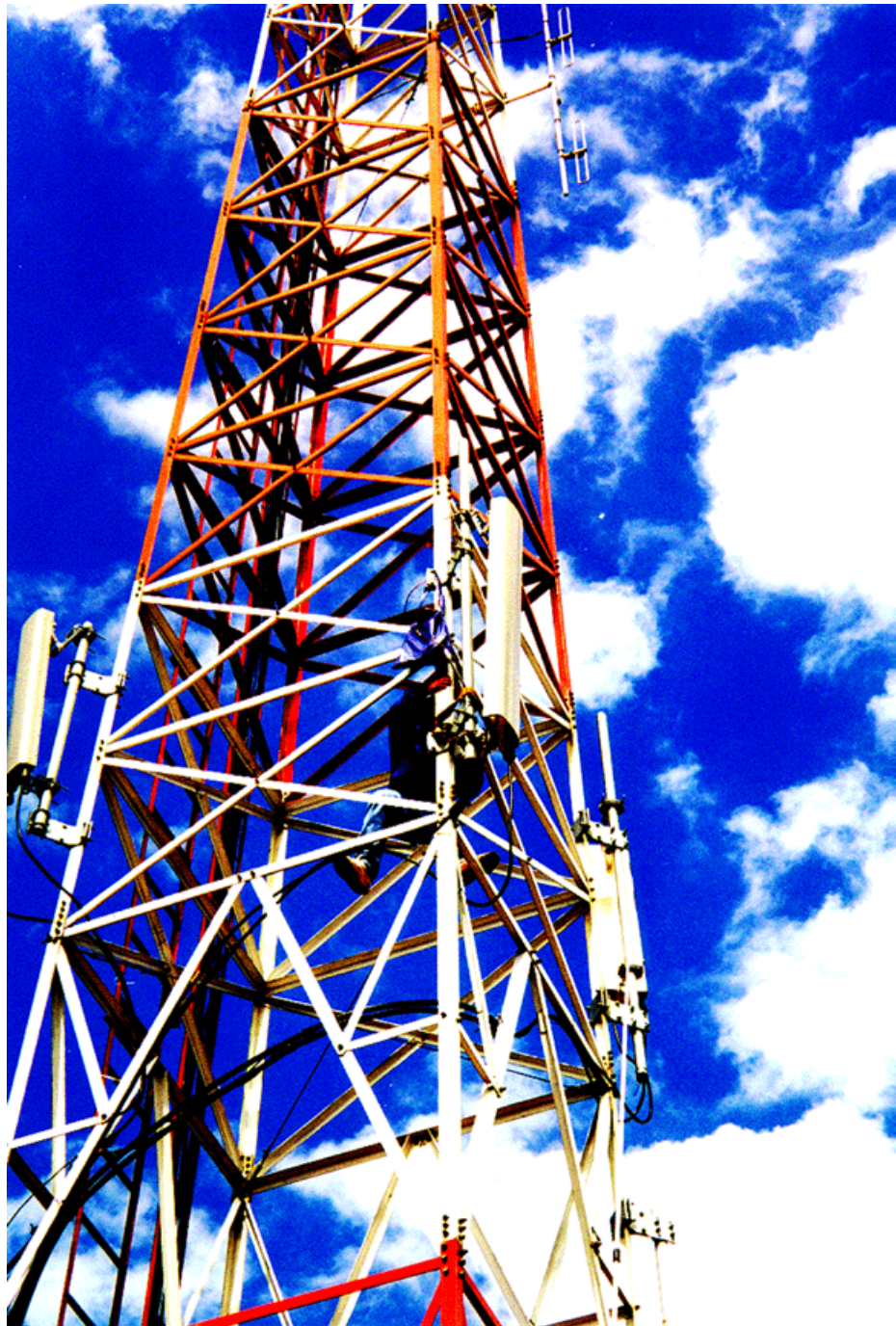




## High performance site components





## **Introduction**

**Egant AB is one of the leading suppliers of products for Cellular infrastructure.**

**Specialised in products that makes it possible to share antenna systems, combining signals and designing cost effective mobile networks.**

**Egant AB works close together with its customers to make solutions and projects optimized for today's demands.**

**Giving you products that is always in the latest design and highest technology.**

**Our design centre in Stockholm Sweden is always happy for new challenges and welcomes all new projects and design ideas.**

**More information can be found at: [www.egant.se](http://www.egant.se)**

### **EGANT AB**

Box 945

114 79 Stockholm

Sweden

Tel: +46 (0)8 6200 650

Email: [info@egant.se](mailto:info@egant.se)

Website: [www.egant.se](http://www.egant.se)



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

1xFM, 1xTetra, 1x800, 1x900, 1x2100, 1xANT  
1xFM, 1xTetra, 3x800, 3x900, 3x2100, 4xANT  
1xFM, 1xTetra, 4x806-960, 4x1800, 4x2100, 4xANT  
4x88-500, 1x900, 1- 4xANT  
1x88-470, 1x900, 1x1800, 1x2100, 1x2600, 1xANT  
1x88-470, 1x800, 1x900, 1x1800, 1x2100, 1x2600, 1xANT  
3x376-470, 1xANT  
1x380-395, 1x415-427, 1x458-470, 1xANT  
1xTetra, 1xTetra, 1xGSM-R, 1x800,  
1x900, 1x1800, 1x2100, 1x2600, 4xANT UL, 4xANT DL  
1xTetra, 1xTetra SL, 1xGSM-R, 1x800,  
1x900, 1x1800, 1x2100, 1x2600, 4xANT UL, 4xANT DL  
1xTetra, 3x700-2700MHz, 1xANT  
1xTetra, 2x790-960, 2x1710-2170MHz, 1xANT  
1xTetra, 2x790-960, 2x1710-2170MHz, 2xANT  
1xTetra, 2x790-960, 2x1710-2170MHz, 1xANT  
1xTetra, 2x790-960, 2x1710-2170MHz, 2xANT  
1xTetra, 3x790-960, 3x1710-2170, 2xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
  
Multi Operator Combiner  
  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0149  
7/16(f) EG 601 0144  
N(f) EG 601 0017  
7/16(f) EG 601 0061  
7/16(f) EG 601 0124  
7/16(f) EG 601 0109  
7/16(f) EG 601 0059  
7/16(f) EG 601 0173  
  
7/16(f) EG 601 0137  
  
7/16(f) EG 601 0198  
7/16(f) EG 601 0138  
7/16(f) EG 601 0164  
7/16(f) EG 601 0165  
7/16(f) EG 601 0158  
7/16(f) EG 601 0159  
7/16(f) EG 601 0142



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

1xTetra, 3x790-960, 3x1710-2170, 1xANT  
1xTetra, 1x800, 1xGSM-R, 1x900, 1x1800, 1x2100, 1x2600, 1xANT  
1xTetra, 1x800, 1x900, 1x2100, 1xANT  
1xTetra, 3x800, 3x900, 3x2100, 4xANT  
1xTetra, 3x900, 3x2100, 2xANT  
1xTetra, 3x900, 3x2100, 3xANT  
1xTetra, 3x900, 3x2100, 1x2600, 1xANT  
1xTetra, 2x900, 2x2100, 3x2600, 4xANT  
1xTetra, 2x1800, 3x2100, 3xANT  
1xTetra, 3x1800, 3x2100, 8xANT  
1xTetra, 3x2100, 1xANT  
1xTetra, 1x2100, 1x2600, 1xANT  
2xTetra, 1x900, 3x1800, 2x2100, 4xANT  
3x698-2700MHz, 1xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0154  
7/16(f) EG 601 0207  
7/16(f) EG 601 0145  
7/16(f) EG 601 0146  
7/16(f) EG 601 0151  
7/16(f) EG 601 0123  
7/16(f) EG 601 0106  
7/16(f) EG 601 0170  
7/16(f) EG 601 0103  
7/16(f) EG 601 0104  
7/16(f) EG 601 0177  
7/16(f) EG 601 0136  
7/16(f) EG 601 0079  
7/16(f) EG 601 0172



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

4x700-2700MHz, 1xANT  
4x700-2700MHz, 2xANT  
4x700-2700MHz, 3xANT  
2x790-960, 2x1710-1880, 2x1920-2170, 4xANT  
4x790-960, 4x1710-2170, 4xANT  
4x790-960, 4x1710-2170, 4xANT  
4x790-960, 4x1800, 4x2100, 4x2600, 4xANT  
1x800, 1x900, 1x1800, 1x2100, 1x2600, 1xANT  
1x800, 1x900, 1x1800, 1x2100, 1x2600, 1xANT  
1x800, 1x900, 1x1800, 1x2100, 1x2600, 1xANT  
1x800, 1x900, 1x1710-2170, 1x2600, 1xANT  
3x800, 3x900, 2x2100, 1xANT  
3x800, 3x900, 3x1800, 3x2100, 1xANT  
3x800, 3x900, 3x1800, 3x2100, 2xANT  
3x800, 3x900, 4x1800, 4x2100, 2xANT  
3x800, 3x900, 3x1800, 3x2100, 4xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0190  
7/16(f) EG 601 0195  
7/16(f) EG 601 0196  
7/16(f) EG 601 0201  
N(f) EG 601 0174  
7/16(f) EG 601 0175  
7/16(f) EG 601 0133  
7/16(f) EG 601 0132  
7/16(f) EG 601 0191  
7/16(f) EG 601 0162  
7/16(f) EG 601 0160  
7/16(f) EG 601 0140  
7/16(f) EG 601 0197  
7/16(f) EG 601 0213  
7/16(f) EG 601 0152  
7/16(f) EG 601 0215



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

4x800, 4x900, 4x1800, 4x2100, 2xANT  
4x800, 4x900, 4x1800, 4x1200, 4xANT  
2x800, 2x900, 2x1800, 2x2100, 2x2600, 2xANT  
3x800, 3x900, 3x1800, 3x2100, 3x2600, 3xANT  
4x800, 4x900, 4x1800, 4x2100, 4x2600, 4xANT  
2x806-960, 1x2100, 1xANT  
2x806-960, 4x1800, 4xANT  
4x806-960, 4x1800, 4xANT  
2x806-960, 1x1800, 1x2100, 1xANT  
2x806-960, 2x1800, 2x2100, 2xANT  
2x806-960, 3x1800, 3x2100, 1xANT  
2x806-960, 4x1800, 4x2100, 4xANT  
2x806-960, 4x1800, 4x2100, 4xANT  
2x806-960, 5x1800, 5x2100, 4xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0157  
7/16(f) EG 601 0156  
7/16(f) EG 601 0209  
7/16(f) EG 601 0210  
7/16(f) EG 601 0139  
7/16(f) EG 601 0026  
7/16(f)-N(f) EG 601 0084  
7/16(f) EG 100 4206  
7/16(f) EG 601 0028  
7/16(f) EG 100 4201  
7/16(f) EG 601 0034  
7/16(f)-N(f) EG 601 0074  
N(f) EG 601 0075  
7/16(f)-N(f) EG 601 0076



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

2x806-960, 5x1800, 5x2100, 4xANT  
3x806-960, 4x1800, 4x2100, 2xANT  
3x806-960, 4x1800, 4x2100, 3xANT  
3x806-960, 4x1800, 4x2100, 4xANT  
4x806-960, 4x1800, 4x2100, 4xANT  
4x806-960, 4x1800, 4x2100, 4xANT  
4x806-960, 4x1800, 4x2100, 4xANT  
3x806-960, 5x1800, 2x2100, 4xANT  
3x806-960, 3x2100, 3xANT  
4x806-960, 4x2100, 2xANT  
4x806-960, 4x2100, 4xANT  
4x806-960, 5x1800, 5x2100, 4xANT  
4x806-960, 5x1800, 5x2100, 4xANT  
4x806-960, 5x1800, 5x2100, 4xANT  
4x806-960, 5x1800, 5x2100, 4xANT  
4x806-960, 5x1800, 5x2100, 1x2400-2500, 4xANT  
4x806-960, 5x1800, 5x2100, 1x2400-2500, 4xANT  
4x806-960, 6x1800, 3x2100, 2x2400-2500, 4xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

N(f) EG 601 0060  
7/16(f) EG 601 0014  
7/16(f) EG 601 0129  
7/16(f) EG 601 0015  
N(f) EG 601 0048  
N(f)-SMA(f) EG 601 0045  
7/16(f) EG 100 4202  
7/16(f)-N(f) EG 601 0085  
7/16(f) EG 601 0027  
7/16(f) EG 601 0024  
7/16(f) EG 100 4205  
7/16(f)-N(f) EG 601 0082  
7/16(f)-N(f) EG 601 0072  
N(f) EG 601 0073  
N(f) EG 601 0052  
7/16(f)-N(f) EG 601 0077  
N(f) EG 601 0078  
7/16(f)-N(f) EG 601 0086



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

6x806-960, 2x1800, 4xANT  
1x820x890, 3x1800, 4x2100, 4xANT  
1x820x890, 3x1800, 4x2100, 4xANT  
4x824-960, 4x1800, 4x2100, 4xANT  
4x824-960, 4x1800, 4x2100, 4xANT  
1x900, 1x1800, 3x2100, 1xANT  
1x900, 2x1800, 3x2100, 3x2600 1xANT  
1x900, 2x1800, 3x2100, 1xANT  
1x900, 2x1800, 3x2100, 1xANT  
1x900, 3x2100, 1xANT  
2x900, 2x1800, 2xANT  
2x900, 2x1800, 2x2100, 2x2600, 2xANT  
2x900, 2x1800, 2x2100, 2x2600, 2xANT  
2x900, 2x1800, 2x2100, 2x2600, 3xANT  
2x900, 2x1800, 2x2100, 2x2600, 4xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0022  
N(f) EG 601 0069  
7/16(f) EG 601 0070  
N(f) EG 100 4209  
7/16(f) EG 100 4210  
7/16(f) EG 601 0110  
7/16(f) EG 601 0101  
7/16(f) EG 601 0105  
7/16(f) EG 601 0134  
7/16(f) EG 601 0041  
7/16(f) EG 601 0089  
7/16(f) EG 601 0131  
7/16(f) EG 601 0117  
7/16(f) EG 601 0168  
7/16(f) EG 601 0169





## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

2x900, 2x2100, 1xANT  
2x900, 2x2100, 2xANT  
3x900, 3x1800, 3x2100, 3x2600, 3xANT  
3x900, 3x1800, 3x2100, 3x2600, 4xANT  
4x900, 4x1800, 4x2100, 4x2600, 4xANT  
4x900, 2x1800, 4x2100, 2xANT  
4x900, 4x1800, 4x2100, 1xANT  
4x900, 4x1800, 4x2100, 2xANT  
6x900, 6x2100, 4xANT  
1x1800, 3x2100, 2xANT  
2x1800, 2x2100, 2xANT  
2x1800, 3x2100, 4xANT  
2x1800, 1x2100, 1x2600, 1xANT  
2x1800, 1x2100, 1x2600, 3xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0113  
7/16(f) EG 601 0025  
7/16(f) EG 601 0176  
7/16(f) EG 601 0127  
7/16(f) EG 601 0119  
7/16(f) EG 601 0150  
N(f) EG 601 0121  
7/16(f) EG 601 0122  
7/16(f) EG 601 0040  
7/16(f) EG 601 0107  
7/16(f) EG 601 0029  
7/16(f) EG 601 0100  
7/16(f) EG 601 0206  
7/16(f) EG 601 0204



## Multi Operator Combiner

[www.egant.se](http://www.egant.se)

### Frequency range

#### *Multi Operator Combiners*

3x1800, 3x2100, 1xANT  
3x1800, 3x2100, 2xANT  
3x1800, 3x2100, 3xANT  
4x1800, 4x2100, 1xANT  
4x1800, 4x2100, 2xANT  
4x1800, 4x2100, 4xANT  
4x1800, 4x2100, 4xANT  
4x1800, 4x2100, 4xANT  
4x1800, 1x2100, 1x2600, 3xANT  
4x1800, 4x2100, 4x2600, 4xANT  
5x1800, 5x2100, 4xANT  
3x2100, 1xANT

### Description

Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner  
Multi Operator Combiner

### Connector Ordering number

7/16(f) EG 601 0050  
7/16(f) EG 601 0049  
7/16(f) EG 601 0051  
7/16(f) EG 601 0071  
7/16(f) EG 601 0214  
7/16(f) EG 601 0033  
N(f)-SMA(f) EG 601 0046  
N(f) EG 601 0047  
7/16(f) EG 601 0203  
7/16(f) EG 601 0205  
N(f) EG 601 0054  
7/16(f) EG 601 0007



**Multi Operator Combiner**  
**5 x Input**  
**1 x Antenna Ports**

**Combines up to 5 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 5 Radio Base Stations to connect to the combiner:

- 1 x 88-108MHz Radio Base Stations
- 1 x TETRA Radio Base Stations
- 1 x LTE800MHz Radio Base Stations
- 1 x GSM900 Radio Base Stations
- 1 x UMTS Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in a box optimized for wall mounting or in a 19" rack for installation in cabinet.

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0149
Passband:	
Port 1: FM	88 - 108 MHz
Port 2: Tetra	380 - 395 MHz
Port 3: LTE800	790 - 862 MHz
Port 4: GSM900	880 - 960 MHz
Port 5: UMTS	1920 - 2170 MHz

### Insertion loss:

Port 1: - ANT 1	<1.8 dB, typ 1,2 dB
Port 2: - ANT 1	<1.8 dB, typ 2,2 dB
Port 3: - ANT 1	<2.8 dB, typ 2,2 dB
Port 4: - ANT 1	<2.8 dB, typ 1,2 dB
Port 5: - ANT 1	<1.8 dB, typ 1,2 dB

Input return loss:	> 16.0 dB, typ 18dB
Isolation between systems:	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 140 x 435 mm
Connectors:	7/16(f)
Weight:	18 kg

### Environmental Specifications

Temp. range (normal operation):	5 to 55° C
Sealing:	Indoor

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se

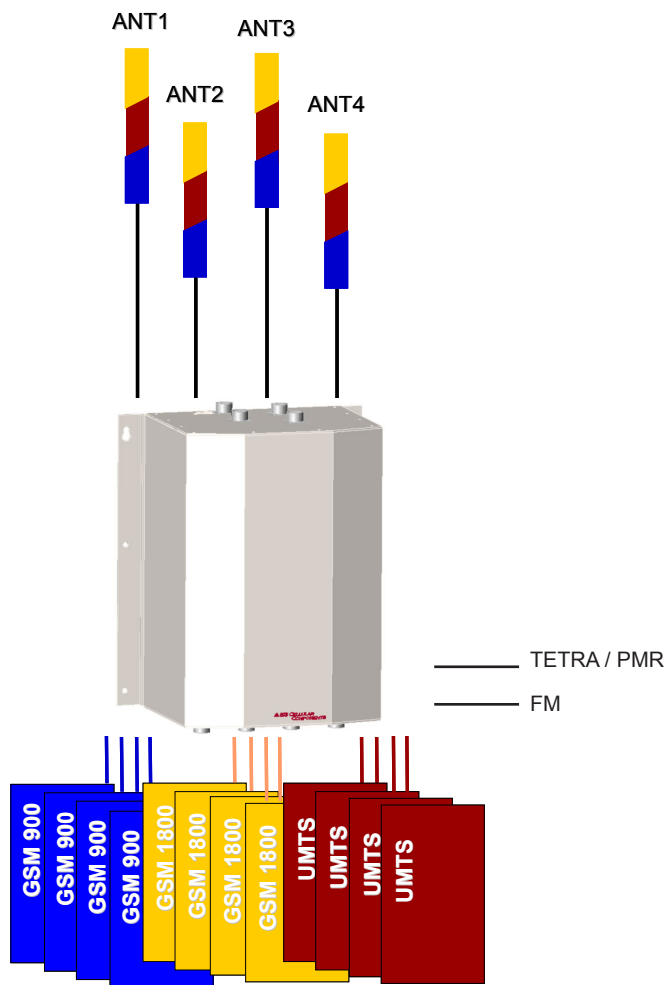


## Multi Operator Combiner

3 x 800, 900, 2100

1 x TETRA

1x FM



### Combines 800 / 900 / 2100 / TETRA / FM into 4 antenna ports

The Multi Operator Combiner enables a maximum of 11 Radio Base Stations to connect to the combiner:

- 3 800 Radio Base Stations
- 3 900 Radio Base Stations
- 3 2100 Radio Base Stations
- 1 TETRA / PMR Radio Base Station
- 1 FM Radio Base Station

The combiner combines the 11 signals to the 4 antenna ports, or splits the signal to the 11 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### Save money by installing our Multi Operator Combiner

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0144
Passband:	
Port 1 FM	88 - 108 MHz
Port 2 Tetra	380 - 395 MHz
Port 3 800	790 - 862 MHz
Port 4 800	790 - 862 MHz
Port 5 800	790 - 862 MHz
Port 6 900	880 - 960 MHz
Port 7 900	880 - 960 MHz
Port 8 900	880 - 960 MHz
Port 9 2100	1920 - 2170 MHz
Port 10 2100	1920 - 2170 MHz
Port 11 2100	1920 - 2170 MHz

### Insertion loss / Coupling:

Port 1 - 11 to ANT 1 - 4:  $\leq 8.5$  dB

### Input return loss:

$> 16.0$  dB

### Isolation between systems:

$\geq 50$  dB

### Isolation between same systems:

$\geq 25$  dB

### Intermodulation 2 x 43 dBm:

$\leq 110$  dBm (153 dBc)

### Max input power/port:

60 W

### Impedance in/out:

50 Ohm

### Mechanical Specifications

Dimensions (W x H x D): 420 x 800 x 180 mm

Connectors: 7/16 (f)

Weight: 28 kg

### Environmental Specifications

Temp. range (normal operation): -30 to +70° C

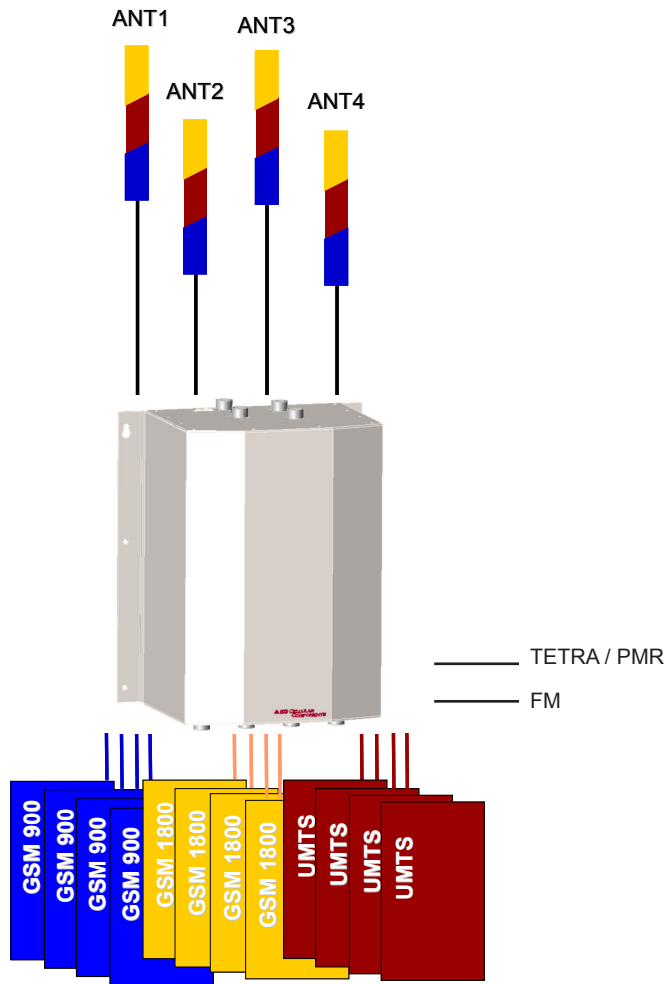
Humidity: Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
Fax: +46 (0)70 386 53 53  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**4 x GSM900, GSM1800, UMTS**  
**1 x TETRA / PMR, FM**  
**14 Inputs to 4 Antenna Ports**



**Combines GSM900 / GSM1800 / UMTS / TETRA / FM into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 14 Radio Base Stations to connect to the combiner:

- 4 GSM900 Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations
- 1 TETRA / PMR Radio Base Station
- 1 FM Radio Base Station

The combiner combines the 14 signals to the 4 antenna ports, or splits the signal to the 14 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

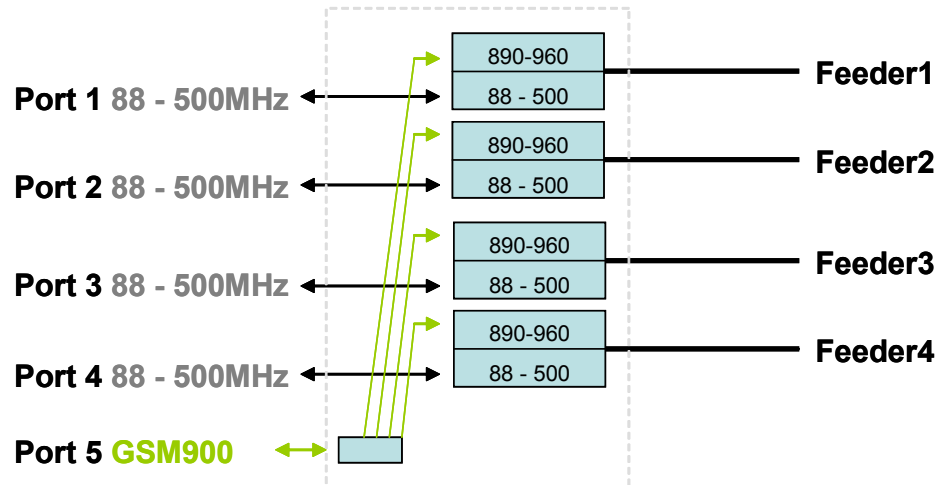
<b>Electrical Specifications</b>	
Product number:	EG 601 0017
Passband:	
Port 1 GSM900 - 1:	806 - 960 MHz
Port 2 GSM900 - 2:	806 - 960 MHz
Port 3 GSM900 - 3:	806 - 960 MHz
Port 4 GSM900 - 4:	806 - 960 MHz
Port 5 GSM1800 - 1:	1710 - 1880 MHz
Port 6 GSM1800 - 2:	1710 - 1880 MHz
Port 7 GSM1800 - 3:	1710 - 1880 MHz
Port 8 GSM1800 - 4:	1710 - 1880 MHz
Port 9 UMTS - 1:	1920 - 2170 MHz
Port 10 UMTS - 2:	1920 - 2170 MHz
Port 11 UMTS - 3:	1920 - 2170 MHz
Port 12 UMTS - 4:	1920 - 2170 MHz
Port 13 TETRA (option EG 601 0018):	376 - 500 MHz
Port 14 FM (option EG 601 0018):	88 - 108 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 1.0 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	≤ 1.0 dB
Port 9 - 12 UMTS - ANT 1 - 4:	≤ 1.0 dB
Port 13 TETRA - ANT 1 - 4:	≤ 1.0 dB
Port 14 FM - ANT 1 - 4:	≤ 1.0 dB
Coupling (1 INPUT 4 - OUT):	
Port 1, 2, 5, 6, 11, 12 to ANT 1 - 4:	6.0 dB +/- 0.5 dB
Port 3, 7 to - ANT 3, 4:	6.0 dB +/- 0.5 dB
Port 3, 7 to - ANT 2 (option EG 601 0019):	30.0 dB +/- 0.5 dB
Port 4, 8 to - ANT 1, 2:	6.0 dB +/- 0.5 dB
Port 4, 8 to - ANT 3 (option EG 601 0019):	30.0 dB +/- 0.5 dB
Port 13 to ANT 1 - 4:	6.0 dB +/- 0.5 dB
Port 14 to ANT 1 - 4:	6.0 dB +/- 0.5 dB
Input return loss:	
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 800 x 180 mm
Connectors port 1 - 12:	7/16 (f)
Connectors port 13, 14:	N (f)
Weight:	28 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**88 - 500MHz, GSM900**  
**5 Inputs - 4 Output**



**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Connects GSM900 and 88-500MHz systems to 4 antenna ports**

This Multi Operator Combiner enables the connection of 5 RBSs/repeaters to the combiner.

The combiner combines the 5 signals to the 4 antenna ports, or splits the signal to the 5 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0061
Passband:	
Port 1 - 4:	88 - 500 MHz
Port 5, GSM900:	890 - 960 MHz

### Insertion loss:

Port 1 to ANT 1:	$\leq 0.5$ dB (0.25dB typ.)
Port 2 to ANT 2:	$\leq 0.5$ dB (0.25dB typ.)
Port 3 to ANT 3:	$\leq 0.5$ dB (0.25dB typ.)
Port 4 to ANT 4:	$\leq 0.5$ dB (0.25dB typ.)
Port 5 to ANT 1-4:	$\leq 7.0$ dB (6.4dB typ.)

Input return loss:	$> 16.0$ dB
--------------------	-------------

Isolation between systems:	$\geq 50$ dB
----------------------------	--------------

### Max input power/port:

Port 1-4:	300W
Port 5:	150W

Impedance in/out:	50 Ohm
-------------------	--------

### Mechanical Specifications

Dimensions (W x H x D):	250 x 150 x 250 mm
Connectors:	7/16 (f)
Weight:	15 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**5 x Input**  
**1 x Antenna Port**

**Combines up to 5 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 5 Radio Base Stations to connect to the combiner:

- 1 x 88-470MHz Radio Base Stations
- 1 x GSM900 Radio Base Stations
- 1 x GSM1800 Radio Base Stations
- 1 x UMTS Radio Base Stations
- 1 x LTE Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in a box optimized for wall mounting, also equipped with a grounding-point.

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0124
Passband:	
Port 1: FM -Tetra	88 - 470 MHz
Port 2: GSM900	880 - 960 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: UMTS	1920 - 2170 MHz
Port 5: LTE	2500 - 2700 MHz
Insertion loss:	
Port 1: - ANT 1	<1.2 dB, typ 0,8 dB
Port 2: - ANT 1	<1.8 dB, typ 1,4 dB
Port 3: - ANT 1	<1.6 dB, typ 1,2 dB
Port 4: - ANT 1	<1.6 dB, typ 1,2 dB
Port 5: - ANT 1	<0.7 dB, typ 0,3 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 140 x 435 mm
Connectors:	7/16(f)
Weight:	16 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%
Sealing:	IP67

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**6 x Input**  
**1 x Antenna Ports**

**Combines up to 6 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 6 Radio Base Stations to connect to the combiner:

- 1 x 88-470MHz Radio Base Stations
- 1 x 790-862MHz Radio Base Stations
- 1 x GSM900 Radio Base Stations
- 1 x GSM1800 Radio Base Stations
- 1 x UMTS Radio Base Stations
- 1 x LTE Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in a box optimized for wall mounting, also equipped with a grounding-point.

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0108	EG 601 0109
Passband:		
Port 1: FM -Tetra	88 - 470 MHz	88 - 470 MHz
Port 2: 790 - 862MHz	790 - 862 MHz	790 - 862 MHz
Port 3: GSM900	880 - 960 MHz	880 - 960 MHz
Port 4: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 5: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 6: LTE	2500 - 2700 MHz	2500 - 2700 MHz
Insertion loss:		
Port 1: - ANT 1	<1.2 dB, typ 0,8 dB	<1.2 dB, typ 0,8 dB
Port 2: - ANT 1	<2.8 dB, typ 2,2 dB	<2.8 dB, typ 2,2 dB
Port 3: - ANT 1	<2.8 dB, typ 2,2 dB	<2.8 dB, typ 2,2 dB
Port 4: - ANT 1	<1.6 dB, typ 1,2 dB	<1.6 dB, typ 1,2 dB
Port 5: - ANT 1	<1.6 dB, typ 1,2 dB	<1.6 dB, typ 1,2 dB
Port 6: - ANT 1	<0.7 dB, typ 0,3 dB	<0.7 dB, typ 0,3 dB
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	40 W	40 W
Impedance in/out:	50 Ohm	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 140 x 435 mm	450 x 140 x 435 mm
Connectors:	N(f)	7/16(f)
Weight:	18 kg	18 kg

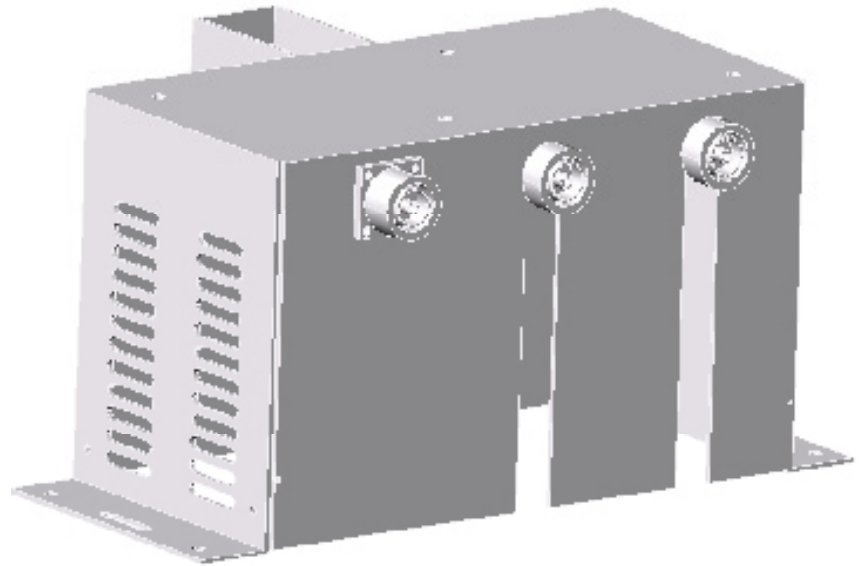
### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%
Sealing:	IP67	IP67

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se

**Multi Operator Combiner**  
3 x 376 - 470MHz systems to  
1 Antenna port

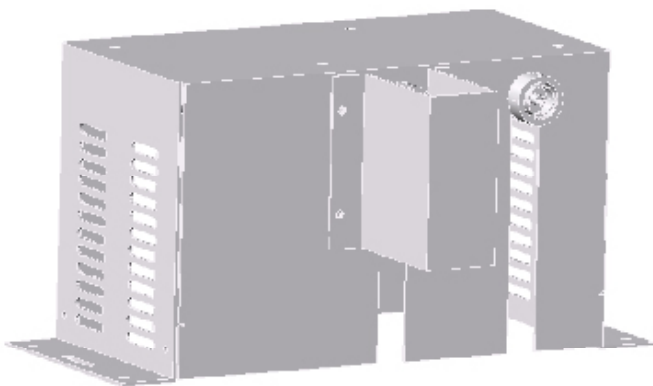


**Combine 3 RBS's into 1 Antenna.**

Do you have Radio Base Stations or Repeaters that you like to combine to the same antenna.

Connect your RBS's to the 3-Way Combiner and it will give you an optimum combination with as less loss as possible.

The combiner gives you an easy solution so you don't need to worry about isolation or intermodulation in your system.



## **Technical Specifications for the Multi Operator Combiner**

Below are some typical data. For more detailed information, please contact us.

### **Electrical Specifications**

Product number:	EG 601 0059
Passband:	
Port 1 :	376 - 470 MHz
Port 2:	376 - 470 MHz
Port 3:	376 - 470 MHz
Insertion loss:	
Port 1 - 3 to ANT 1	$\leq 6.2 \text{ dB} \pm 0,4 \text{ dB}$

Input return loss:	$> 18.0 \text{ dB}$
Isolation between same systems:	$\geq 25 \text{ dB}$ (35dB typ)

Max input power/port:	60 W
Impedance in/out:	50 Ohm

### **Mechanical Specifications**

Dimensions 19" rack:	3HE
Connectors:	7/16 (f)
Weight:	5 kg

### **Environmental Specifications**

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant Cellular Components  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





## **Multi Operator Combiner**

### **Double Unit**

**380-395, 415-427,458-470MHz, 1xANT**

This Multi Operator Combiner enables total of 3 Repeaters to connect to the combiner:

The MOC's combines the 3 signals to 1 antenna port or splits the signal to the 3 repeaters in the receiving way.

This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0173
Passband:	
Port 1: Unit 1	380 - 395 MHz
Port 2: Unit 1	415 - 427 MHz
Port 3: Unit 1	458 - 470 MHz
Port 4: Unit 2	380 - 395 MHz
Port 5: Unit 2	415 - 427 MHz
Port 6: Unit 2	458 - 470 MHz
Insertion loss/Coupling:	
Unit 1:	
Port 1 - Port 2 - ANT	≤ 4.5 dB (3.5 dB typ)
Port 3 - ANT	≤ 3.5 dB (3.0 dB typ)
Unit 2:	
Port 4 - Port 5 - ANT	≤ 4.5 dB (3.5 dB typ)
Port 6 - ANT	≤ 3.5 dB (3.0 dB typ)
Input return loss:	> 16.0 dB, typ 18 dB
Isolation between system:	> 25 dB
Max input power/port:	20 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 115 x 305mm
Connectors:	N (f)
Weight:	8.5 Kg

### Environmental Specifications

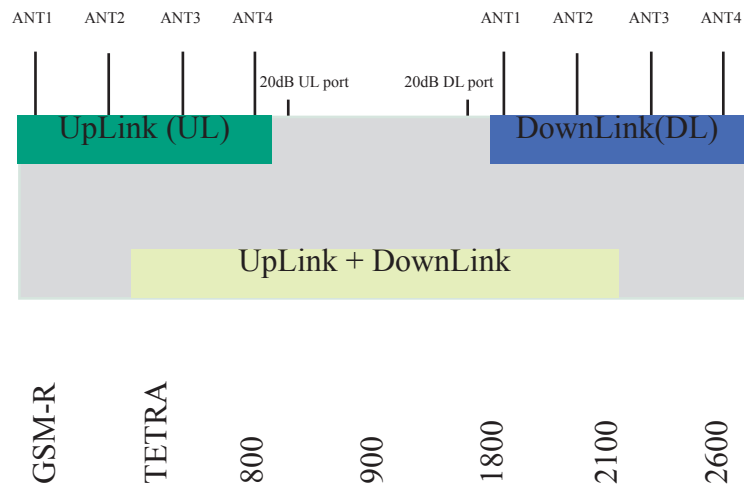
Temp. range (normal operation):	-20 to +65° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**GSM-R, TETRA, 800, 900, 1800, 2100,**  
**2600**  
**7 Inputs to 4 Up Link + 4 Down Link**  
**Antenna Ports**



## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

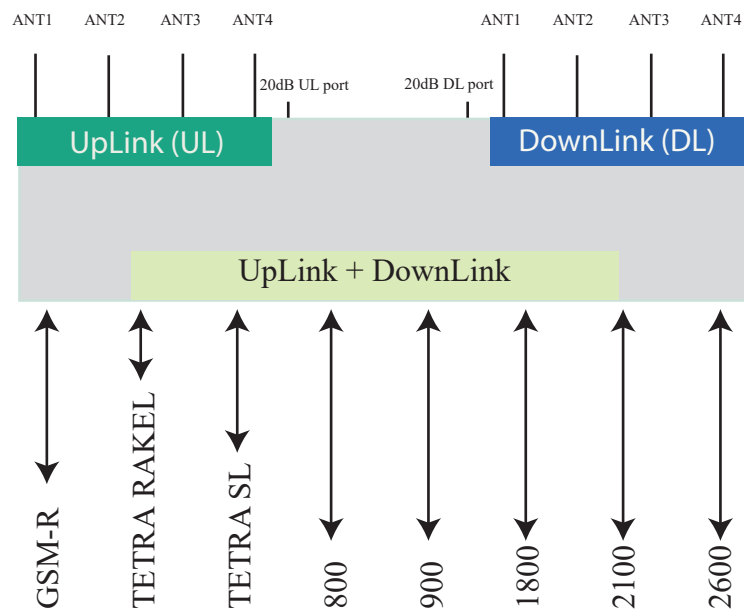
<b>Electrical Specifications</b>	
Product number:	EG 601 0137
Components included:	
Uplink combiner	EG 603 0093
Downlink combiner	EG 603 0094
Rejectionfilter GSM-R	EG 602 0185
Rejectionfilter 900	EG 602 0186
Passband:	
Port 1 TETRA:	UL 380-385, DL 390-395 MHz
Port 2 800:	UL 832-862, DL 791-821 MHz
Port 3 GSM-R:	UL 873-880, DL 918-924.8 MHz
Port 4 900:	UL 880-915, DL 925.5-960 MHz
Port 5 1800:	UL 1710-1785, DL 1805-1880 MHz
Port 6 2100:	UL 1920-1980, DL 2110-2170 MHz
Port 7 2600:	UL 2500-2570, DL 2620 - 2690 MHz
Port 8 20dB UL:	380 - 2690 MHz
Port 9 20dB DL:	380 - 2690 MHz
Insertion loss / Coupling:	
Port 1 - ANT 1, 4:	≤ 10.5dB dB (typ 7.0dB)
Port 1 - ANT 2, 3:	≤ 13.0 dB (typ 10.0dB)
Port 2, 7 - ANT1-4:	≤ 9.0 dB (typ 7.0dB)
Port 3, 4 - ANT1-4 DL:	≤ 11.5 dB (typ 7.5dB center of band)
Port 3, 4 - ANT1-4 UL:	≤ 9.5 dB (typ 7.5dB)
Port 5, 6 - ANT1-4:	≤ 9.0 dB (typ 7.0dB)
Port 8, 9 - ANT1-4:	20dB ± 1dB
<small>(not. ANT 1-4 is 1xUL and 1xDL, 8 in total)</small>	
Input return loss:	≥ 16 dB
Isolation between systems DL Port 2, 4-6:	≥ 50 dB
Isolation between systems DL Port 1, 3-4:	≥ 40 dB
Attenuation in rejection band UL Port 2	≥ 40 dB 873-960MHz
Attenuation in rejection band UL Port 3	≥ 30 dB 791-862MHz
Attenuation in rejection band DL Port 4	≥ 32 dB 873-924.8MHz
Intermodulation:	
Port 1	≤ -110 dBm @ 2x 33dBm IM3 (≥143dBc)
Port 2 -7	≤ -110 dBm @ 2x 37dBm IM3 (≥147dBc)
Max input power/port:	
Port 1	36dBm
Port 2 -7	40dBm
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	500x 800x 500 mm
Connectors:	7/16 (f)
Weight:	45 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +55° C
Sealing:	IP44

Egant reserves the right to change this product specification without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**GSM-R, TETRA RAKEL, TETRA SL,**  
**800, 900, 1800, 2100, 2600**  
**8 Inputs to 4 Up Link and 4**  
**Down Link Antenna Ports**



## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0198
Components included:	
Uplink combiner	EG 603 0093
Downlink combiner	EG 603 0094
Rejectionfilter GSM-R	EG 602 0185
Rejectionfilter 900	EG 602 0186
Passband:	
Port 1 TETRA RAKEL:	UL 380-385, DL 390-395 MHz
Port 2 TETRA SL:	UL 415-420 DL 425-430 MHz
Port 3 800:	UL 832-862, DL 791-821 MHz
Port 4 GSM-R:	UL 873-880, DL 918-924.8 MHz
Port 5 900:	UL 880-915, DL 925.5-960 MHz
Port 6 1800:	UL 1710-1785, DL 1805-1880 MHz
Port 7 2100:	UL 1920-1980, DL 2110-2170 MHz
Port 8 2600:	UL 2500-2570, DL 2620 - 2690 MHz
Port 9 20dB:	UL 380 - 2690 MHz
Port 10 20dB:	DL 380 - 2690 MHz
Insertion loss / Coupling:	
Port 1,2 - ANT 1, 4:	≤ 10.5dB dB (typ 7.0dB)
Port 1,2 - ANT 2, 3:	≤ 13.0 dB (typ 9.0dB)
Port 3, 8 - ANT1-4:	≤ 9.0 dB (typ 7.0dB)
Port 4, 5 - ANT1-4 DL:	≤ 11.5 dB (typ 7.5dB center of band)
Port 4, 5 - ANT1-4 UL:	≤ 9.5 dB (typ 7.5dB)
Port 6, 7 - ANT1-4:	≤ 9.0 dB (typ 7.0dB)
Port 9, 10 - ANT1-4:	20dB ± 1dB
<small>(not. ANT 1-4 is 1xUL and 1xDL, 8 in total)</small>	
Input return loss:	≥ 16 dB
Isolation between systems DL Port 3, 5-7:	≥ 50 dB
Isolation between systems DL Port 4-5, 1-2:	≥ 40 dB
Attenuation in rejection band UL Port3	≥ 40 dB 873-960MHz
Attenuation in rejection band UL Port4	≥ 30 dB 791-862MHz
Attenuation in rejection band DL Port5	≥ 32 dB 873-924.8MHz
Intermodulation:	
Port 1 -2	≤ -110 dBm @ 2x 33dBm IM3 (≥143dBc)
Port 3 -8	≤ -110 dBm @ 2x 37dBm IM3 (≥147dBc)
Max input power/port:	
Port 1 -2	36dBm
Port 3 -8	40dBm
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	500x 800x 500 mm
Connectors:	7/16 (f)
Weight:	47 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +55° C
Sealing:	IP44

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**3 x 700 -2700MHz**

**1 x 380 - 500MHz**

**1 x ANT**

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### **Combines 3 x 700 - 2700MHz and 1 x Tetra signals into 1 antenna port**

This Multi Operator Combiner enables the connection of 4 RBSs/repeaters to the combiner.

The combiner combines the 4 signals to the antenna port, or splits the signal to the 4 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0138
Passband:	
Port 1 - 3:	700 - 2700 MHz
Port 4:	376 - 500 MHz
Coupling/Insertion loss:	
Port 1 - 3 - ANT 1:	5.0 dB +/- 1.2dB
Port 4 - ANT 1:	1.0dB, typ 0.5dB
Input return loss:	> 18.0 dB
Isolation between same systems:	≥ 25 dB
Isolation between system:	≥ 25 dB
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	450 x 115 x 305 mm
Connectors:	7/16 (f)
Weight:	14 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-25 to +65° C
Humidity:	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





## **Multi Operator Combiner**

**19" rack**

**1 x 376 - 450MHz, 2 x 790 - 960MHz**

**2 x 1710 - 2170MHz, 1 or 2 Antenna  
Ports**

### **Combines 5 RBSs into 1 or 2 antenna ports**

This Multi Operator Combiner enables 5 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 2 LTE800/GSM900 Radio Base Stations
- 2 GSM1800/UMTS Radio Base Stations

The combiner combines the 5 signals to the 1 or 2 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0164	EG 601 0165
Passband:		
Port 1:	376 - 450 MHz	376 - 450 MHz
Port 2:	790 - 960 MHz	790 - 960 MHz
Port 3:	790 - 960 MHz	790 - 960 MHz
Port 4:	1710- 2170 MHz	1710- 2170 MHz
Port 5:	1710- 2170 MHz	1710- 2170 MHz
Antenna ports:	1	2
Coupling/Insertion loss:		
Port 1 - ANT	≤ 0.5 dB (0.2dB typ)	≤ 4.0 dB (3.6dB typ)
Port 2 - 5 - ANT	≤ 4.0 dB (3.6dB typ)	≤ 4.0 dB (3.6dB typ)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB (30dB typ)	≥ 25 dB (30dB typ)
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	100 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 140 x 385 mm	483 x 140 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	15 kg	17 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**19" rack**

**1 x 376 - 450MHz, 2 x 790 - 960MHz**

**2 x 1710 - 2170MHz, 1 or 2 Antenna  
Ports**

### **Combines 5 RBSs into 1 or 2 antenna ports**

This Multi Operator Combiner enables 5 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 2 LTE800/GSM900 Radio Base Stations
- 2 GSM1800/UMTS Radio Base Stations

The combiner combines the 5 signals to the 1 or 2 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0158	EG 601 0159
Passband:		
Port 1:	376 - 450 MHz	376 - 450 MHz
Port 2:	790 - 960 MHz	790 - 960 MHz
Port 3:	790 - 960 MHz	790 - 960 MHz
Port 4:	1710- 2170 MHz	1710- 2170 MHz
Port 5:	1710- 2170 MHz	1710- 2170 MHz
Antenna ports:	1	2
Coupling/Insertion loss:		
Port 1 - ANT	≤ 0.5 dB (0.2dB typ)	≤ 4.0 dB (3.6dB typ)
Port 2 - 5 - ANT	≤ 4.0 dB (3.6dB typ)	≤ 4.0 dB (3.6dB typ)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB (30dB typ)	≥ 25 dB (30dB typ)
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 140 x 385 mm	483 x 140 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	14 kg	16 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%
Egant reserves the right to change this product specification at any time without notice.		

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**19" rack**

**1 x TETRA, 3 x 790-960MHz,**

**3 x 1710-2170MHz, 2 x ANT**

### **Combines 7 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 7 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 3 LTE800/GSM900 Radio Base Stations
- 3 GSM1800/UMTS Radio Base Stations

The combiner combines the 7 signals to 2 antenna ports, or splits the signal to the 7 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0142	EG 601 0167
Passband:		
Port 1 TETRA:	380 - 400 MHz	380 - 400 MHz
Port 2 LTE800/GSM900:	790 - 960 MHz	790 - 960 MHz
Port 3 LTE800/GSM900:	790 - 960 MHz	790 - 960 MHz
Port 4 LTE800/GSM900:	790 - 960 MHz	790 - 960 MHz
Port 5 GSM1800/UMTS:	1710 - 2170 MHz	1710 - 2170 MHz
Port 6 GSM1800/UMTS:	1710 - 2170 MHz	1710 - 2170 MHz
Port 7 GSM1800/UMTS:	1710 - 2170 MHz	1710 - 2170 MHz
Coupling/Insertion loss:		
Port 1 TETRA - ANT 1 - 2	≤ 4.0 dB (3.5dB typ)	≤ 4.0 dB (3.5dB typ)
Port 2 LTE800/GSM900 - ANT 1 - 2	≤ 4.0 dB (3.5dB typ)	≤ 4.0 dB (3.5dB typ)
Port 3 - 4 LTE800/GSM900 - ANT 1 - 2	≤ 7.3 dB (6.5dB typ)	≤ 7.3 dB (6.5dB typ)
Port 5 GSM1800/UMTS - ANT 1 - 2	≤ 4.0 dB (3.6dB typ)	≤ 4.0 dB (3.6dB typ)
Port 6 - 7 GSM1800/UMTS - ANT 1 - 2	≤ 7.3 dB (6.7dB typ)	≤ 7.3 dB (6.7dB typ)
Input return loss:	> 17.0 dB	> 17.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB (30dB typ)	≥ 25 dB (30dB typ)
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 140 x 385 mm	483 x 140 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	20 kg	22 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**19" rack**

**1 x 376 - 450MHz, 3 x 790 - 960MHz**

**3 x 1710 - 2170MHz, 1 x Ant**

### **Combines 7 RBSs into 1 antenna ports**

This Multi Operator Combiner enables 7 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 3 LTE800/GSM900 Radio Base Stations
- 3 GSM1800/UMTS Radio Base Stations

The combiner combines the 7 signals to the 1 antenna port, or splits the signal to the 7 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0154	EG 601 0166
Passband:		
Port 1:	376 - 450 MHz	376 - 450 MHz
Port 2:	790 - 960 MHz	790 - 960 MHz
Port 3:	790 - 960 MHz	790 - 960 MHz
Port 4:	790 - 960 MHz	790 - 960 MHz
Port 5:	1710- 2170 MHz	1710- 2170 MHz
Port 6:	1710- 2170 MHz	1710- 2170 MHz
Port 7:	1710- 2170 MHz	1710- 2170 MHz
Coupling/Insertion loss:		
Port 1 - ANT	≤ 0.5 dB (0.2dB typ)	≤ 0.5 dB (0.2dB typ)
Port 2 - ANT	≤ 3.5 dB (3.2dB typ)	≤ 3.5 dB (3.2dB typ)
Port 3 - 4 - ANT	≤ 7.0 dB (6.5dB typ)	≤ 7.0 dB (6.5dB typ)
Port 5 - ANT	≤ 4.0 dB (3.6dB typ)	≤ 4.0 dB (3.6dB typ)
Port 6 - 7 - ANT	≤ 7.0 dB (6.7dB typ)	≤ 7.0 dB (6.7dB typ)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB (30dB typ)	≥ 25 dB (30dB typ)
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 140 x 385 mm	483 x 140 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	16 kg	18 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**7 x Input**  
**1 x Antenna Port**

**Combines up to 7 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 7 Radio Base Stations to connect to the combiner:

- 1 x Tetra Radio Base Stations
- 1 x LTE800 Radio Base Stations
- 1 x GSM-R Radio Base Stations
- 1 x GSM900 Radio Base Stations
- 1 x GSM1800 Radio Base Stations
- 1 x UMTS2100 Radio Base Stations
- 1 x LTE2600 Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 7 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in 19" rack. By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0207
Passband:	
Port 1: TETRA	380 - 395 MHz
Port 2: LTE800	790 - 862 MHz
Port 3: GSM-R	UL 873 - 879.8 MHz, DL 918-924.8 MHz
Port 4: GSM900	UL 881 - 915 MHz, DL 925.5-960 MHz
Port 5: GSM1800	1710 - 1880 MHz
Port 6: UMTS2100	1920 - 2170 MHz
Port 7: LTE2600	2500 - 2690 MHz

### Insertion loss / Coupling:

Port 1: - ANT	<0.5 dB, typ 0,2 dB
Port 2: - ANT	<1.5 dB, typ 0,7 dB
Port 3 - 4 DL : - ANT	<9.5 dB, typ 4,9 dB
Port 3 - 4 UL: - ANT	<7.5 dB, typ 4,9 dB
Port 5: - ANT	<0.7 dB, typ 0.3 dB
Port 6: - ANT	<0.7 dB, typ 0,3 dB
Port 7: - ANT	<0.7 dB, typ 0,3 dB

Input return loss: > 16.0 dB

### Isolation between systems:

Isolation between systems DL Port 2, 4-6:	≥ 50 dB
Isolation between systems DL Port 3-4:	≥ 35 dB
Attenuation in rejection band UL Port2	≥ 40 dB 873-960MHz
Attenuation in rejection band UL Port3	≥ 30 dB 791-862MHz
Attenuation in rejection band DL Port4	≥ 32 dB 873-924.8MHz

Intermodulation 2 x 43 dBm: ≤ 110 dBm (153 dBc)

Max input power/port: 43 dBm  
Impedance in/out: 50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	485 x 390 x 400 mm
Connectors:	7/16(f)
Weight:	28 kg

### Environmental Specifications

Temp. range (normal operation):	-20 to +55° C
Humidity:	Relative 5 - 95%
Sealing:	Indoor

Egant reserves the right to change this product specification at any time without notice.

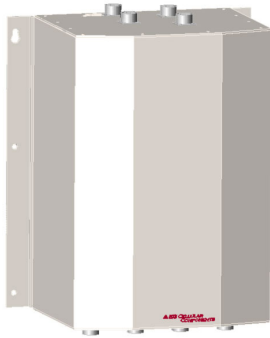
Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se

## **Multi Operator Combiner**

**1 x 800, 900, 2100**

**1 x TETRA**

**4 Inputs to 1 Antenna Ports**



### **Combines 800 / 900 / 2100 / TETRA into 1 antenna port**

The Multi Operator Combiner enables a maximum of 4 Radio Base Stations to connect to the combiner:

1 800 Radio Base Stations

1 900 Radio Base Stations

1 2100 Radio Base Stations

1 TETRA / PMR Radio Base Station

The combiner combines the 4 signals to the 1 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

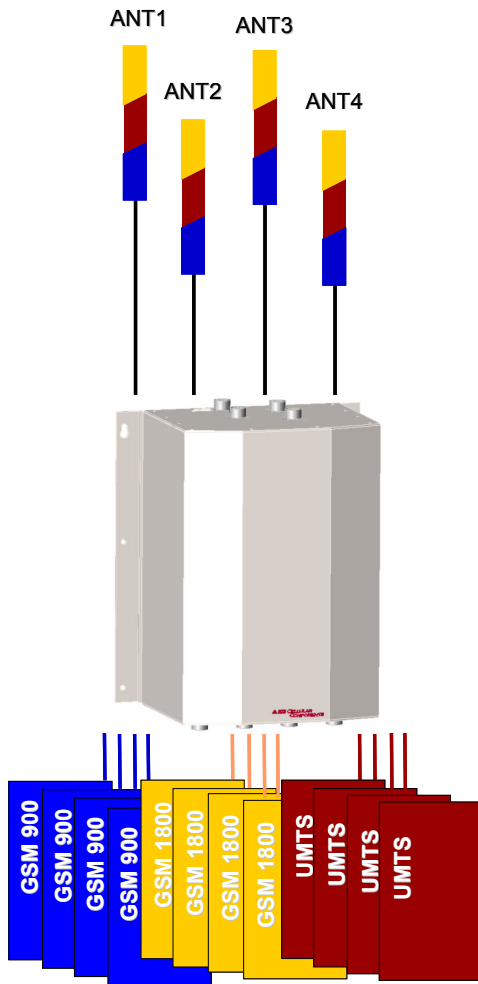
<b>Electrical Specifications</b>	
Product number:	EG 601 0145
Passband:	
Port 1 Tetra	380 - 395 MHz
Port 2 800	790 - 862 MHz
Port 3 900	880 - 960 MHz
Port 4 2100	1920 - 2170 MHz
Insertion loss / Coupling:	
Port 1 - 4 to ANT 1:	≤ 3.5 dB (2dB typ)
Input return loss:	> 16.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	420 x 800 x 180 mm
Connectors:	7/16 (f)
Weight:	18 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3 x 800, 900, 2100**  
**1 x TETRA**



**Combines 800 / 900 / 2100 / TETRA into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 10 Radio Base Stations to connect to the combiner:

- 3 800 Radio Base Stations
- 3 900 Radio Base Stations
- 3 2100 Radio Base Stations
- 1 TETRA / PMR Radio Base Station

The combiner combines the 10 signals to the 4 antenna ports, or splits the signal to the 10 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0146
Passband:	
Port 1 Tetra	380 - 395 MHz
Port 2 800	790 - 862 MHz
Port 3 800	790 - 862 MHz
Port 4 800	790 - 862 MHz
Port 5 900	880 - 960 MHz
Port 6 900	880 - 960 MHz
Port 7 900	880 - 960 MHz
Port 8 2100	1920 - 2170 MHz
Port 9 2100	1920 - 2170 MHz
Port 10 2100	1920 - 2170 MHz

### Insertion loss / Coupling:

Port 1 - to ANT 1 , 4:	≤ 8.5 dB
Port 1 - to ANT 2 , 3:	≤ 12.0 dB
Port 2 - 10 to ANT 1 - 4:	≤ 8.5 dB

### Input return loss:

Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

### Max input power/port:

Impedance in/out:	60 W 50 Ohm
-------------------	----------------

### Mechanical Specifications

Dimensions (W x H x D):	420 x 800 x 180 mm
Connectors:	7/16 (f)
Weight:	28 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1 x TETRA, 3 x GSM900 3 x UMTS**  
**7 Inputs to 2 Antenna Ports**

**Combines 7 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 7 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 3 GSM900 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 7 signals to 2 antenna port, or splits the signal to the 7 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0151
Passband:	
Port 1 TETRA:	376 - 450 MHz
Port 2 GSM900:	890 - 960 MHz
Port 3 GSM900:	890 - 960 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Coupling/Insertion loss:	
Port 1 TETRA - ANT 1 - 2	$\leq 7.9$ dB (7dB typ)
Port 2 - 4 GSM900 - ANT 1 - 2	$\leq 7.9$ dB (7dB typ)
Port 5 - 7UMTS - ANT	$\leq 7.9$ dB (7dB typ)
Input return loss:	$> 17.0$ dB, (typ 20dB)
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB (30dB typ)
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	483 x 140 x 385 mm
Connectors:	7/16 (f)
Weight:	18 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
Fax: +46 (0)70 386 53 53  
E-mail: info@egant.se  
www.egant.se





## **Multi Operator Combiner**

**19" rack**

**1 x TETRA, 3 x GSM900 3 x UMTS**

**7 Inputs to 1 Antenna Ports**

### **Combines 7 RBSs into 1 antenna ports**

This Multi Operator Combiner enables 7 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 3 GSM900 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 7 signals to the 1 antenna port, or splits the signal to the 7 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0123	EG 601 0141
Passband:		
Port 1 TETRA:	376 - 450 MHz	376 - 450 MHz
Port 2 GSM900:	800 - 960 MHz	800 - 960 MHz
Port 3 GSM900:	800 - 960 MHz	800 - 960 MHz
Port 4 GSM900:	800 - 960 MHz	800 - 960 MHz
Port 5 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Coupling/Insertion loss:		
Port 1 TETRA - ANT	≤ 0.5 dB (0.2dB typ)	≤ 0.5 dB (0.2dB typ)
Port 2 GSM900 - ANT	≤ 3.5 dB (3.2dB typ)	≤ 3.5 dB (3.2dB typ)
Port 3 - 4 GSM900 - ANT	≤ 7.0 dB (6.5dB typ)	≤ 7.0 dB (6.5dB typ)
Port 5 UMTS - ANT	≤ 4.0 dB (3.6dB typ)	≤ 4.0 dB (3.6dB typ)
Port 6 - 7 UMTS - ANT	≤ 7.0 dB (6.7dB typ)	≤ 7.0 dB (6.7dB typ)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB (30dB typ)	≥ 25 dB (30dB typ)
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 140 x 385 mm	483 x 220 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	16 kg	20 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1xTetra, 3 x GSM900, 1 x LTE2600,**  
**3 x UMTS**  
**8 Inputs to 1 Antenna Port**



**Combines TETRA / GSM900 / LTE2600 / UMTS into 1 antenna port**

The Multi Operator Combiner enables a maximum of 8 Radio Base Stations to connect to the combiner:

- 1 TETRA
- 3 GSM900 Radio Base Stations
- 1 LTE 2600 Radio Base Station
- 3 UMTS Radio Base Stations

The combiner combines the 8 signals to the 1 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0106
Passband:	
Port 1 TETRA:	376 - 450 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 GSM900:	806 - 960 MHz
Port 5 LTE2600:	2500 - 2690 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 TETRA - ANT 1:	≤ 0.8 dB (0.4dB typ)
Port 2 GSM900 - ANT 1:	≤ 4.9 dB (4.0dB typ)
Port 3 - 4 GSM900 - ANT 1:	≤ 7.5 dB (6.7dB typ)
Port 5 LTE2600 - ANT 1:	≤ 5.3 dB (4.4dB typ)
Port 6 UMTS - ANT 1:	≤ 7.5 dB (6.7dB typ)
Port 7 - 8 UMTS - ANT 1:	≤ 7.5 dB (6.7dB typ)
Input return loss:	> 18.0 dB
Isolation cellular systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	22 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**1 x Tetra, 2 x GSM900, 2 x UMTS,  
3 x LTE2600, 4 x Ant**

### **Combines 8 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

1x Tetra Radio Base Station  
2x GSM900 Radio Base Stations  
2x UMTS2100 Radio Base Station  
3x LTE2600 Radio Base Station

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

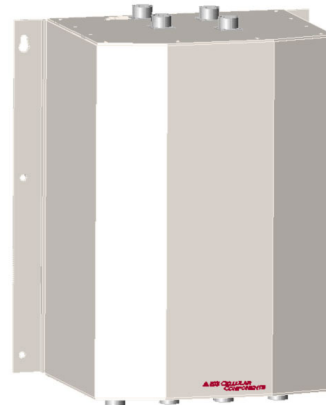
<b>Electrical Specifications</b>	
Product number:	EG 601 0170
Passband:	
Port 1: Tetra	380 - 395 MHz
Port 2: GSM900	890 - 960 MHz
Port 3: GSM900	890 - 960 MHz
Port 4: UMTS2100	1920 - 2170 MHz
Port 5: UMTS2100	1920 - 2170 MHz
Port 6: LTE2600	2500 - 2690 MHz
Port 7: LTE2600	2500 - 2690 MHz
Port 8: LTE2600	2500 - 2690 MHz
Coupling/Insertion loss:	
Port 1 - ANT 1	≤ 6.5 dB, typ 5.3dB
Port 1 - ANT 2	≤ 10.6 dB, typ 9.5dB
Port 1 - ANT 3	≤ 9.2 dB, typ 8dB
Port 1 - ANT 4	≤ 5.0 dB, typ 3.8dB
Port 2 - 8 - ANT 1 - ANT 4	≤ 7.9 dB, typ 6.5dB
Input return loss:	> 16.0 dB
Isolation between systems:	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	483 x 100 x 385 mm
Connectors:	7/16 (f)
Weight:	22 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1 x TETRA, 2 x GSM1800, 3 x UMTS**  
**6 Inputs to 3 Antenna Ports**



**Combines 6 RBSs into 3 antenna ports**

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 2 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 6 signals to the 3 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0103
Passband:	
Port 1 TETRA:	376 - 500 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 UMTS:	1920 - 2170 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 6 to ANT 1 - 3:	≤ 8.0 dB (7dB typical)
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	13 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

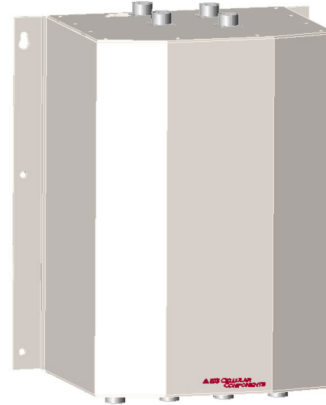
Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**1 x TETRA, 3 x GSM1800, 3 x UMTS**  
**7 Inputs to 8 Antenna Ports**



**Combines 7 RBSs into 8 antenna ports**

This Multi Operator Combiner enables 7 Radio Base Stations to connect to the combiner:

- 1 TETRA Radio Base Station
- 3 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 7 signals to the 8 antenna ports, or splits the signal to the 7 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0104
Passband:	
Port 1 TETRA:	376 - 500 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 7 to ANT 1 - 8:	≤ 11.5 dB (10dB typical)
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	18 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1xTETRA, 3xUMTS2100, 1xANT**  
**4 Inputs - 1 Output**

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 4 signals into 1 antenna port**

This Multi Operator Combiner enables the connection of 4 RBSs/repeaters to the combiner.

The combiner combines the 4 signals to the antenna port, or splits the signal to the 4 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0177
Passband:	
Port 1: TETRA	376 - 395MHz
Port 2: UMTS2100	1920 - 2170MHz
Port 3: UMTS2100	1920 - 2170MHz
Port 4: UMTS2100	1920 - 2170MHz
Coupling/Insertion loss:	
Port 1 - ANT:	0.5 dB, typ 0.2dB
Port 2,3,4 - ANT:	5.4 dB +/- 0.9dB
Input return loss:	> 18.0 dB
Isolation between same systems:	$\geq$ 20 dB
Max input power/port:	60 W
Impedance in/out:	50 Ohm
Intermodulation:	
IM3, 2 x 43 dBm:	<-153dBc
<b>Mechanical Specifications</b>	
Dimensions:	19" rack 2 HU
Connectors:	7/16 (f)
Weight:	12kg

### Environmental Specifications

Temp. range (normal operation):	-5 to +55° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1xTETRA, 1xUMTS, 1xLTE**  
**1xAntenna port**

### **Combines 3 RBSs into 1 antenna port**

This Multi Operator Combiner enables the connection of 3 Radio Base Stations to the combiner:

- 1 TETRA Radio Base Station
- 1 UMTS Radio Base Station
- 1 LTE2600 Radio Base Station

The MOC combines the 3 signals to 1 antenna port, or splits the signal to the 3 RBSs in the receiving direction.

This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Reduces cost**

By utilizing our multi operator combiner you will reduce the cost of antennas, feeders and installation.

It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the MOC

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0136
Passband:	
Port 1: TETRA	380 - 500 MHz
Port 2: UMTS	1920 - 2170 MHz
Port 3: LTE2600	2500 - 2690 MHz
Insertion loss:	
Port 1: TETRA - ANT	≤ 0.3 dB
Port 2: UMTS - ANT	≤ 0.8 dB
Port 3: LTE - ANT	≤ 0.7 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Max input power/port:	< 100 W
Impedance in/out:	50 Ohm
Intermodulation:	
IM3, 2 x 43 dBm:	≤ -110 dBm (153 dBc)

### Mechanical Specifications

Dimensions :	19" rack 2 HU
Connectors:	7/16 (f)
Weight:	7.6 kg

### Environmental Specifications

Temp. range (normal operation):	-40 to +65° C
Humidity:	Relative 5 - 100%
Sealing:	IP65

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2x TETRA/CDMA, 1x GSM900,**  
**3xGSM1800, 2xUMTS**  
**8 Ports In - 4 Ports Out**



**Save money by installing our Multi Operator Combiner**

**Combines 12 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 12 Radio Base Stations to connect to the combiner:

- 2 TETRA/CDMA
- 1 GSM900 / CDMA Radio Base Stations
- 3 GSM1800 Radio Base Stations
- 2 UMTS Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0079
Passband:	
Port 1 TETRA / CDMA:	376 - 500 MHz
Port 2 TETRA / CDMA:	376 - 500 MHz
Port 3 GSM900:	824 - 960 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz

### Insertion loss:

Port 1 - 2 TETRA / CDMA:	$\leq 7.9$ dB (7 dB typ)
Port 3 GSM900 - ANT 1 - 4:	$\leq 7.9$ dB (7 dB typ)
Port 4 - 6 GSM1800 - ANT 1 - 4:	$\leq 7.9$ dB (7 dB typ)
Port 7 - 8 UMTS - ANT 1 - 4:	$\leq 7.9$ dB (7 dB typ)

### Input return loss:

$> 16.0$  dB

### Isolation between systems:

$\geq 35$  dB

### Isolation between same systems:

$\geq 25$  dB

### Intermodulation 2 x 43 dBm:

$\leq 110$  dBm (153 dBc)

### Max input power/port:

20 W

### Impedance in/out:

50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	494 x 214 x 500 mm
Connectors:	7/16 (f)
Weight:	24 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.



Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**698 - 2700MHz**  
**3 Inputs - 1 Output**

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 3 signals into 1 antenna port**

This Multi Operator Combiner enables the connection of 3 RBSs/repeaters to the combiner.

The combiner combines the 3 signals to the antenna port, or splits the signal to the 3 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## **Technical Specifications for the Multi Operator Combiner**

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0172
Passband:	698- 2700 MHz
Coupling/Insertion loss:	
Port 1 - 3 - ANT:	
698 - 2200MHz	4.8 dB +/- 0,8dB
2200 - 2700MHz	4.8 dB +/- 1,3dB
Input return loss:	> 18.0 dB
Isolation between same systems:	≥ 25 dB
Max input power/port:	150 W
Impedance in/out:	50 Ohm
Intermodulation:	
IM3, 2 x 43 dBm:	<-153dBc
<b>Mechanical Specifications</b>	
Dimensions:	19" rack 2 HU
Connectors:	7/16 (f)
Weight:	8 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**700 - 2700 MHz**  
**4 Inputs - 1 Antenna port**

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 4 signals into 1 antenna port**

This Multi Operator Combiner enables the connection of 4 RBSs/repeaters to the combiner.

The combiner combines the 4 signals to the antenna port, or splits the signal to the 4 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0190
Passband:	700- 2700 MHz
Coupling/Insertion loss:	
Port 1 - 4 - ANT:	7 dB +/- 0,8dB
Input return loss:	
Isolation between same systems:	> 22.0 dB, typ 26dB ≥ 30 dB
Max input power/port:	1 W
Impedance in/out:	50 Ohm
Intermodulation:	
IM3, 2 x 43 dBm:	<-153dBc
<b>Mechanical Specifications</b>	
Dimensions:	19" rack 2 HU
Connectors:	7/16 (f)
Weight:	12kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**700 - 2700MHz**  
**4 Inputs, 2-ANT / 3-ANT**

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 4 x 700-2700MHZ signals into 2 or 3 antenna port**

This Multi Operator Combiner enables the connection of 4 RBSs/repeaters to the combiner.

The combiner combines the 4 signals to the antenna ports, or splits the signal to the 4 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0195	EG 601 0196
Passband:	700 - 2700 MHz	700 - 2700 MHz
Antenna Ports:	2 x Antenna	3 x Antenna
Coupling/Insertion loss:		
Port 1 - 4 - ANT:	6.0 dB +/- 0,8dB	6.0 dB +/- 0,8dB
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between ports:	≥ 25 dB	≥ 25 dB
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	450 x 115 x 305 mm	450 x 115 x 305 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	11 kg	9 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-20 to +65° C	-20 to +65° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner  
2xLTE800/CDMA800/GSM900,  
2xGSM1800, 2xUMTS2100, 4xANT  
6 Inputs to 4 Antenna Port**



**Combines 791-960 / GSM1800/ UMTS2100  
into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 6 Radio Base Stations to connect to the combiner:

- 2 x LTE800/CDMA800/GSM900  
Radio Base Stations
- 2 x GSM1800 Radio Base Stations
- 2 x UMTS2100 Radio Base Stations

The combiner combines the 6 signals to the 4 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0201	EG 601 0202
Model:	19" rack	Inline
Passband:		
Port 1 LTE800/CDMA800/900:	791 - 960 MHz	791 - 960 MHz
Port 2 LTE800/CDMA800/900:	791 - 960 MHz	791 - 960 MHz
Port 3 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 5 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:		
Port 1 - 6 - ANT 1 - 4:	≤ 1.5 dB	≤ 1.5 dB
Coupling:		
Port 1 - 6 - ANT 1 - 4:	6.2dB +/- 0.3 dB	6.2dB +/- 0.3 dB
Input return loss:		
Port 1 - 6	> 16.0 dB	> 16.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 23 dB, typ 30dB	≥ 23 dB, typ 30dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	100 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	300 x 180 x 480 mm	300 x 180 x 480 mm
Connectors:	N (f)	N (f)
Weight:	19 kg	19 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +65° C	-30 to +65° C
Humidity:	Relative 5 - 95%	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





## **Multi Operator Combiner**

**19" rack**

**4 x 790 - 960MHz**

**4 x 1710 - 2170MHz, 4 x Ant**

### **Combines 8 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

4 x LTE800/GSM900 Radio Base Stations

4 x GSM1800/UMTS2100 Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signals to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0174	EG 601 0175
Passband:		
Port 1:	790 - 960 MHz	790 - 960 MHz
Port 2:	790 - 960 MHz	790 - 960 MHz
Port 3:	790 - 960 MHz	790 - 960 MHz
Port 4:	790 - 960 MHz	790 - 960 MHz
Port 5:	1710- 2170 MHz	1710- 2170 MHz
Port 6:	1710- 2170 MHz	1710- 2170 MHz
Port 7:	1710- 2170 MHz	1710- 2170 MHz
Port 8:	1710- 2170 MHz	1710- 2170 MHz
Coupling/Insertion loss:		
Port 1 - Port 8 - ANT 1 - ANT 4	≤7.8 dB (6.8 dB typ)	≤7.8 dB (6.8 dB typ)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB (30dB typ)	≥ 25 dB (30dB typ)
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	100 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 140 x 385 mm	483 x 140 x 385 mm
Connectors:	N (f)	7/16 (f)
Weight:	16 kg	16.5 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-10 to +65° C	-10 to +65° C
Humidity:	Relative 5 - 85%	Relative 5 - 85%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**4 x 790-960MHz, 4xGSM1800,**  
**4xUMTS, 4xLTE, 4xANT**  
**16 Inputs to 4 Antenna Ports**



**Combines 790-960Mhz / GSM1800 / UMTS/  
LTE into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 4 LTE800/GSM900/UMTS900 Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations
- 4 LTE Radio Base Stations

The combiner combines the 16 signals to the 4 antenna ports, or splits the signal to the 16 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0133
Passband:	
Port 1 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 2 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 3 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 4 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 UMTS:	1920 - 2170 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz
Port 13 LTE:	2500 - 2690 MHz
Port 14 LTE:	2500 - 2690 MHz
Port 15 LTE:	2500 - 2690 MHz
Port 16 LTE:	2500 - 2690 MHz

Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 1.0 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	≤ 1.0 dB
Port 9 - 12 UMTS - ANT 1 - 4:	≤ 1.0 dB
Port 13 - 16 LTE - ANT 1 - 4:	≤ 1.0 dB

Coupling (1 INPUT 4 - OUT):	
Port 1 - 4 GSM900 - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Port 9 - 12 UMTS - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Port 13 - 16 LTE - ANT 1 - 4:	6.3 dB +/- 0.5 dB

Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	26 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**5 x Input,**  
**LTE800, GSM900, LTE1800**  
**UMTS2100, LTE2600**  
**1 x Antenna Ports**

**Combines up to 5 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 5 Radio Base Stations to connect to the combiner:

- 1 x LTE800 Radio Base Stations
- 1 x GSM900 Radio Base Stations
- 1 x LTE1800 Radio Base Stations
- 1 x UMTS2100 Radio Base Stations
- 1 x LTE2600 Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in a box optimized for wall mounting, also equipped with a grounding-point.

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0132
Passband:	
Port 1: LTE800	790 - 862 MHz
Port 2: GSM900	880 - 960 MHz
Port 3: LTE1800	1710 - 1880 MHz
Port 4: UMTS2100	1920 - 2200 MHz
Port 5: LTE2600	2500 - 2690 MHz
Insertion loss:	
Port 1: - ANT 1	<1.2 dB, typ 0.6 dB
Port 2: - ANT 1	<1.2 dB, typ 0.6 dB
Port 3: - ANT 1	<1.0 dB, typ 0.4 dB
Port 4: - ANT 1	<1.0 dB, typ 0.4 dB
Port 5: - ANT 1	<1.0 dB, typ 0,4 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 140 x 435 mm
Connectors:	7/16(f)
Weight:	16 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%
Sealing:	IP65

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**5 x Input**  
**1 x Antenna Port**

**Combines up to 5 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 5 Radio Base Stations to connect to the combiner:

- 1 x LTE800 Radio Base Stations
- 1 x GSM900 Radio Base Stations
- 1 x GSM1800 Radio Base Stations
- 1 x UMTS2100 Radio Base Stations
- 1 x LTE2600 Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in a box optimized for wall mounting, also equipped with a grounding-point.

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0191
Passband:	
Port 1: LTE800	790 - 862 MHz
Port 2: GSM900	880 - 960 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: UMTS	1920 - 2170 MHz
Port 5: LTE2600	2500 - 2690 MHz
Insertion loss:	
Port 1: - ANT	<2.8 dB, typ 2,2 dB
Port 2: - ANT	<2.8 dB, typ 2,2 dB
Port 3: - ANT	<1.6 dB, typ 1,2 dB
Port 4: - ANT	<1.6 dB, typ 1,2 dB
Port 5: - ANT	<0.7 dB, typ 0,3 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 140 x 435 mm
Connectors:	7/16(f)
Weight:	16 kg

### Environmental Specifications

Temp. range (normal operation):	-20 to +65° C
Humidity:	Relative 5 - 100%
Sealing:	IP65

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





### **Multi Operator Combiner**

**1 x 790 - 862, 1 x 870 - 960,**

**1 x 1710 - 1880, 1 x 1920 - 2170**

**1 x 2490 -2690**

**1 x Antenna port**

### **Combines 5 RBSs into 1 antenna port**

This Multi Operator Combiner enables 5 Radio Base Stations to connect to the combiner:

1 LTE800 Radio Base Station

1 GSM900 Radio Base Station

1 GSM1800 Radio Base Station

1 UMTS2100 Radio Base Station

1 LTE2600 Radio Base Station

The combiner combines the 5 signals to the 1 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

	Single Unit	Double Unit
<b>Electrical Specifications</b>		
Product number:	EG 601 0162	EG 601 0163
Passband:		
Port 1:	790 - 862 MHz	790 - 862 MHz
Port 2:	870 - 960 MHz	870 - 960 MHz
Port 3:	1710 - 1880 MHz	1710 - 1880 MHz
Port 4:	1920 - 2170 MHz	1920 - 2170 MHz
Port 5:	2490 - 2690 MHz	2490 - 2690 MHz
Insertion loss:		
Port 1 - ANT	≤ 0.9 dB (0.5dB typ)	≤ 0.9 dB (0.5dB typ)
Port 2 - ANT	≤ 0.9 dB (0.5dB typ)	≤ 0.9 dB (0.5dB typ)
Port 3 - ANT	≤ 0.3 dB (0.15dB typ)	≤ 0.3 dB (0.15dB typ)
Port 4 - ANT	≤ 0.3 dB (0.15dB typ)	≤ 0.3 dB (0.15dB typ)
Port 5 - ANT	≤ 0.3 dB (0.15dB typ)	≤ 0.3 dB (0.15dB typ)
Input return loss:	> 16.0 dB	> 16.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	300 W	300 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 100 x 385 mm	483 x 150 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	7.5 kg	15 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%
Egant reserves the right to change this product specification at any time without notice.		

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**1 x 790 - 862, 1 x 870 - 960,**

**1 x 1710 - 2170, 1 x 2490 - 2690**

**1 x Antenna port**

### **Combines 4 RBSs into 1 antenna port**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

1 LTE800 Radio Base Station

1 GSM900 Radio Base Station

1 GSM1800/UMTS Radio Base Station

1 LTE2600 Radio Base Station

The combiner combines the 4 signals to the 1 antenna port, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

	Single Unit	Double Unit
<b>Electrical Specifications</b>		
Product number:	EG 601 0160	EG 601 0161
Passband:		
Port 1:	790 - 862 MHz	790 - 862 MHz
Port 2:	870 - 960 MHz	870 - 960 MHz
Port 3:	1710 - 2170 MHz	1710 - 2170 MHz
Port 4:	2490 - 2690 MHz	2490 - 2690 MHz
Insertion loss:		
Port 1 - ANT	≤ 0.9 dB (0.5dB typ)	≤ 0.9 dB (0.5dB typ)
Port 2 - ANT	≤ 0.9 dB (0.5dB typ)	≤ 0.9 dB (0.5dB typ)
Port 3 - ANT	≤ 0.3 dB (0.15dB typ)	≤ 0.3 dB (0.15dB typ)
Port 4 - ANT	≤ 0.3 dB (0.15dB typ)	≤ 0.3 dB (0.15dB typ)
Input return loss:	> 16.0 dB	> 16.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	300 W	300 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	483 x 100 x 385 mm	483 x 150 x 385 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	7 kg	14 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%
Egant reserves the right to change this product specification at any time without notice.		

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3xLTE800, 3xGSM900,2xUMTS2100,**  
**1xANT**  
**8 Inputs to 1 Antenna Port**



**Combines LTE800 / GSM900 / UMTS2100**  
**into 1 antenna port**

The Multi Operator Combiner enables a maximum of 8 Radio Base Stations to connect to the combiner:

- 3 x LTE800 Radio Base Stations
- 3x GSM900 Radio Base Stations
- 2 x UMTS2100 Radio Base Stations

The combiner combines the 8 signals to 1 antenna port, or splits the signal to the 8 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0140
Passband:	
Port 1 LTE800:	790 - 862 MHz
Port 2 LTE800:	790 - 862 MHz
Port 3 LTE800:	790 - 862 MHz
Port 4 GSM900:	880 - 960 MHz
Port 5 GSM900:	880 - 960 MHz
Port 6 GSM900:	880 - 960 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Insertion loss / Coupling:	
Port 1 - 6 - ANT:	≤ 8 dB (typ 6.8 dB)
Port 7 - 8 - ANT:	≤ 4.5 dB (typ 3.5 dB)
Input return loss:	> 16.0 dB, (typ 20 dB)
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	20 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 180 x 400 mm
Connectors:	7/16 (f)
Weight:	22 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3xLTE800, 3xGSM900, 3xGSM1800,**  
**3xUMTS2100, 1xANT**  
**12 Inputs to 1 Antenna Port**



**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 into 1 antenna port**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 3 x LTE800 Radio Base Stations
- 3 x GSM900 Radio Base Stations
- 3 x GSM1800 Radio Base Stations
- 3 x UMTS2100 Radio Base Stations

The combiner combines the 12 signals to the 1 antenna port, or splits the signal to the 12 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0197
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz

### Insertion loss:

Port 1 - 6 - ANT:	$\leq 1.5$ dB
Port 7 - 12 - ANT:	$\leq 1.0$ dB

### Coupling:

Port 1 - 12 - ANT:	5.3 dB +/- 0.5 dB
--------------------	-------------------

### Input return loss:

Port 1 - 6	$> 16.0$ dB
Port 7 - 12	$> 18.0$ dB

Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 23$ dB, typ 30dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	27 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +65° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**3xLTE800, 3xGSM900, 3xGSM1800,**  
**3xUMTS2100, 2xANT**  
**12 Inputs to 2 Antenna Port**

**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 into 2 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 3 x LTE800 Radio Base Stations
- 3 x GSM900 Radio Base Stations
- 3 x GSM1800 Radio Base Stations
- 3 x UMTS2100 Radio Base Stations

The combiner combines the 12 signals to the 2 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0213
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 6 - ANT 1-2:	≤ 1.5 dB
Port 7 - 12 - ANT 1-2:	≤ 1.0 dB
Coupling:	
Port 1 - 12 - ANT 1-2:	5.3 dB +/- 0.5 dB
Input return loss:	
Port 1 - 6	> 16.0 dB
Port 7 - 12	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 23 dB, typ 30dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	19" rack 550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	27 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +65° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3xLTE800, 3xGSM900 4xGSM1800,**  
**4xUMTS2100, 2xANT**  
**14 Inputs to 2 Antenna Ports**



**Combines LTE800 / GSM900 / GSM1800 / UMTS2100 into 2 antenna ports**

The Multi Operator Combiner enables a maximum of 14 Radio Base Stations to connect to the combiner:

- 3 x LTE800 Radio Base Stations
- 3 x GSM900 Radio Base Stations
- 4 x GSM1800 Radio Base Stations
- 4 x UMTS2100 Radio Base Stations

The combiner combines the 14 signals to the 2 antenna ports, or splits the signal to the 14 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0152
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 GSM1800:	1710 - 1880 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz
Port 13 UMTS:	1920 - 2170 MHz
Port 14 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 14 - ANT 1 - 2:	$\leq 1.1$ dB
Coupling:	
Port 1 - 14 - ANT 1 - 2:	6.3 dB +/- 0.5 dB
Input return loss:	
Port 1 - 14	$> 17.0$ dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	33 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3xLTE800, 3xGSM900, 3xGSM1800,**  
**3xUMTS2100, 4xANT**  
**12 Inputs to 4 Antenna Port**

**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 3 x LTE800 Radio Base Stations
- 3 x GSM900 Radio Base Stations
- 3 x GSM1800 Radio Base Stations
- 3 x UMTS2100 Radio Base Stations

The combiner combines the 12 signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0215
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 6 - ANT 1-4:	≤ 1.5 dB
Port 7 - 12 - ANT 1-4:	≤ 1.0 dB
Coupling:	
Port 1 - 12 - ANT 1-4:	6.4 dB +/- 0.5 dB
Input return loss:	
Port 1 - 6	> 16.0 dB
Port 7 - 12	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 23 dB, typ 30dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	19" rack 550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	27 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +65° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**4xLTE800, 4xGSM900 4xGSM1800,**  
**4xUMTS2100, 2xANT**  
**16 Inputs to 2 Antenna Ports**



**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 into 2 antenna ports**

The Multi Operator Combiner enables a maximum of 20 Radio Base Stations to connect to the combiner:

- 4 x LTE800 Radio Base Stations
- 4 x GSM900 Radio Base Stations
- 4 x GSM1800 Radio Base Stations
- 4 x UMTS2100 Radio Base Stations

The combiner combines the 16 signals to the 2 antenna ports, or splits the signal to the 16 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0157
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 LTE800:	791 - 862 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM900:	890 - 960 MHz
Port 8 GSM900:	890 - 960 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 GSM1800:	1710 - 1880 MHz
Port 11 GSM1800:	1710 - 1880 MHz
Port 12 GSM1800:	1710 - 1880 MHz
Port 13 UMTS:	1920 - 2170 MHz
Port 14 UMTS:	1920 - 2170 MHz
Port 15 UMTS:	1920 - 2170 MHz
Port 16 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 8 - ANT 1 - 2:	≤ 1.5 dB
Port 9 - 16 - ANT 1 - 2:	≤ 1.0 dB
Coupling:	
Port 1 - 16 - ANT 1 - 2:	6.3 dB +/- 0.5 dB
Input return loss:	
Port 1 - 8	> 16.0 dB
Port 9 - 16	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	31 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**4xLTE800, 4xGSM900 4xGSM1800,**  
**4xUMTS2100, 4xANT**  
**16 Inputs to 4 Antenna Ports**



**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 20 Radio Base Stations to connect to the combiner:

- 4 x LTE800 Radio Base Stations
- 4 x GSM900 Radio Base Stations
- 4 x GSM1800 Radio Base Stations
- 4 x UMTS2100 Radio Base Stations

The combiner combines the 16 signals to the 4 antenna ports, or splits the signal to the 16 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0156
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 LTE800:	791 - 862 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM900:	890 - 960 MHz
Port 8 GSM900:	890 - 960 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 GSM1800:	1710 - 1880 MHz
Port 11 GSM1800:	1710 - 1880 MHz
Port 12 GSM1800:	1710 - 1880 MHz
Port 13 UMTS:	1920 - 2170 MHz
Port 14 UMTS:	1920 - 2170 MHz
Port 15 UMTS:	1920 - 2170 MHz
Port 16 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 8 - ANT 1 - 4:	≤ 1.5 dB
Port 9 - 16 - ANT 1 - 4:	≤ 1.0 dB
Coupling (1 INPUT 4 - OUT):	
Port 1 - 16 - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Input return loss:	
Port 1 - 8	> 16.0 dB
Port 9 - 16	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	31 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2x800, 2x900, 2x1800, 2x2100,**  
**2x2600, 2xANT**  
**10 Inputs to 2 Antenna Ports**



**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 and LTE2600 into 2 antenna  
ports**

The Multi Operator Combiner enables a maximum of 10 Radio Base Stations to connect to the combiner:

- 2 x LTE800 Radio Base Stations
- 2 x GSM900 Radio Base Stations
- 2 x GSM1800 Radio Base Stations
- 2 x UMTS2100 Radio Base Stations
- 2 x LTE2600 Radio Base Stations

The combiner combines the 10 signals to the 2 antenna ports, or splits the signal to the 10 RBSs in the receiving direction. This is a very important function when designing shared antenna systems

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0209
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 GSM900:	890 - 960 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 UMTS2100:	1920 - 2170 MHz
Port 8 UMTS2100:	1920 - 2170 MHz
Port 9 LTE2600:	2500 - 2690 MHz
Port 10 LTE2600:	2500 - 2690 MHz
Insertion loss:	
Port 1 - 4 - ANT:	$\leq 1.5$ dB, typ 0.8dB
Port 5 - 10 - ANT:	$\leq 1.0$ dB, typ 0.3dB
Coupling:	
Port 1 - 10 - ANT:	3.3 dB +/- 0.5 dB
Input return loss:	
Port 1 - 4	> 16.0 dB
Port 5 - 10	> 18.0 dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB, typ 30dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	27 kg

### Environmental Specifications

Temp. range (normal operation):	-20 to +65° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner  
3x800, 3x900, 3x1800, 3x2100,  
3x2600, 3xANT  
15 Inputs to 3 Antenna Ports**



**Combines LTE800 / GSM900 / GSM1800/  
UMTS2100 and LTE2600 into 3 antenna  
ports**

The Multi Operator Combiner enables a maximum of 15 Radio Base Stations to connect to the combiner:

- 3 x LTE800 Radio Base Stations
- 3 x GSM900 Radio Base Stations
- 3 x GSM1800 Radio Base Stations
- 3 x UMTS2100 Radio Base Stations
- 3 x LTE2600 Radio Base Stations

The combiner combines the 15 signals to the 3 antenna ports, or splits the signal to the 15 RBSs in the receiving direction. This is a very important function when designing shared antenna systems

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0210
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 UMTS2100:	1920 - 2170 MHz
Port 11 UMTS2100:	1920 - 2170 MHz
Port 12 UMTS2100:	1920 - 2170 MHz
Port 13 LTE2600:	2500 - 2690 MHz
Port 14 LTE2600:	2500 - 2690 MHz
Port 15 LTE2600:	2500 - 2690 MHz
Insertion loss:	
Port 1 - 6 - ANT:	≤ 1.5 dB, typ 0.8dB
Port 7 - 15 - ANT:	≤ 1.0 dB, typ 0.3dB
Coupling:	
Port 1 - 15 - ANT:	4.8 dB +/- 0.8 dB
Input return loss:	
Port 1 - 6	> 16.0 dB
Port 7 - 15	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 23 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	27 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-20 to +65° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**4xLTE800, 4xGSM900 4xGSM1800,**  
**4xUMTS2100, 4xLTE2600, 4xANT**  
**20 Inputs to 4 Antenna Ports**



**Combines LTE800 / GSM900 / GSM900/  
UMTS2100 / LTE2600 into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 20 Radio Base Stations to connect to the combiner:

- 4 x LTE800 Radio Base Stations
- 4 x GSM900 Radio Base Stations
- 4 x GSM1800 Radio Base Stations
- 4 x UMTS2100 Radio Base Stations
- 4 x LTE2600 Radio Base Stations

The combiner combines the 20 signals to the 4 antenna ports, or splits the signal to the 20 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0139
Passband:	
Port 1 LTE800:	791 - 862 MHz
Port 2 LTE800:	791 - 862 MHz
Port 3 LTE800:	791 - 862 MHz
Port 4 LTE800:	791 - 862 MHz
Port 5 GSM900:	890 - 960 MHz
Port 6 GSM900:	890 - 960 MHz
Port 7 GSM900:	890 - 960 MHz
Port 8 GSM900:	890 - 960 MHz
Port 9 GSM1800:	1710 - 1880 MHz
Port 10 GSM1800:	1710 - 1880 MHz
Port 11 GSM1800:	1710 - 1880 MHz
Port 12 GSM1800:	1710 - 1880 MHz
Port 13 UMTS:	1920 - 2170 MHz
Port 14 UMTS:	1920 - 2170 MHz
Port 15 UMTS:	1920 - 2170 MHz
Port 16 UMTS:	1920 - 2170 MHz
Port 17 LTE2600:	2500 - 2690 MHz
Port 18 LTE2600:	2500 - 2690 MHz
Port 19 LTE2600:	2500 - 2690 MHz
Port 20 LTE2600:	2500 - 2690 MHz

### Insertion loss:

Port 1 - 8 - ANT 1 - 4:	$\leq 1.5$ dB
Port 9 - 20 - ANT 1 - 4:	$\leq 1.0$ dB

### Coupling (1 INPUT 4 - OUT):

Port 1 - 20 - ANT 1 - 4:	6.3 dB +/- 0.5 dB
--------------------------	-------------------

### Input return loss:

Port 1 - 8	$> 16.0$ dB
Port 9 - 20	$> 18.0$ dB

### Isolation between systems:

Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

### Max input power/port:

Impedance in/out:	40 W
	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	550 x 180 x 500 mm
Connectors:	7/16 (f)
Weight:	33 kg

### Environmental Specifications

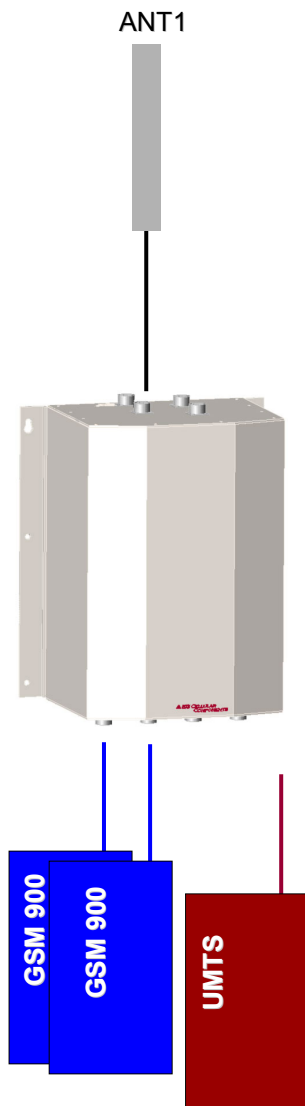
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2 x GSM900, 1 x UMTS**  
**3 Inputs to 1 Antenna Port**



**Combines 3 RBSs into 1 antenna port**

This Multi Operator Combiner enables 3 Radio Base Stations to connect to the combiner:

- 2 GSM900 Radio Base Stations
- 1 UMTS Radio Base Station

The combiner combines the 3 signals to the antenna port, or splits the signal to the 3 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0026
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 2 GSM900 - ANT 1:	$\leq 3.5$ dB (typ 3.3 dB)
Port 3 UMTS - ANT 1:	$\leq 0.3$ dB
Input return loss:	
	$> 18.0$ dB
Isolation between systems:	
	$\geq 50$ dB
Isolation between same systems:	
	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	
	$\leq 110$ dBm (153 dBc)
Max input power/port:	
	60 W
Impedance in/out:	
	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	5 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## Multi Operator Combiner

2 x CDMA800/GSM900

4 x GSM1800

4 x Antenna Ports

4 x Monitor Ports

### Combines 6 RBSs into 4 antenna ports

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

2 x CDMA800/GSM900 Radio Base Stations

4 x GSM1800 Radio Base Stations

The combiner combines the 6 signals to the 4 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### Save money by installing our Multi Operator Combiner

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### Monitoring ports

This product comes equipped with four -30dB monitoring ports (N(f))

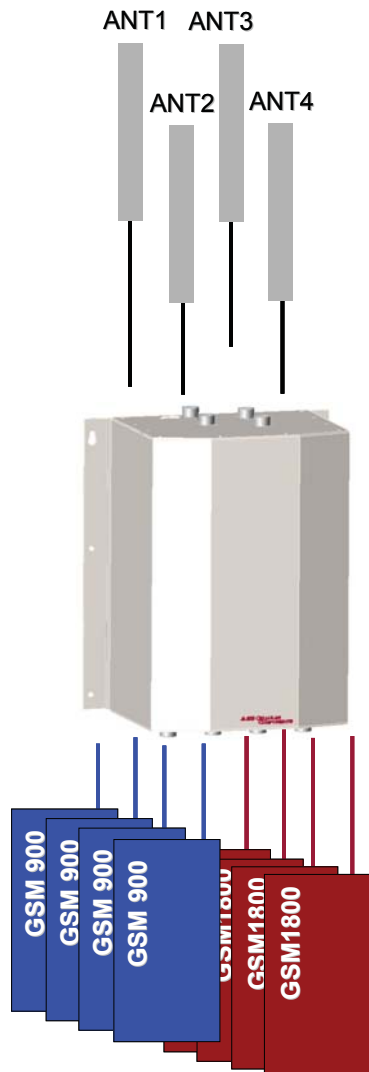
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0084
Passband:	
Port 1 CDMA800/GSM900:	806 - 960 MHz
Port 2 CDMA800/GSM900:	806 - 960 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Insertion loss:	
Port 1 - 2 CDMA800/GSM900 - ANT 1 - 4:	
Port 3 - 6 GSM1800 - ANT 1 - 4:	≤ 1.2 dB
	≤ 1.2 dB
Coupling:	
Port 1 - 2 CDMA800/GSM900 - ANT 1 - 4:	
Port 3 - 6 GSM1800 - ANT 1 - 4:	6.0 dB +/- 0.6 dB
	6.0 dB +/- 0.6 dB
Input return loss:	
Isolation between systems:	> 18.0 dB
Isolation between same systems:	≥ 50 dB
Intermodulation 2 x 43 dBm:	≥ 25 dB
	≤ 110 dBm (153 dBc)
Max input power/port:	
Impedance in/out:	60 W
	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	450 x 250 x 500 mm
Input connectors:	7/16 (f)
Antenna connectors:	N(f)
Monitoring Ports (-30dB)	N(f)
Weight:	15 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

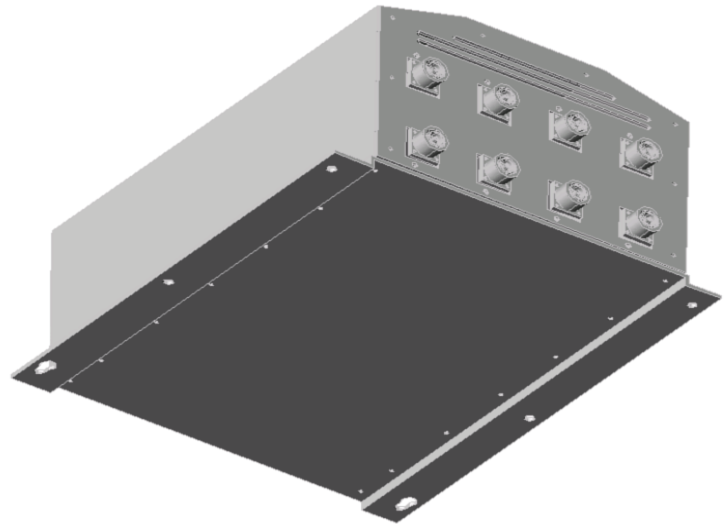
Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: [info@egant.se](mailto:info@egant.se)  
[www.egant.se](http://www.egant.se)



## Multi Operator Combiner

4 x GSM900, GSM1800  
8 Inputs to 4 Antenna Ports



### Save money by installing our Multi Operator Combiner

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### Combines 8 RBSs into 4 antenna ports

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

- 4 GSM900 Radio Base Stations
- 4 1800 Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

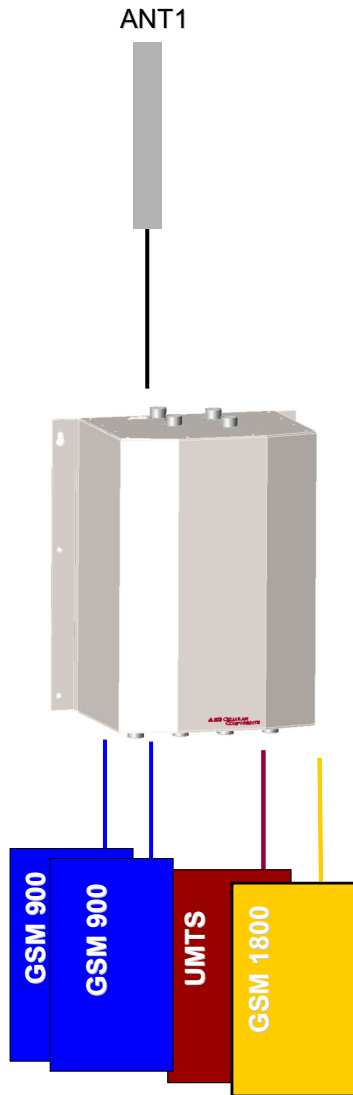
Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 100 4206
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 GSM900:	806 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 7.0 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	≤ 7.0 dB
Input return loss:	
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	15 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se

**Multi Operator Combiner**  
**2 x GSM900, 1 x GSM1800 1 x UMTS**  
**4 Inputs to 1 Antenna Port**



**Combines 4 RBSs into 1 antenna port**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 2 GSM900 Radio Base Stations
- 1 GSM1800 Radio Base Station
- 1 UMTS Radio Base Station

The combiner combines the 4 signals to the antenna port, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0028
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM1800:	1710 -1880 MHz
Port 4 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 2 GSM900 - ANT 1:	≤ 3.5 dB (typ 3.3 dB)
Port 3 GSM1800 - ANT 1:	≤ 0.3 dB
Port4 UMTS - ANT 1:	≤ 0.5 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	7 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

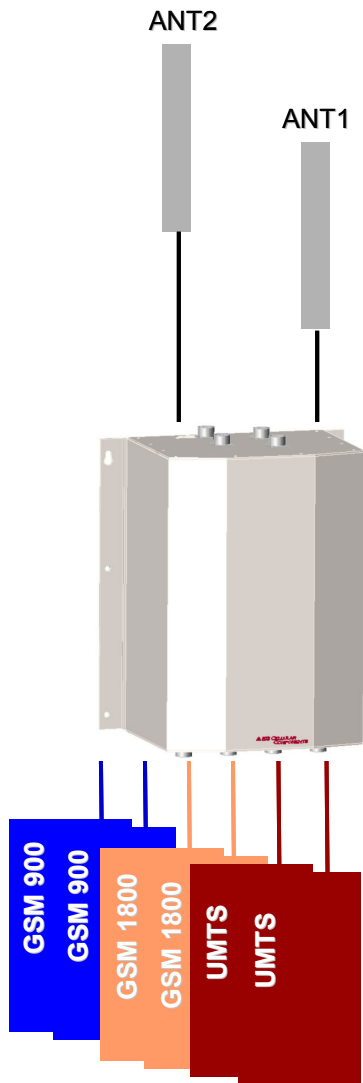
Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
2 x GSM900, GSM1800, UMTS  
6 Inputs to 2 Antenna Ports



**Combines 6 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

- 2 GSM900 Radio Base Stations
- 2 GSM1800 Radio Base Stations
- 2 UMTS Radio Base Stations

The combiner combines the 6 signals to the 2 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 100 4201
Passband:	
Port1 GSM900:	806 - 960 MHz
Port2 GSM900:	806 - 960 MHz
Port3 GSM1800:	1710 - 1880 MHz
Port4 GSM1800:	1710 - 1880 MHz
Port5 UMTS:	1920 - 2170 MHz
Port6 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 + 2 GSM900 - ANT 1 + 2:	≤ 4.0 dB (3.3 dB typ)
Port 3 + 4 GSM1800 - ANT 1 + 2:	≤ 4.0 dB (3.4 dB typ)
Port 5 + 6 UMTS - ANT 1 + 2:	≤ 4.0 dB (3.5 dB typ)
Input return loss:	> 20.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

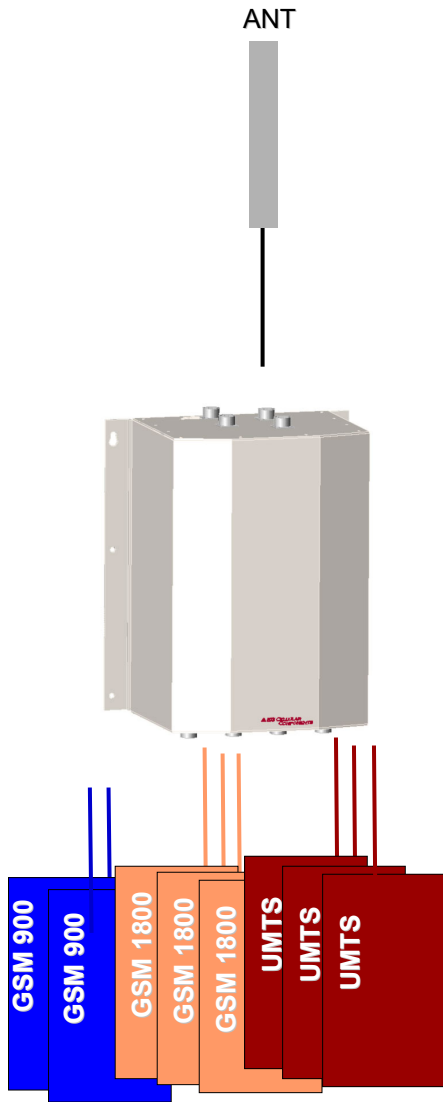
Dimensions (W x H x D):	350 x 400 x 220 mm
Connectors:	7/16 (f)
Weight:	12 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3xUMTS, 3xGSM1800, 2xGSM900**  
**8 Inputs to 1 Antenna Port**

**Combines 8 RBS's into 1 Antenna-port.**

The Multi Operator Combiner allows you to connect up to 8 Radio Base Stations to the Combiner.

4 UMTS Radio Base Stations

4 GSM1800 Radio Base Stations

2 GSM900 Radio Base Stations

The Combiner combines the 8 signals to the 1-Antenna port or in the receiving way splits the signal to the 8 RBS's.

This is an extremely important function when you are designing shared antenna systems and like to connect multiple RBS's to the same antennas.

## **Technical Specifications for the Multi Operator Combiner**

Below are some typical data. For more detailed information, please contact us.

### **Electrical Specifications**

Product number:	EG 601 0034
Passband	
Port 1 GSM900:	806 - 960MHz
Port 2 GSM900:	806 - 960MHz
Port 3 UMTS:	1920 - 2170MHz
Port 4 UMTS:	1920 - 2170MHz
Port 5 UMTS:	1920 - 2170MHz
Port 6 GSM1800:	1710 - 1880MHz
Port 7 GSM1800:	1710 - 1880MHz
Port 8 GSM1800:	1710 - 1880MHz
Insertion loss:	
Port 1 - 8 - ANT:	≤ 5.5 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43dBm:	≤ 110 dBm (153dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm

### **Mechanical Specifications**

Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	16 kg

### **Environmental Specifications**

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2 xCDMA800/GSM900, 4 x GSM1800,**  
**4 x UMTS**  
**4 Antenna Ports**



**Combines up to 10 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 10 Radio Base Stations to connect to the combiner:

- 2 CDMA800/GSM900 Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 10 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0074	EG 601 0075
Passband:		
Port 1: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz
Port 2: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz
Port 3: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 6: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 7: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 8: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 9: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 10: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:		
Port 1 - 2: CDMA800 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Port 3 - 6: GSM1800 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Port 7 - 10: UMTS - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Coupling:		
Port 1 - 2: CDMA800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 3 - 6: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 7 - 10: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 250 x 500 mm	450 x 250 x 500 mm
Input connectors:	7/16 (f)	N (f)
Output connectors:	N(f)	N(f)
Weight:	19 kg	19 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**2 x CDMA800/GSM900**

**5 x GSM1800,**

**5 x UMTS**

**4 x Antenna Ports**

**4 x Monitor Ports**



### **Combines up to 12 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 12 Radio Base Stations to connect to the combiner:

2 CDMA800/GSM900 Radio Base Stations

5 GSM1800 Radio Base Stations

5 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### **Monitoring ports**

This product comes equipped with four -30 dB monitoring ports (N(f)).

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0076
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz
Port 6: CDMA800/GSM900	806 - 960 MHz
Port 7: CDMA800/GSM900	806 - 960 MHz
Port 8: UMTS	1920 - 2170 MHz
Port 9: UMTS	1920 - 2170 MHz
Port 10: UMTS	1920 - 2170 MHz
Port 11: UMTS	1920 - 2170 MHz
Port 12: UMTS	1920 - 2170 MHz
Insertion loss:	
Port 1 - 5: GSM1800 - ANT 1 - 4	≤ 1.2 dB
Port 6 - 7: CDMA800/GSM900 - ANT 1 - 4	≤ 1.2 dB
Port 8 - 12: UMTS - ANT 1 - 4	≤ 1.2 dB
Coupling:	
Port 1 - 3: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 4 - 5: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB
Port 6 - 7: CDMA800/GSM900 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 8 - 10: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 11 - 12: UMTS - ANT 1 - 4	9.0 dB +/- 0.6 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 250 x 500 mm
Input Connectors:	7/16 (f)
Output Connectors:	N(f)
Monitoring Ports (-30 dB):	N(f)
Weight:	29 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**2 x CDMA800/GSM900, 5 x GSM1800,**  
**5 x UMTS**  
**4 Antenna Ports**



**Combines up to 12 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 12 Radio Base Stations to connect to the combiner:

- 2 CDMA800/GSM900 Radio Base Stations
- 5 GSM1800 Radio Base Stations
- 5 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0060
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz
Port 6: CDMA800	806 - 960 MHz
Port 7: CDMA800	806 - 960 MHz
Port 8: UMTS	1920 - 2170 MHz
Port 9: UMTS	1920 - 2170 MHz
Port 10: UMTS	1920 - 2170 MHz
Port 11: UMTS	1920 - 2170 MHz
Port 12: UMTS	1920 - 2170 MHz

#### Insertion loss:

Port 1 - 5: GSM1800 - ANT 1 - 4	≤ 1.2 dB
Port 6 - 7: CDMA800 - ANT 1 - 4	≤ 1.2 dB
Port 8 - 12: UMTS - ANT 1 - 4	≤ 1.2 dB

#### Coupling:

Port 1 - 3: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 4 - 5: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB
Port 6 - 7: CDMA800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 8 - 10: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 11 - 12: UMTS - ANT 1 - 4	9.0 dB +/- 0.6 dB

#### Input return loss:

	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

#### Max input power/port:

60 W

#### Impedance in/out:

50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 250 x 500 mm
Connectors:	N (f)
Weight:	28 kg

### Environmental Specifications

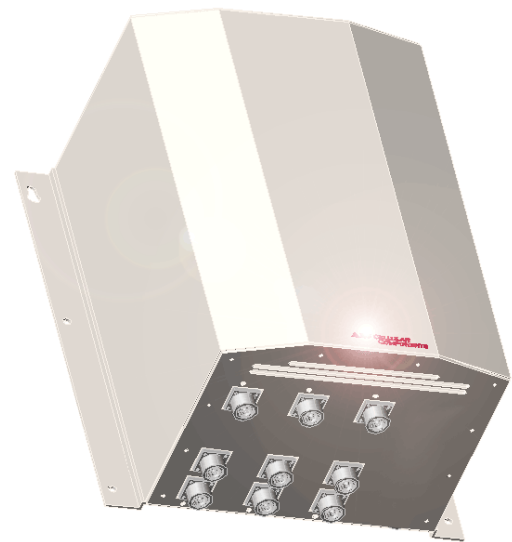
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3 x GSM900, 3xGSM1800, 3xUMTS**  
**9 Inputs to 2,3 or 4 Antenna Ports**



**Combines GSM900 / GSM1800 / UMTS**  
**into 2, 3 or 4 antenna ports**

This Multi Operator Combiner enables a maximum of 9 Radio Base Stations to connect to the combiner:

- 3 GSM900 Radio Base Stations
- 3 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 9 signals to the 2, (3) (4) antenna ports, or splits the signal to the 9 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>			
Product number:	EG 601 0014	EG 601 0129	EG 601 0015
Passband:			
Port 1 GSM900:	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 4 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 7 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 9 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Antenna ports:	2	3	4
Coupling/Insertion loss:			
Port 1 - 3 GSM900 - ANT	≤ 6.5 dB, typ 6.0dB	≤ 6.5 dB, typ 6.0dB	≤ 7.8 dB, typ 7.0dB
Port 4 - 6 GSM1800 - ANT	≤ 6.5 dB, typ 6.0dB	≤ 6.5 dB, typ 6.0dB	≤ 7.8 dB, typ 7.0dB
Port 7 - 9 UMTS - ANT	≤ 6.5 dB, typ 6.0dB	≤ 6.5 dB, typ 6.0dB	≤ 7.8 dB, typ 7.0dB
Input return loss:	> 18.0 dB	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153dBc)	≤ 110 dBm (153dBc)	≤ 110 dBm (153dBc)
Max input power/port:	60 W	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>			
Dimensions (W x H x D):	300 x 400 x 180 mm	300 x 400 x 180 mm	300 x 400 x 180 mm
Connectors:	7/16 (f)	7/16 (f)	7/16 (f)
Weight:	22 kg	22 kg	22 kg
<b>Environmental Specifications</b>			
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 (0)8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se



**Multi Operator Combiner**  
**4 x CDMA800/GSM900, 4 x GSM1800,**  
**4 x UMTS**  
**4 Antenna Ports**



**Combines up to 12 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 12 Radio Base Stations to connect to the combiner:

- 4 CDMA800/GSM900 Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0048
Passband:	
Port 1: CDMA800/GSM900	806 - 960 MHz
Port 2: CDMA800/GSM900	806 - 960 MHz
Port 3: CDMA800/GSM900	806 - 960 MHz
Port 4: CDMA800/GSM900	806 - 960 MHz
Port 5: GSM1800	1710 - 1880 MHz
Port 6: GSM1800	1710 - 1880 MHz
Port 7: GSM1800	1710 - 1880 MHz
Port 8: GSM1800	1710 - 1880 MHz
Port 9: UMTS	1920 - 2170 MHz
Port 10: UMTS	1920 - 2170 MHz
Port 11: UMTS	1920 - 2170 MHz
Port 12: UMTS	1920 - 2170 MHz

Insertion loss:	
Port 1 - 4: CDMA800 - ANT 1 - 4	≤ 1.2 dB
Port 5 - 8: GSM1800 - ANT 1 - 4	≤ 1.2 dB
Port 9 - 12: UMTS - ANT 1 - 4	≤ 1.2 dB

Coupling:	
Port 1 - 4: CDMA800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 5 - 8: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 9 - 12: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB

Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 250 x 500 mm
Connectors:	N (f)
Weight:	20 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner  
(4 x GSM900), 4 x GSM1800,  
4 x UMTS  
(With monitoring port option)**



**Combines up to 12 RBSs into 4 antenna ports**

These Multi Operator Combiners enable up to 12 Radio Base Stations to connect to the combiner:

- (4 GSM900 Radio Base Stations)
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiners combine the signals to the 4 antenna ports, or they split the signal to the 8 or 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing Egant's Multi Operator Combiners you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Monitoring port option**

The EG 601 0045 and EG 601 0046 combiners come equipped with four 30 dB monitoring ports (SMA).

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

	EG 601 0045	EG 601 0046	EG 601 0047
<b>Electrical Specifications</b>			
Product number:	EG 601 0045	EG 601 0046	EG 601 0047
Passband:			
Port 1: GSM900	880 - 960 MHz		
Port 2: GSM900	880 - 960 MHz		
Port 3: GSM900	880 - 960 MHz		
Port 4: GSM900	880 - 960 MHz		
Port 5 (1): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 6 (2): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 7 (3): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 8 (4): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 9 (5): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 10 (6): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 11 (7): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 12 (8): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:			
Port 1 - 4: GSM900 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Port 5 - 8 (1 - 4): GSM1800 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Port 9 - 12 (5 - 8): UMTS - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Coupling: (1 IN - 4 OUT)			
Port 1 - 4: GSM900 - ANT 1 - 4	6.0 dB +/- 0.6 dB		
Port 5 - 8 (1 - 4): GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 9 - 12 (5 - 8): UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Input return loss:	> 18.0 dB	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (53 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>			
Dimensions (W x H x D):	450 x 250 x 500 mm	450 x 250 x 500 mm	450 x 250 x 500 mm
Connectors:	N (f)	N (f)	N (f)
Monitoring ports (-30 dB):	SMA (f)	SMA (f)	
Weight:	24 kg	21 kg	18 kg
<b>Environmental Specifications</b>			
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%	Relative 5 - 100%

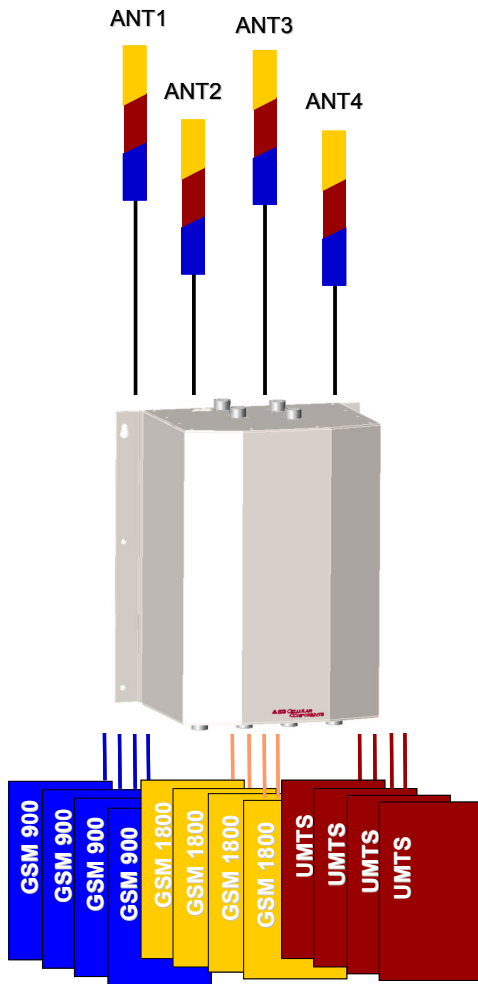
Egant reserves the right to change this product specification at any time without notice.

Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 [0]8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se





**Multi Operator Combiner  
4 x GSM900, GSM1800, UMTS  
12 Inputs to 4 Antenna Ports**



**Combines GSM900 / GSM1800 / UMTS  
into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 4 GSM900 Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 12 signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

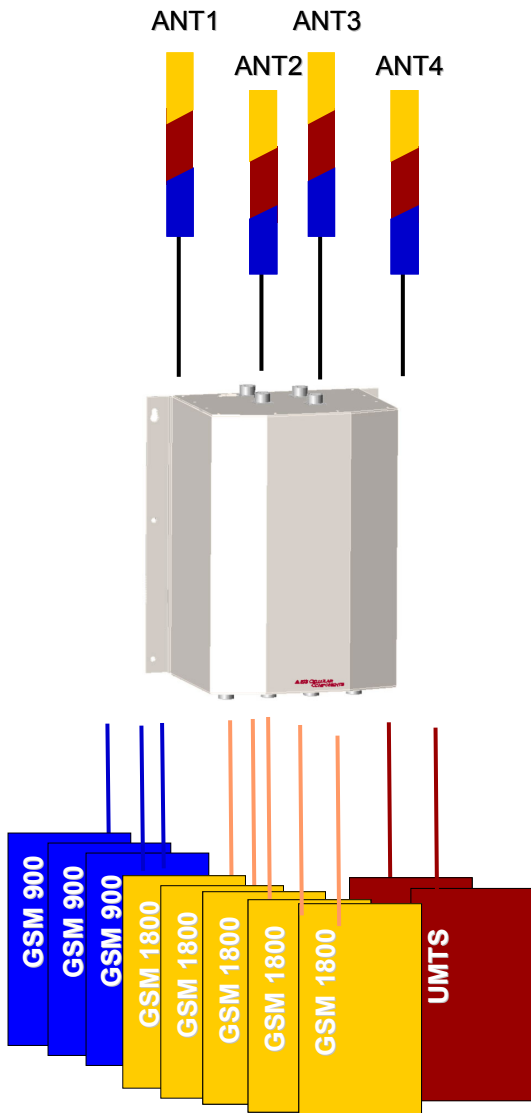
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 100 4202
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 GSM900:	806 - 960 MHz
Port 5 GSM1800:	1710 -1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 UMTS:	1920 - 2170 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 1.0 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	≤ 1.0 dB
Port 9 - 12 UMTS - ANT 1 - 4:	≤ 1.0 dB
Coupling (1 INPUT 4 - OUT):	
Port 1 - 4 GSM900 - ANT 1 - 4:	6.0 dB +/- 0.5 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	6.0 dB +/- 0.5 dB
Port 9 - 12 UMTS - ANT 1 - 4:	6.0 dB +/- 0.5 dB
Input return loss:	
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	22 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



### **Combines 10 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 10 Radio Base Stations to connect to the combiner:

- 3 x CDMA800/GSM900 Radio Base Stations
- 5 x GSM1800 Radio Base Stations
- 2 x UMTS Radio Base Stations

The combiner combines the 10 signals to the 4 antenna ports, or splits the signal to the 10 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Multi Operator Combiner**

- 3 x CDMA800/GSM900**
- 5 x GSM1800**
- 2 x UMTS**
- 4 x Antenna Ports**
- 4 x Monitor Ports**

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### **Monitoring ports**

This product comes equipped with four -30dB monitoring ports (N(f))

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

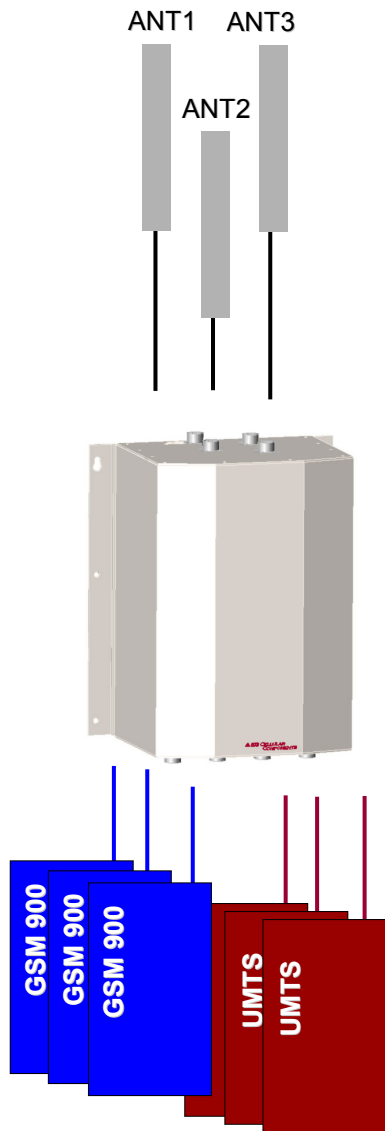
<b>Electrical Specifications</b>	
Product number:	EG 601 0085
Passband:	
Port 1 GSM1800:	1710 - 1880 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 CDMA800/GSM900:	806 - 960 MHz
Port 7 CDMA800/GSM900:	806 - 960 MHz
Port 8 CDMA800/GSM900:	806 - 960 MHz
Port 9 UMTS	1920 - 2170 MHz
Port 10 UMTS	1920 - 2170 MHz
Insertion loss:	
Port 1 - 5: GSM1800 - ANT 1 - 4:	≤ 1.2 dB
Port 6 - 8 CDMA800/GSM900 - ANT 1 - 4:	≤ 1.2 dB
Port 9 - 10 UMTS - ANT 1 - 4:	≤ 1.2 dB
Coupling:	
Port 1 - 3: GSM1800 - ANT 1 - 4:	6.0 dB +/- 0.6 dB
Port 4 - 5: GSM1800 - ANT 1 - 4:	9.0 dB +/- 0.6 dB
Port 6 - 8 CDMA800/GSM900 - ANT 1 - 4:	6.0 dB +/- 0.6 dB
Port 9 - 10 UMTS - ANT 1 - 4:	6.0 dB +/- 0.6 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	450 x 250 x 500 mm
Input connectors:	7/16 (f)
Antenna connectors:	N(f)
Monitoring Ports (-30dB)	N(f)
Weight:	30 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3 x GSM900, UMTS**  
**6 Inputs to 3 Antenna Ports**



**Combines 6 RBSs into 3 antenna ports**

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

- 3 GSM900 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 6 signals to the 3 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

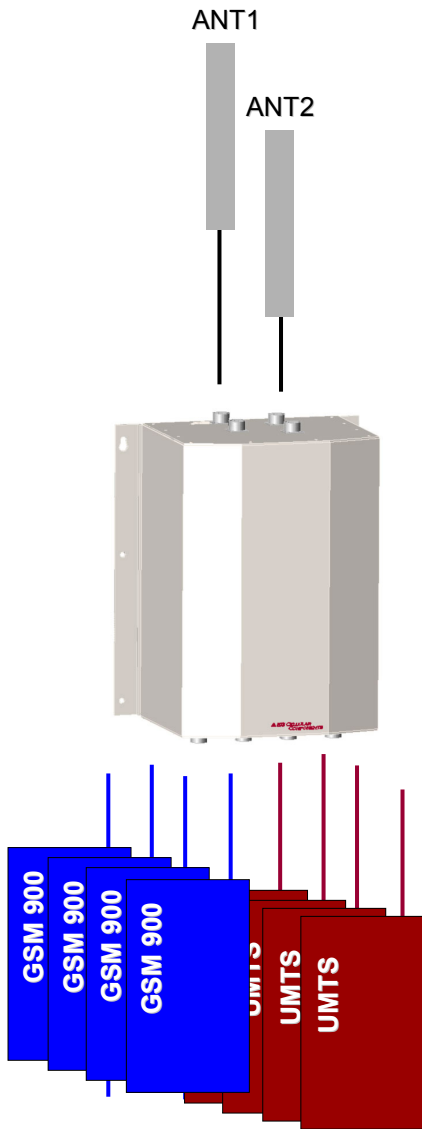
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

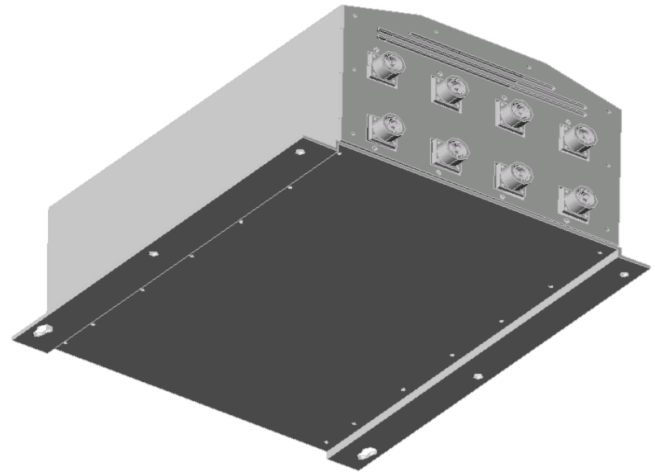
<b>Electrical Specifications</b>	
Product number:	EG 601 0027
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 UMTS:	1920 - 2170 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 3 GSM900 - ANT 1 - 3:	≤ 7.0 dB
Port 4 - 6 UMTS - ANT 1 - 3:	≤ 7.0 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	13 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**4 x GSM900, UMTS**  
**8 Inputs to 2 Antenna Ports**



**Combines 8 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

- 4 GSM900 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 8 signals to the 2 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

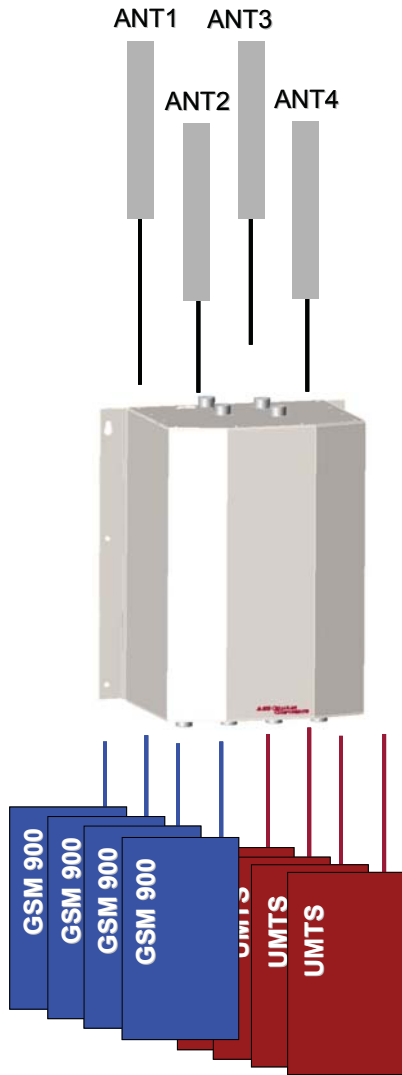
Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0024
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 GSM900:	806 - 960 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 2:	≤ 7.0 dB
Port 5 - 8 UMTS - ANT 1 - 2:	≤ 7.0 dB
Input return loss:	
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	15 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

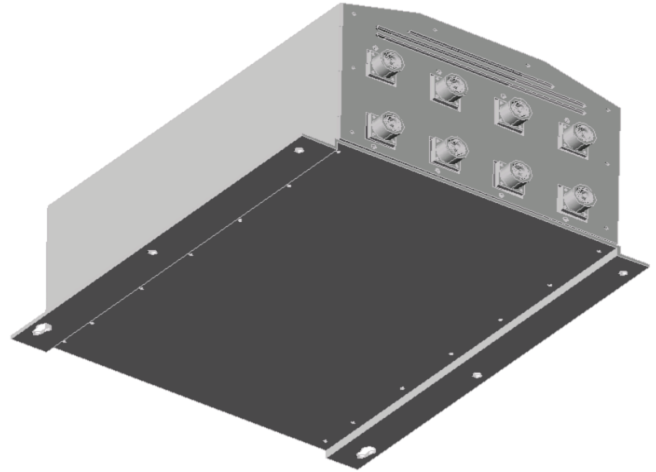
Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**4 x GSM900, UMTS**  
**8 Inputs to 4 Antenna Ports**



**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 8 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

- 4 GSM900 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 100 4205
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 GSM900:	806 - 960 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 7.0 dB
Port 5 - 8 UMTS - ANT 1 - 4:	≤ 7.0 dB
Input return loss:	
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	15 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant Cellular Components  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**4 x CDMA800/GSM900**

**5 x GSM1800**

**5 x UMTS**

**4 x Antenna Ports**



### **Combines up to 14 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 14 Radio Base Stations to connect to the combiner:

4 CDMA800/GSM900 Radio Base Stations

5 GSM1800 Radio Base Stations

5 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 14 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>			
Product number:	EG 601 0072	EG 601 0073	EG 601 0082
<b>Passband:</b>			
Port 1: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 6: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 7: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 8: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 9: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz	806 - 960 MHz
Port 10: UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 11: UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 12: UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 13: UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 14: UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
<b>Insertion loss:</b>			
Port 1 - 5: GSM1800 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Port 6 - 9: CDMA/GSM900 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Port 10 - 14: UMTS - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
<b>Coupling:</b>			
Port 1 - 3: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 4: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
Port 5: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
Port 6 - 8: CDMA800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 9: CDMA800 - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
Port 10 - 12: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 13 - 14: UMTS - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
<b>Input return loss:</b>			
Isolation between systems:	> 18.0 dB	> 18.0 dB	> 18.0 dB
Isolation between same systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB
Intermodulation 2 x 43 dBm:	≥ 25 dB	≥ 25 dB	≥ 25 dB
	≤ 117 dBm (160 dBc)	≤ 117 dBm (160 dBc)	≤ 117 dBm (160 dBc)
Max input power/port:	60 W	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>			
Dimensions (W x H x D):	450 x 250 x 500 mm	450 x 250 x 500 mm	450 x 250 x 500 mm
Input connectors:	7/16 (f)	N (f)	7/16(f)
Antenna connectors:	N(f)	N(f)	N(f)
Monitoring ports (-30dB)			N(f)
Weight:	28 kg	28 kg	28 kg
<b>Environmental Specifications</b>			
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant Cellular Components  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 (0)8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se



**Multi Operator Combiner**  
**4 x CDMA800/GSM900, 5 x GSM1800,**  
**5 x UMTS**  
**4 Antenna Ports**



**Combines up to 14 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 14 Radio Base Stations to connect to the combiner:

- 4 CDMA800/GSM900 Radio Base Stations
- 5 GSM1800 Radio Base Stations
- 5 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 14 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0052
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz
Port 6: CDMA800	806 - 960 MHz
Port 7: CDMA800	806 - 960 MHz
Port 8: CDMA800	806 - 960 MHz
Port 9: CDMA800	806 - 960 MHz
Port 10: UMTS	1920 - 2170 MHz
Port 11: UMTS	1920 - 2170 MHz
Port 12: UMTS	1920 - 2170 MHz
Port 13: UMTS	1920 - 2170 MHz
Port 14: UMTS	1920 - 2170 MHz

Insertion loss:	
Port 1 - 4: CDMA800 - ANT 1 - 4	≤ 1.2 dB
Port 5 - 9: GSM1800 - ANT 1 - 4	≤ 1.2 dB
Port 10 - 14: UMTS - ANT 1 - 4	≤ 1.2 dB

Coupling:	
Port 1 - 3: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 4: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB
Port 5: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB
Port 6 - 8: CDMA800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 9: CDMA800 - ANT 1 - 4	9.0 dB +/- 0.6 dB
Port 10 - 12: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 13 - 14: UMTS - ANT 1 - 4	9.0 dB +/- 0.6 dB

Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 250 x 500 mm
Connectors:	N (f)
Weight:	28 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**4 x CDMA800/GSM900**

**5 x GSM1800**

**5 x UMTS**

**1 x WiFi**

**4 x Antenna Ports**

**4 x Monitor Ports**



### **Combines up to 15 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 15 Radio Base Stations to connect to the combiner:

4 CDMA800/GSM900 Radio Base Stations

5 GSM1800 Radio Base Stations

5 UMTS Radio Base Stations

1 WiFi Radio Base Station

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 15 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### **Monitoring ports**

This product comes equipped with four -30 dB monitoring ports (N(f)).

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0077	EG 601 0078
Passband:		
Port 1: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 6: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz
Port 7: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz
Port 8: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz
Port 9: CDMA800/GSM900	806 - 960 MHz	806 - 960 MHz
Port 10: WiFi	2400-2500MHz	2400-2500MHz
Port 11: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 12: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 13: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 14: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 15: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:		
Port 1: GSM1800 - ANT 1 - 4	≤ 1.7 dB	≤ 1.7 dB
Port 2 - 5: GSM1800 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Port 6: CDMA/GSM900 - ANT 1 - 4	≤ 1.7 dB	≤ 1.7 dB
Port 7 - 9: CDMA/GSM900 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Port 10 WiFi - Ant 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Port 11: UMTS - ANT 1 - 4	≤ 1.7 dB	≤ 1.7 dB
Port 12 - 15: UMTS - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB
Coupling:		
Port 1 - 3: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 4 - 5: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
Port 6 - 8: CDMA800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 9: CDMA800 - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
Port 10 WiFi - Ant 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 11 - 13: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 14 - 15: UMTS - ANT 1 - 4	9.0 dB +/- 0.6 dB	9.0 dB +/- 0.6 dB
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	450 x 250 x 500 mm	450 x 250 x 500 mm
Input connectors:	7/16 (f)	N (f)
Output connectors:	N(f)	N(f)
Monitoring ports (-30 dB)	N(f)	N(f)
Weight:	30.5 kg	30..5 kg

Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 (0)8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se





## **Multi Operator Combiner**

**4 x CDMA800/GSM900**

**6 x GSM1800**

**3 x UMTS**

**2 x Wi-Fi**

**4 x Antenna Ports**

**4 x Monitor Ports**

### **Combines 15 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 15 Radio Base Stations to connect to the combiner:

4 x CDMA800/GSM900 Radio Base Stations

6 x GSM1800 Radio Base Stations

3 x UMTS Radio Base Stations

2 x Wi-Fi Radio Base Stations

The combiner combines the 15 signals to the 4 antenna ports, or splits the signal to the 15 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### **Monitoring ports**

This product comes equipped with four -30dB monitoring ports (N(f))

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0086
Passband:	
Port 1 GSM1800:	1710 - 1880 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 CDMA800/GSM900:	806 - 960 MHz
Port 8 CDMA800/GSM900:	806 - 960 MHz
Port 9 CDMA800/GSM900:	806 - 960 MHz
Port 10 CDMA800/GSM900:	806 - 960 MHz
Port 11 WiFi	2400 - 2500 MHz
Port 12 WiFi	2400 - 2500MHz
Port 13 UMTS	1920 - 2170 MHz
Port 14 UMTS	1920 - 2170 MHz
Port 15 UMTS	1920 - 2170 MHz

### Insertion loss:

Port 1 - 6: GSM1800 - ANT 1 - 4:	$\leq 1.2$ dB
Port 7 - 10 CDMA800/GSM900 - ANT 1 - 4:	$\leq 1.2$ dB
Port 9 - 10 UMTS - ANT 1 - 4:	$\leq 1.2$ dB
Port 11 - 12 WiFi - ANT 1 - 4:	$\leq 1.2$ dB
Port 13 - 15 UMTS - ANT 1- 4:	$\leq 1.2$ dB

### Coupling:

Port 1 - 4: GSM1800 - ANT 1 - 4:	6.0 dB +/- 0.6 dB
Port 5 - 6: GSM1800 - ANT 1 - 4:	9.0 dB +/- 0.6 dB
Port 7 - 8 CDMA800/GSM900 - ANT 1 - 4:	6.0 dB +/- 0.6 dB
Port 9 - 10 CDMA800/GSM900 - ANT 1 - 4:	9.0 dB +/- 0.6 dB
Port 11 - 12 WiFi - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 13 UMTS - ANT 1 - 4:	6.0 dB +/- 0.6 dB
Port 14 - 15 UMTS - ANT 1 - 4:	9.0 dB +/- 0.6 dB

### Input return loss:

Input return loss:	$> 18.0$ dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

Max input power/port:

60 W

Impedance in/out:

50 Ohm

### Mechanical Specifications

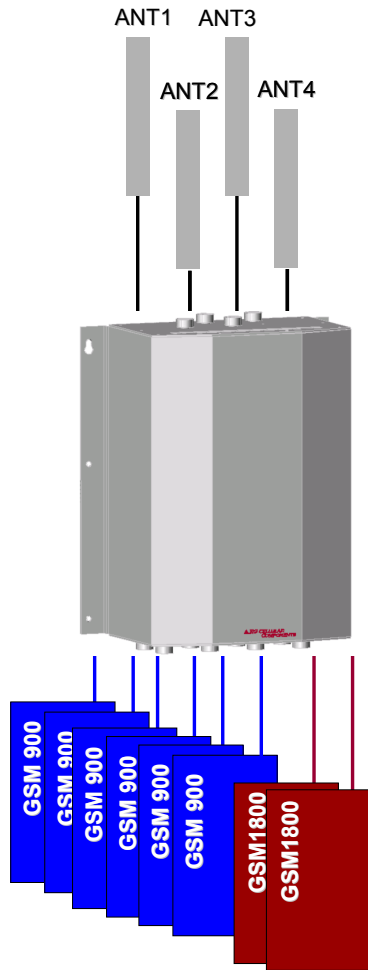
Dimensions (W x H x D):	450 x 250 x 500 mm
Input connectors:	7/16 (f)
Antenna connectors:	N(f)
Monitoring Ports (-30dB)	N(f)
Weight:	38 kg

### Environmental Specifications

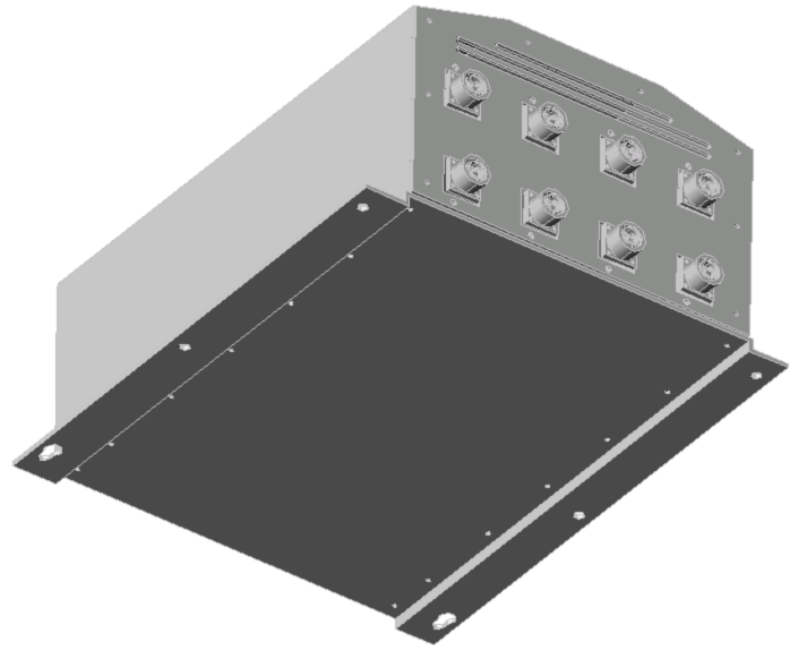
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**6 x GSM900, 2 x GSM1800**  
**8 Ports In - 4 Ports Out**



**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 8 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

- 6 GSM900 Radio Base Stations
- 2 GSM1800 Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0022
Passband:	
Port 1 GSM900:	806 - 960 MHz
Port 2 GSM900:	806 - 960 MHz
Port 3 GSM900:	806 - 960 MHz
Port 4 GSM900:	806 - 960 MHz
Port 5 GSM900:	806 - 960 MHz
Port 6 GSM900:	806 - 960 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 6:	≤ 10.0 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	≤ 7.0 dB
Input return loss:	
Isolation between systems:	> 18.0 dB
Isolation between same systems:	≥ 50 dB
	≥ 25 dB
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	15 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1xCDMA, 3xGSM1800, 4xUMTS**  
**8 Ports In - 4 Ports Out**  
**1 Monitor Port**



**Save money by installing our Multi Operator Combiner**

**Combines 8 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

- 1 CDMA Radio Base Stations
- 3 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0069	EG 601 0070
Passband:		
Port 1 GSM900 / CDMA:	820 - 890 MHz	820 - 890 MHz
Port 2 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 3 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 5 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:		
Port 1 GSM900 - ANT 1 - 4:	≤ 8.5 dB (7 dB typ)	≤ 8.5 dB (7 dB typ)
Port 2 - 4 GSM1800 - ANT 1 - 4:	≤ 8.5 dB (7 dB typ)	≤ 8.5 dB (7 dB typ)
Port 5 - 8 UMTS - ANT 1 - 4:	≤ 8.5 dB (7 dB typ)	≤ 8.5 dB (7 dB typ)
Monitoring port 30dB	-30dB +/- 2dB	-30dB +/- 2dB
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 70 dB	≥ 70 dB
Isolation between same systems:	≥ 30 dB	≥ 30 dB
Intermodulation 2 x 43 dBm:	≤ 140 dBc	≤ 140 dBc
Max input power/port:	100 W	100 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	494 x 214 x 500 mm	494 x 214 x 500 mm
Connectors:	N (f)	7/16 (f)
Weight:	30 kg	30 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.



Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 (0)8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se



**Multi Operator Combiner**  
**4 x GSM900 / CDMA, GSM1800,**  
**UMTS**  
**12 Ports In - 4 Ports Out**



**Save money by installing our Multi Operator Combiner**

**Combines 12 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 12 Radio Base Stations to connect to the combiner:

- 4 GSM900 / CDMA Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 12 signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

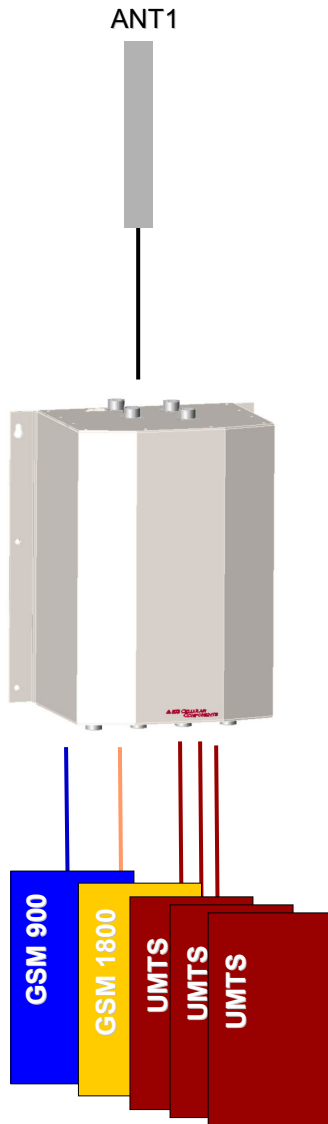
<b>Electrical Specifications</b>		
Product number:	EG 100 4209	EG 100 4210
Passband:		
Port 1 GSM900 / CDMA:	824 - 960 MHz	824 - 960 MHz
Port 2 GSM900 / CDMA:	824 - 960 MHz	824 - 960 MHz
Port 3 GSM900 / CDMA:	824 - 960 MHz	824 - 960 MHz
Port 4 GSM900 / CDMA:	824 - 960 MHz	824 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 7 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz
Port 9 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 10 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:		
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 7.9 dB (7 dB typ)	≤ 7.9 dB (7 dB typ)
Port 5 - 8 GSM1800 - ANT 1 - 4:	≤ 7.9 dB (7 dB typ)	≤ 7.9 dB (7 dB typ)
Port 9 - 12 UMTS - ANT 1 - 4:	≤ 7.9 dB (7 dB typ)	≤ 7.9 dB (7 dB typ)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	494 x 214 x 500 mm	494 x 214 x 500 mm
Connectors:	N (f)	7/16 (f)
Weight:	24 kg	24 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.



Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 (0)8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se





**Multi Operator Combiner**  
**1xGSM900,1xGSM1800, 3xUMTS**  
**5 Inputs to 1 Antenna Port**

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 5 RBSs into 1 antenna ports**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 1 GSM900 Radio Base Stations
- 1 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 5 signals to the 1 antenna port, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

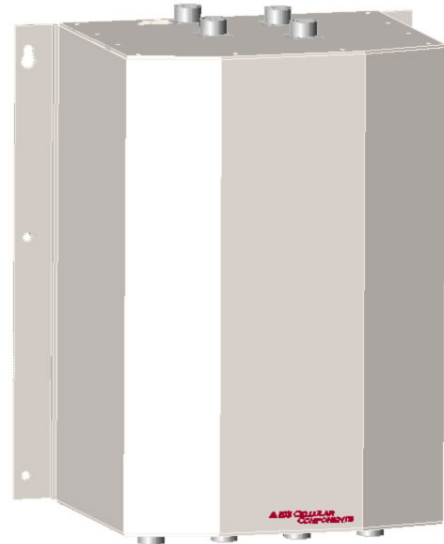
<b>Electrical Specifications</b>	
Product number:	EG 601 0110
Passband:	
Port 1: GSM 900	880 - 960 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: UMTS	1920 - 2170 MHz
Port 4: UMTS	1920 - 2170 MHz
Port 5: UMTS	1920 - 2170 MHz
Coupling/Insertion loss:	
Port 1 - 2: GSM900/GSM1800 - ANT 1	≤ 0,5 dB, typ 0,3dB
Port 3 - 5: UMTS - ANT 1	≤ 7.5 dB, typ 6.2dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	350 x 500 x 220 mm
Connectors:	7/16 (f)
Weight:	15kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1xGSM900, 2 x GSM1800, 3 x UMTS**  
**3xLTE**  
**9 Inputs to 1 Antenna Port**



**Combines 6 RBSs into 1 antenna port**

This Multi Operator Combiner enables 9 Radio Base Stations to connect to the combiner:

- 1 GSM900 Radio Base Station
- 2 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations
- 3 LTE Radio Base Stations

The combiner combines the 9 signals to the antenna port, or splits the signal to the 9 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0101	EG 601 0105
Passband:		
Port 1: GSM900	880 - 960 MHz	880 - 960 MHz
Port 2: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 4: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 5: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 6: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 7: LTE	2500 - 2690 MHz	
Port 8: LTE	2500 - 2690 MHz	
Port 9: LTE	2500 - 2690 MHz	
Insertion loss:		
Port 1: GSM900 - ANT	≤ 4,2 dB	≤ 0,9 dB
Port 2 : GSM1800 - ANT	≤ 7,2dB	≤ 4,2dB
Port 3: GSM1800 - ANT	≤ 7,2dB	≤ 4,2dB
Port 4: UMTS - ANT	≤ 7,2dB	≤ 7,2dB
Port 5: UMTS - ANT	≤ 10,2dB	≤ 7,2dB
Port 6: UMTS - ANT	≤ 10,2dB	≤ 7,2dB
Port 7-9: LTE - ANT	≤ 10,2dB	
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	350 x 500 x 220 mm	350 x 500 x 220 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	14 kg	14 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**1xGSM900, 2xGSM1800, 3xUMTS  
6 x Input 1 x Antenna Ports**

### **Combines up to 6 RBSs into 1 antenna port**

This Multi Operator Combiner enables up to 6 Radio Base Stations to connect to the combiner:

- 1 x GSM900 Radio Base Stations
- 2 x GSM1800 Radio Base Stations
- 3 x UMTS Radio Base Stations

The combiner combines the signals to the 1 antenna port, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

EGANT's Multi Operator Combiners are delivered in a box optimized for wall mounting or in a 19" rack. By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

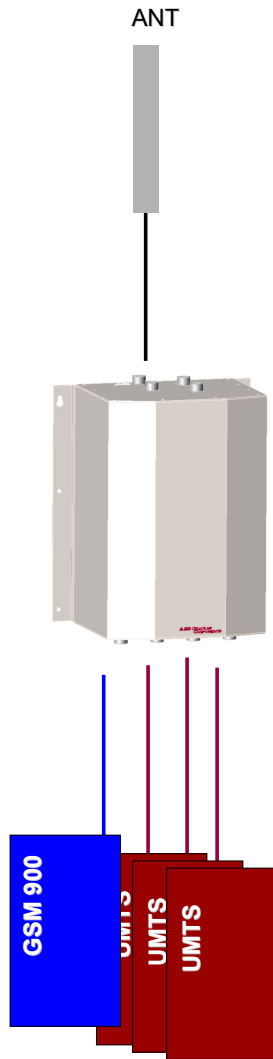
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0134	EG 601 0135
Passband:		
Port 1: GSM900	880 - 960 MHz	880 - 960 MHz
Port 2: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz	1710 - 1880 MHz
Port 4: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 5: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Port 6: UMTS	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss/Coupling:		
Port 1 - 6: - ANT	<6.8 dB, typ 5.2dB	<6.8 dB, typ 5.2dB
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 117 dBm (160 dBc)	≤ 117 dBm (160 dBc)
Max input power/port:	80 W	80 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	300 x 180 x 400 mm	483 x 140 x 385 mm
Connectors:	7/16(f)	7/16(f)
Weight:	17 kg	17 kg
Model:	Inline	19" rack
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3 x UMTS, 1 x GSM900**  
**4 Inputs to 1 Antenna Port**

**Combines 4 RBSs into 1 antenna port**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 1 GSM900 Radio Base Station
- 3 UMTS Radio Base Stations

The combiner combines the 4 signals to the 1 antenna port, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0041
Passband:	
Port 1 GSM900:	880 - 960 MHz
Port 2 UMTS:	1920 - 2170 MHz
Port 3 UMTS:	1920 - 2170 MHz
Port 4 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 GSM900 - ANT 1:	≤ 0.2 dB
Port 2 - 4 UMTS - ANT1:	≤ 5.5 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	15 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**2 x GSM900, GSM1800**  
**4 Inputs to 2 Antenna Ports**



**Combines 4 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 2 GSM900 Radio Base Stations
- 2 GSM1800 Radio Base Stations

The combiner combines the 4 signals to the 2 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0089
Passband:	
Port 1 GSM900:	880 - 960 MHz
Port 2 GSM900:	880 - 960 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Insertion loss:	
Port 1 - 2 GSM900 - ANT 1 - 2:	≤ 4.0 dB (typ 3.3 dB)
Port 3 - 4 GSM1800 - ANT 1 - 2:	≤ 4.0 dB (typ 3.4 dB)
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	8 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**2 x GSM900, 2 x GSM1800,**

**2 x UMTS2100, 2 x LTE2600**

**8 Inputs, 2, 3 or 4 Antenna Ports**

### **Combines GSM900 / GSM1800 / UMTS/ LTE to 2, 3 or 4 antenna ports**

This Multi Operator Combiner enables a maximum of 8 Radio Base Stations to connect to the combiner:

2 x GSM900 Radio Base Stations

2 x GSM1800 Radio Base Stations

2 x UMTS2100 Radio Base Stations

2 x LTE2600 Radio Base Station

The combiner combines the 8 signals to the 2, 3 or 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>			
Product number:	EG 601 0131	EG 601 0168	EG 601 0169
Passband:			
Port 1 GSM900:	890 - 960 MHz	890 - 960 MHz	890 - 960 MHz
Port 2 GSM900:	890 - 960 MHz	890 - 960 MHz	890 - 960 MHz
Port 3 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 5 UMTS2100:	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 6 UMTS2100:	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 7 LTE2600:	2500 - 2690 MHz	2500 - 2690 MHz	2500 - 2690 MHz
Port 8 LTE2600:	2500 - 2690 MHz	2500 - 2690 MHz	2500 - 2690 MHz
Antenna ports:	2	3	4
Coupling/Insertion loss:			
Port 1 - 2 GSM900 - ANT 1 - 2	≤ 3.9 dB, typ 3,3dB	≤ 6.3 dB, typ 5,3dB	≤ 7.9 dB, typ 6,3dB
Port 3 - 4 GSM1800 - ANT 1 - 2	≤ 3.9 dB, typ 3,3dB	≤ 6.3 dB, typ 5,3dB	≤ 7.9 dB, typ 6,3dB
Port 5 - 6 UMTS - ANT 1 - 2	≤ 3.9 dB, typ 3,3dB	≤ 6.3 dB, typ 5,3dB	≤ 7.9 dB, typ 6,3dB
Port 7 - 8 LTE - ANT 1 - 2	≤ 3.9 dB, typ 3,3dB	≤ 6.3 dB, typ 5,3dB	≤ 7.9 dB, typ 6,3dB
Input return loss:	> 18.0 dB	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>			
Dimensions (W x H x D):	300 x 400 x 180 mm	300 x 400 x 180 mm	300 x 400 x 180 mm
Connectors:	7/16 (f)	7/16 (f)	7/16 (f)
Weight:	15 kg	18 kg	20 kg
<b>Environmental Specifications</b>			
Temp. range (normal operation):	-30 to +70° C	30 to +70° C	30 to +70° C
Humidity:	Relative 5 - 95%	Relative 5 - 95%	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 (0)8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se

**Multi Operator Combiner  
2 x GSM900, GSM1800, UMTS,  
LTE  
8 Inputs to 2 Antenna Ports**



**Combines GSM900 / GSM1800 / UMTS/  
LTE into 2 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 2 GSM900 Radio Base Stations
- 2 GSM1800 Radio Base Stations
- 2 UMTS Radio Base Stations
- 2 LTE Radio Base Stations

The combiner combines the 8 signals to the 2 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0117
Passband:	
Port 1 GSM900:	890 - 960 MHz
Port 2 GSM900:	890 - 960 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 LTE:	2500 - 2690 MHz
Port 8 LTE:	2500 - 2690 MHz

#### Insertion loss:

Port 1 - 2 GSM900 - ANT 1 - 2:	$\leq 1.0$ dB
Port 3 - 4 GSM1800 - ANT 1 - 2:	$\leq 1.0$ dB
Port 5 - 6 UMTS - ANT 1 - 2:	$\leq 1.0$ dB
Port 7 - 8 LTE - ANT 1 - 2:	$\leq 1.0$ dB

#### Coupling (1 INPUT 2 - OUT):

Port 1 - 2 GSM900 - ANT 1 - 2:	6.3 dB +/- 0.5 dB
Port 3 - 4 GSM1800 - ANT 1 - 2:	6.3 dB +/- 0.5 dB
Port 5 - 6 UMTS - ANT 1 - 2:	6.3 dB +/- 0.5 dB
Port 7 - 8 LTE - ANT 1 - 2:	6.3 dB +/- 0.5 dB

#### Input return loss:

	$> 18.0$ dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

#### Max input power/port:

	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	22 kg

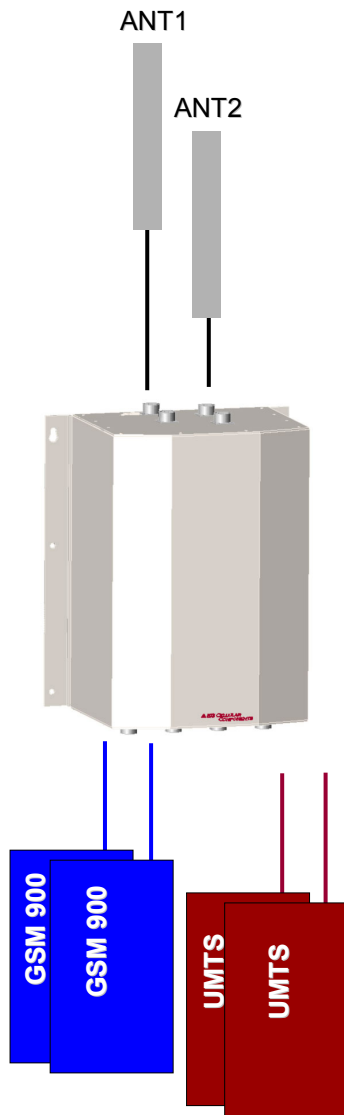
### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se

**Multi Operator Combiner**  
**2 x GSM900, 2 xUMTS**  
**4 Inputs to 1 or 2 Antenna Ports**



**Combines 4 RBSs into 1 or 2 antenna ports**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 2 GSM900 Radio Base Stations
- 2 UMTS Radio Base Stations

The combiner combines the 4 signals to the 1 or 2 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0025	EG 601 0113
Passband:		
Port 1 GSM900:	880 - 960 MHz	880 - 960 MHz
Port 2 GSM900:	880 - 960 MHz	880 - 960 MHz
Port 3 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Port 4 UMTS:	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:		
Port 1 - 4 - ANT 1 - 2:	≤ 4.0 dB (typ 3.3 dB)	
Port 1 - 4 - ANT 1:		≤ 4.0 dB (typ 3.3 dB)
Input return loss:	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm	≤ 110 dBm (153 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):	450 x 250 x 500 mm	450 x 250 x 500 mm
Connectors:	7/16 (f)	7/16 (f)
Weight:	9 kg	10 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner  
3 x 790-960MHz, 3xGSM1800,  
3xUMTS, 3xLTE2600, 3xANT  
12 Inputs to 3 Antenna Ports**



**Combines 790-960MHz / GSM1800 /  
UMTS2100/LTE2600 into 3 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 3 LTE800/GSM900 Radio Base Stations
- 3 GSM1800 Radio Base Stations
- 3 UMTS21200 Radio Base Stations
- 3 LTE2600 Radio Base Stations

The combiner combines the 12 signals to the 3 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0176
Passband:	
Port 1 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 2 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 3 LTE800/GSM900/UMTS900:	790 - 960 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Port 9 UMTS:	1920 - 2170 MHz
Port 10 LTE:	2500 - 2690 MHz
Port 11 LTE:	2500 - 2690 MHz
Port 12 LTE:	2500 - 2690 MHz

Insertion loss:  
Port 1 - 12: ANT 1 - 3:  $\leq 0.6$  dB, typ 0.3dB

Coupling:  
Port 1 - 12- ANT 1 -3: 5.3 dB +/- 1.3 dB

Input return loss:  $> 16.0$  dB, typ  $>25$ dB  
Isolation between systems:  $\geq 50$  dB  
Isolation between same systems:  $\geq 25$  dB, typ  $>30$ dB  
Intermodulation 2 x 43 dBm:  $\leq 110$  dBm (153 dBc)

Max input power/port: 60 W  
Impedance in/out: 50 Ohm

### Mechanical Specifications

Dimensions (W x H x D): 300 x 400 x 180 mm  
Connectors: 7/16 (f)  
Weight: 23 kg

### Environmental Specifications

Temp. range (normal operation):  $-30$  to  $+70^{\circ}$  C  
Humidity: Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## **Multi Operator Combiner**

**3 x GSM900, 3 x GSM1800,  
3 x UMTS, 3 x LTE, 4 x ANT  
12 Inputs, 4 Antenna Ports**

### **Combines GSM900 / GSM1800 / UMTS/ LTE to 4 antenna ports**

This Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 3 x GSM900 Radio Base Stations
- 3 x GSM1800 Radio Base Stations
- 3 x UMTS Radio Base Stations
- 3 x LTE Radio Base Station

The combiner combines the 12 signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0127
Passband:	
Port 1 GSM900:	890 - 960 MHz
Port 2 GSM900:	890 - 960 MHz
Port 3 GSM900:	890 - 960 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Port 9 UMTS:	1920 - 2170 MHz
Port 10 LTE:	2600 - 2690 MHz
Port 11 LTE:	2600 - 2690 MHz
Port 12 LTE:	2600 - 2690 MHz

Antenna ports: 4

### Coupling/Insertion loss:

Port 1 - 3 GSM900 - ANT 1 - 4	$\leq 7.9$ dB, typ 6,5dB
Port 4 - 6 GSM1800 - ANT 1 - 4	$\leq 7.9$ dB, typ 6,5dB
Port 7 - 9 UMTS - ANT 1 - 4	$\leq 7.9$ dB, typ 6,5dB
Port 10 - 12 LTE - ANT 1 - 4	

### Input return loss:

$> 18.0$  dB

### Isolation between systems:

$\geq 50$  dB

### Isolation between same systems:

$\geq 25$  dB

### Intermodulation 2 x 43 dBm:

$\leq 110$  dBm (153 dBc)

### Max input power/port:

60 W

### Impedance in/out:

50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	26 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner  
4 x GSM900, GSM1800, UMTS,  
LTE  
16 Inputs to 4 Antenna Ports**



**Combines GSM900 / GSM1800 / UMTS/  
LTE into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 4 GSM900 Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations
- 4 LTE Radio Base Stations

The combiner combines the 16 signals to the 4 antenna ports, or splits the signal to the 16 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi  
Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0119
Passband:	
Port 1 GSM900:	890 - 960 MHz
Port 2 GSM900:	890 - 960 MHz
Port 3 GSM900:	890 - 960 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 UMTS:	1920 - 2170 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz
Port 13 LTE:	2500 - 2690 MHz
Port 14 LTE:	2500 - 2690 MHz
Port 15 LTE:	2500 - 2690 MHz
Port 16 LTE:	2500 - 2690 MHz

Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	$\leq 1.0$ dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	$\leq 1.0$ dB
Port 9 - 12 UMTS - ANT 1 - 4:	$\leq 1.0$ dB
Port 13 - 16 LTE - ANT 1 - 4:	$\leq 1.0$ dB

Coupling (1 INPUT 4 - OUT):	
Port 1 - 4 GSM900 - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Port 5 - 8 GSM1800 - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Port 9 - 12 UMTS - ANT 1 - 4:	6.3 dB +/- 0.5 dB
Port 13 - 16 LTE - ANT 1 - 4:	6.3 dB +/- 0.5 dB

Input return loss:	$> 18.0$ dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	28 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**4xGSM900, 2xGSM1800,**  
**4xUMTS2100, 2xANT**  
**10 Inputs to 2 Antenna Ports**



**Combines GSM900 / GSM1800 / UMTS2100**  
**into 2 antenna ports**

The Multi Operator Combiner enables a maximum of 10 Radio Base Stations to connect to the combiner:

- 4 x GSM900 Radio Base Stations
- 2 x GSM1800 Radio Base Stations
- 4 x UMTS2100 Radio Base Stations

The combiner combines the 10 signals into 2 antenna ports, or splits the signal to the 10 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0150
Passband:	
Port 1 GSM900:	890 - 960 MHz
Port 2 GSM900:	890 - 960 MHz
Port 3 GSM900:	890 - 960 MHz
Port 4 GSM900:	890 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 UMTS2100:	1920 - 2170 MHz
Port 8 UMTS2100:	1920 - 2170 MHz
Port 9 UMTS2100:	1920 - 2170 MHz
Port 10 UMTS2100:	1920 - 2170 MHz
Insertion loss / Coupling:	
Port 1 - 4 - ANT 1 - 2:	≤ 7.9 dB (typ 7 dB)
Port 5 - 6 - ANT 1 - 2:	≤ 7.9 dB (typ 7 dB)
Port 7 - 10 - ANT 1 - 2:	≤ 7.9 dB (typ 7 dB)
Input return loss:	> 17.0 dB, (typ 20 dB)
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 180 x 400 mm
Connectors:	7/16 (f)
Weight:	19 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**4 x GSM900 / CDMA, 4 x GSM1800,**  
**4 x UMTS**  
**12 Ports In - 1 Antenna ports**



**Save money by installing our Multi Operator Combiner**

**Combines 12 RBSs into 1 antenna ports**

This Multi Operator Combiner enables 12 Radio Base Stations to connect to the combiner:

- 4 GSM900 / CDMA Radio Base Stations
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 12 signals to the 2 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0121
Passband:	
Port 1 GSM900 / CDMA:	824 - 960 MHz
Port 2 GSM900 / CDMA:	824 - 960 MHz
Port 3 GSM900 / CDMA:	824 - 960 MHz
Port 4 GSM900 / CDMA:	824 - 960 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 GSM1800:	1710 - 1880 MHz
Port 7 GSM1800:	1710 - 1880 MHz
Port 8 GSM1800:	1710 - 1880 MHz
Port 9 UMTS:	1920 - 2170 MHz
Port 10 UMTS:	1920 - 2170 MHz
Port 11 UMTS:	1920 - 2170 MHz
Port 12 UMTS:	1920 - 2170 MHz

Insertion loss:	
Port 1 - 4 GSM900 - ANT 1:	≤ 7.9 dB (7 dB typ)
Port 5 - 8 GSM1800 - ANT 1:	≤ 7.9 dB (7 dB typ)
Port 9 - 12 UMTS - ANT 1:	≤ 7.9 dB (7 dB typ)

Input return loss:	> 17.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

Max input power/port:	100 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	494 x 214 x 500 mm
Connectors:	N (f)
Weight:	24 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.



Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1XTetra, 2xGSM900, 2xGSM1800**  
**3xUMTS, 3xLTE**  
**3 Antenna ports**

### **Combines 11 RBSs into 3 antenna ports**

This Multi Operator Combiner enables 11 Radio Base Stations to connect to the combiner:

- 1 Tetra Radio Base Stations
- 2 GSM900 Radio Base Stations
- 2 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations
- 3 LTE Radio Base Stations

The combiner combines the 11 signals to the 3 antenna ports, or splits the signal to the 11 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0122
Passband:	
Port 1 Tetra:	380 - 500 MHz
Port 2 GSM900:	890 - 960 MHz
Port 3 GSM900:	890 - 960 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 GSM1800:	1710 - 1880 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz
Port 9 LTE:	2600 - 2690 MHz
Port 10 LTE:	2600 - 2690 MHz
Port 11 LTE:	2600 - 2690 MHz

### Coupling/Insertion loss:

Port 1 Tetra - ANT 1 - 3:	$\leq 7.5$ dB (6 dB typ)
Port 2 - 3 GSM900 - ANT 1 - 3:	$\leq 7.5$ dB (6 dB typ)
Port 4 - 5 GSM1800 - ANT 1 - 3:	$\leq 7.5$ dB (6 dB typ)
Port 6 - 8 UMTS - ANT 1 - 3:	$\leq 7.5$ dB (6 dB typ)
Port 9 - 11 LTE - ANT 1 - 3:	$\leq 7.5$ dB (6 dB typ)

### Input return loss:

Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

### Max input power/port:

Impedance in/out:	60 W 50 Ohm
-------------------	----------------

### Mechanical Specifications

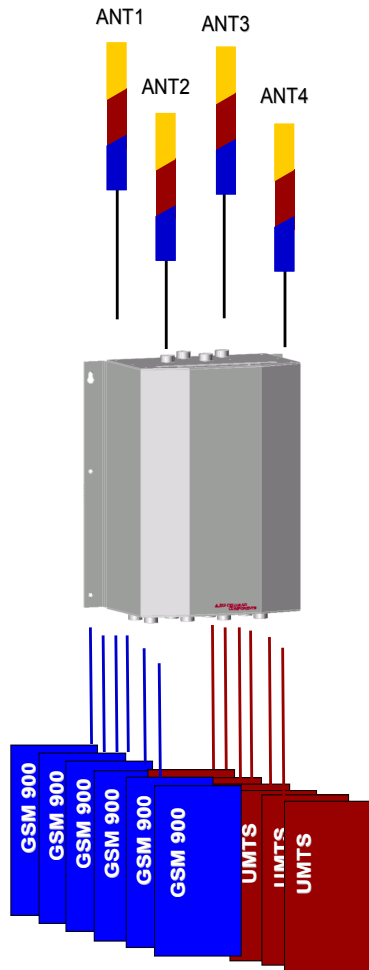
Dimensions (W x H x D):	494 x 214 x 500 mm
Connectors:	7/16 (f)
Weight:	24 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## Multi Operator Combiner

6 x GSM900, 6 x UMTS  
12 Ports In - 4 Ports Out



### Combines 12 RBSs into 4 antenna ports

This Multi Operator Combiner enables 12 Radio Base Stations to connect to the combiner:

- 6 GSM900 Radio Base Stations
- 6 UMTS Radio Base Stations

The combiner combines the 12 signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### Save money by installing our Multi Operator Combiner

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

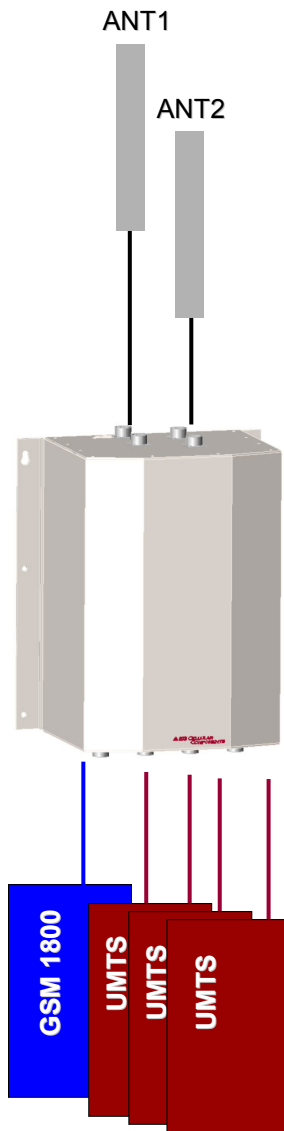
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0040
Passband:	
Port1 GSM900:	880 - 960 MHz
Port2 GSM900:	880 - 960 MHz
Port3 GSM900:	880 - 960 MHz
Port4 GSM900:	880 - 960 MHz
Port5 GSM900:	880 - 960 MHz
Port6 GSM900:	880 - 960 MHz
Port7 UMTS:	1920 - 2170 MHz
Port8 UMTS:	1920 - 2170 MHz
Port9 UMTS:	1920 - 2170 MHz
Port10 UMTS:	1920 - 2170 MHz
Port11 UMTS:	1920 - 2170 MHz
Port12 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 4 GSM900 - ANT 1 - 4:	≤ 10.0 dB (typ. 9.5 dB)
Port 5 - 6 GSM900 - ANT 1 - 4:	≤ 7.0 dB, (typ. 6.5 dB)
Port 7 - 10 UMTS - ANT 1 - 4:	≤ 10.0 dB (typ. 9.5 dB)
Port 11 - 12 UMTS - ANT 1 - 4:	≤ 7.0 dB (typ. 6.5 dB)
Input return loss:	
	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	22 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**1 x GSM1800, 3 x UMTS**  
**4 Inputs to 2 Antenna Ports**

**Combines 4 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 1 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 4 signals to the 2 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0107
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: UMTS	1920 - 2170 MHz
Port 3: UMTS	1920 - 2170 MHz
Port 4: UMTS	1920 - 2170 MHz
Insertion loss:	
Port 1 - 2: GSM1800/UMTS - ANT 1 - 2	≤ 4.2 dB, typ 3.3dB
Port 3 - 4: UMTS - ANT 1 - 2	≤ 6.8 dB, typ 6.2dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	350 x 500 x 220 mm
Connectors:	7/16 (f)
Weight:	12 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant Cellular Components  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**2 x GSM1800, 2 x UMTS2100**  
**4 Inputs to 2 Antenna Ports**



**Combines 4 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 2 GSM1800 Radio Base Stations
- 2 UMTS Radio Base Stations

The combiner combines the 4 signals to the 2 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

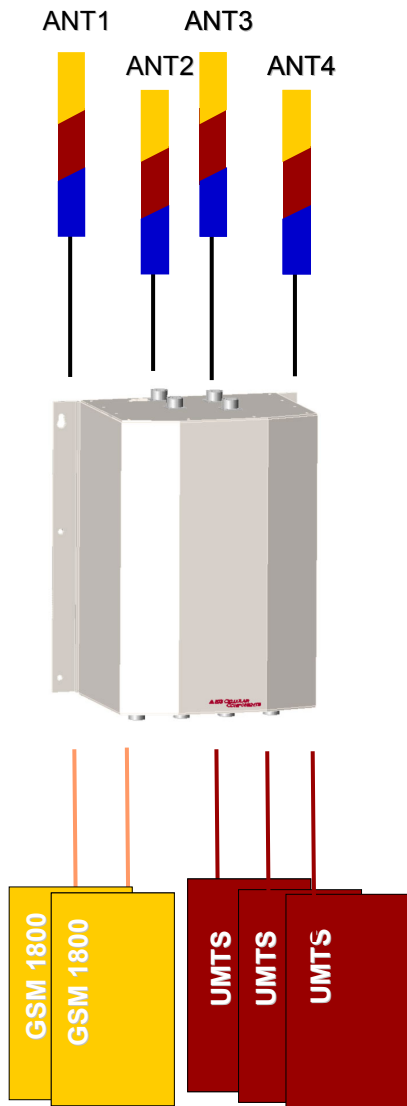
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0029
Passband:	
Port 1 GSM1800:	1710 - 1880 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 UMTS:	1920 - 2170 MHz
Port 4 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 2 GSM1800 - ANT 1 - 2:	≤ 4.0 dB (typ 3.5 dB)
Port 3 - 4 UMTS - ANT 1 - 2:	≤ 4.0 dB (typ 3.5 dB)
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (WxHxD):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	11 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2 x GSM1800, 3 xUMTS**  
**5 Inputs to 4 Antenna Ports**

### **Combines 5 RBSs into 4 antenna ports**

This Multi Operator Combiner enables 4 Radio Base Stations to connect to the combiner:

- 2 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 5 signals to the 4 antenna ports, or splits the signal to the 5 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0100
Passband:	
Port 1 GSM1800:	1710 - 1880 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 UMTS:	1920 - 2170 MHz
Port 4 UMTS:	1920 - 2170 MHz
Port 5 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 2 GSM1800 - ANT 1 - 4:	≤ 1.0 dB
Port 3 - 5 UMTS - ANT 1 - 4:	≤ 1.0 dB
Coupling:	
Port 1 - 2 GSM1800 - ANT 1 - 4:	6.0 dB +/- 0.5 dB
Port 3 - 5 UMTS - ANT 1 - 4:	6.0 dB +/- 0.5 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 30 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	16 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2 x1800, 1x2100, 1x2600, 1xANT**  
**4 Inputs to 1 Antenna Port**



**Combines 1800/ UMTS2100/LTE2600 into 1 antenna port**

The Multi Operator Combiner enables a maximum of 4 Radio Base Stations to connect to the combiner:

- 2 x 1800 Radio Base Stations
- 1 x 2100 Radio Base Stations
- 1 x 2600 Radio Base Stations

The combiner combines the 4 signals to the antenna port. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>		
Product number:	EG 601 0206	
Passband:		
Port 1 1800:	1710 -1880 MHz	
Port 2 1800:	1710 - 1880 MHz	
Port 3 2100:	1920 - 2170 MHz	
Port 4 2600:	2500 - 2690 MHz	
Coupling + Insertion loss:		
Port 1 - 2: - ANT:	3.3dB +/- 0.6 dB	
Port 2 - 4: - ANT :	0.3dB, typ 0.1dB	
Input return loss:		
Port 1 - 4:	> 16.0 dB, typ 20dB	
Isolation between systems:		≥ 50 dB
Isolation between same systems:		≥ 25 dB
Intermodulation 2 x 46 dBm:		≤ 110 dBm (156 dBc)
Max input power/port:		40 W
Impedance in/out:		50 Ohm
<b>Mechanical Specifications</b>		
Dimensions (W x H x D):		300 x 180 x 480 mm
Connectors:		7/16 (f)
Weight:		11.5 kg
<b>Environmental Specifications</b>		
Temp. range (normal operation):		-30 to +65° C
Humidity:		Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**2 x1800, 1x2100, 1x2600, 3xANT**  
**4 Inputs to 3 Antenna Port**



**Combines 1800/ UMTS2100/LTE2600 into 3 antenna ports**

The Multi Operator Combiner enables a maximum of 4 Radio Base Stations to connect to the combiner:

- 2 x 1800 Radio Base Stations
- 1 x 2100 Radio Base Stations
- 1 x 2600 Radio Base Stations

The combiner combines the 4 signals to the 3 antenna ports, or splits the signal to the 4 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0204
Passband:	
Port 1 1800:	1710 -1880 MHz
Port 2 1800:	1710 - 1880 MHz
Port 3 2100:	1920 - 2170 MHz
Port 4 2600:	2500 - 2690 MHz
Coupling + Insertion loss:	
Port 1: - ANT 1 - 3:	5.45dB +/- 1.15 dB
Port 2 - 4: - ANT 1 - 3:	5.7dB +/- 1.2 dB
Input return loss:	
Port 1 - 4:	> 16.0 dB, typ 20dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 26$ dB
Intermodulation 2 x 46 dBm:	$\leq 110$ dBm (156 dBc)
Max input power/port:	40 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

Dimensions (W x H x D):	300 x 180 x 480 mm
Connectors:	7/16 (f)
Weight:	17.5 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +65° C
Humidity:	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: [info@egant.se](mailto:info@egant.se)  
[www.egant.se](http://www.egant.se)





**Multi Operator Combiner**  
**3 x GSM1800, 3 x UMTS**  
**6 Inputs to 1 Antenna Port**

**Combines 6 RBSs into 1 antenna port**

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

- 3 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 6 signals to the antenna port, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

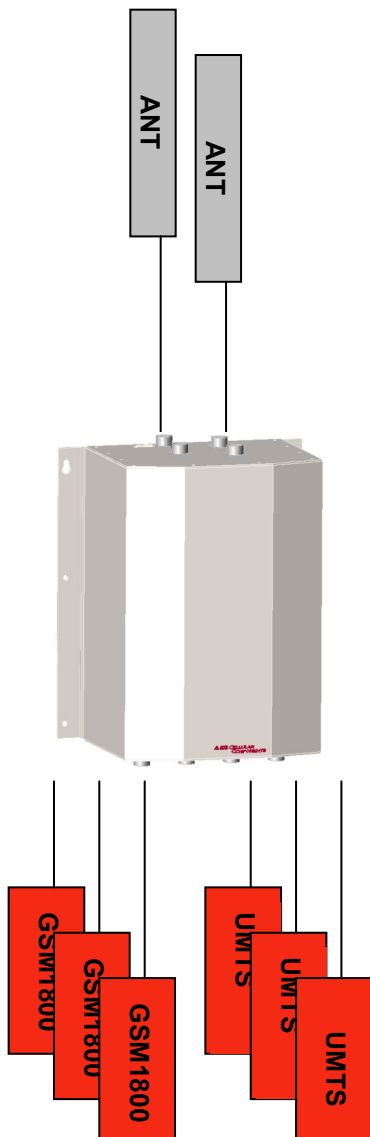
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0050
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: UMTS	1920 - 2170 MHz
Port 5: UMTS	1920 - 2170 MHz
Port 6: UMTS	1920 - 2170 MHz
Insertion loss:	
Port 1 - 3: GSM1800 - ANT	≤ 5.8 dB
Port 4 - 6: UMTS - ANT	≤ 5.8 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 23 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	350 x 500 x 220 mm
Connectors:	7/16 (f)
Weight:	14 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
3 x GSM1800, 3 x UMTS  
6 Inputs to 2 Antenna Ports

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 6 RBSs into 2 antenna ports**

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

- 3 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 6 signals to the 2 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

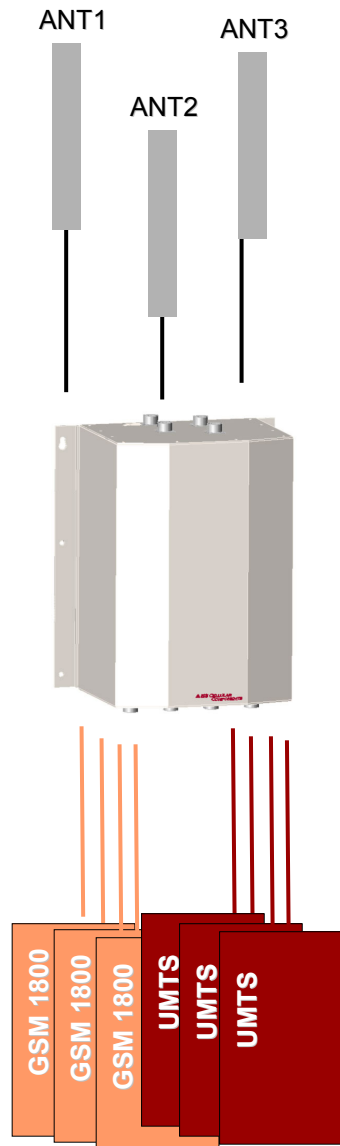
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0049
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: UMTS	1920 - 2170 MHz
Port 5: UMTS	1920 - 2170 MHz
Port 6: UMTS	1920 - 2170 MHz
Insertion loss:	
Port 1 - 3: GSM1800 - ANT 1 - 2	≤ 7.0 dB
Port 4 - 6: UMTS - ANT 1 - 2	≤ 7.0 dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	350 x 500 x 220 mm
Connectors:	7/16 (f)
Weight:	14 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**3 x GSM1800, 3xUMTS**  
**6 Inputs to 3 Antenna Ports**

### **Combines 6 RBSs into 3 antenna ports**

This Multi Operator Combiner enables 6 Radio Base Stations to connect to the combiner:

- 3 GSM1800 Radio Base Stations
- 3 UMTS Radio Base Stations

The combiner combines the 6 signals to the 3 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

### **Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

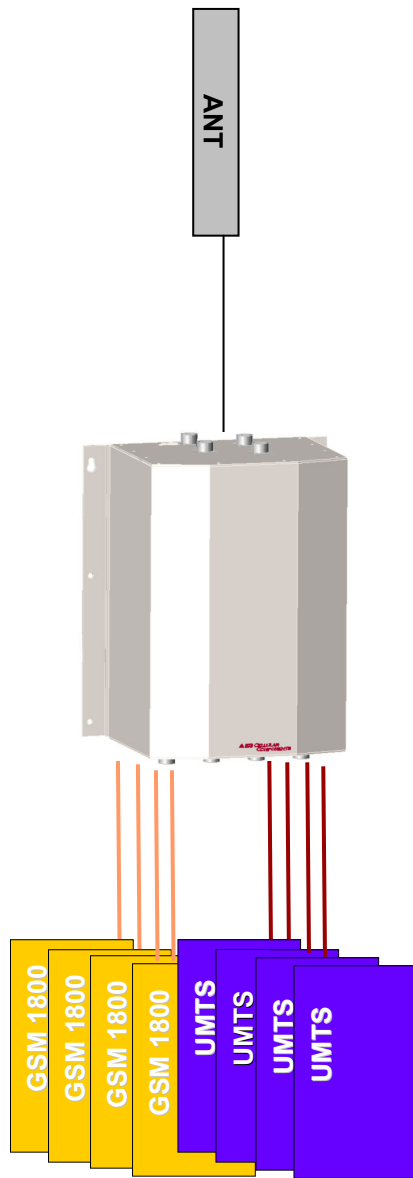
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0027
Passband:	
Port 1 GSM900:	1710 - 1880 MHz
Port 2 GSM900:	1710 - 1880 MHz
Port 3 GSM900:	1710 - 1880 MHz
Port 4 UMTS:	1920 - 2170 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Insertion loss:	
Port 1 - 3 GSM1800 - ANT 1 - 3:	≤ 6.3 dB
Port 4 - 6 UMTS - ANT 1 - 3:	≤ 6.3 dB
Input return loss:	> 17.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 400 x 120 mm
Connectors:	7/16 (f)
Weight:	13 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
4 x 1800, 4 x 2100  
8 Inputs to 1 Antenna Port

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 8 RBSs into 1 antenna port**

This Multi Operator Combiner enables 8 Radio Base Stations to connect to the combiner:

- 4 GSM1800 Radio Base Stations
- 4 UMTS2100 Radio Base Stations

The combiner combines the 8 signals to the antenna port, or splits the signal to the 8 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0071
Passband:	
Port 1: GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz
Port 5: UMTS	1920 - 2170 MHz
Port 6: UMTS	1920 - 2170 MHz
Port 7: UMTS	1920 - 2170 MHz
Port 8: UMTS	1920 - 2170 MHz
Insertion loss:	
Port 1 - 4: GSM1800 - ANT	≤ 1,0 dB
Port 5 - 8: UMTS - ANT	≤ 1,0 dB
Coupling:	
Port 1 - 4: GSM1800 - ANT	6,0dB +/- 0.8dB
Port 5 - 8: UMTS - ANT	6.0dB +/- 0.8dB
Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	350 x 500 x 220 mm
Connectors:	7/16 (f)
Weight:	24 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-20 to +55° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone:+46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**4 x1800, 4x2100, 2xANT**  
**8 Inputs to 2 Antenna Port**



**Combines 4x1800, 4x2100 into 2 antenna ports**

The Multi Operator Combiner enables a maximum of 8 Radio Base Stations to connect to the combiner:

- 4 x 1800 Radio Base Stations
- 4 x 2100 Radio Base Stations

The combiner combines the 8 signals to the 2 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

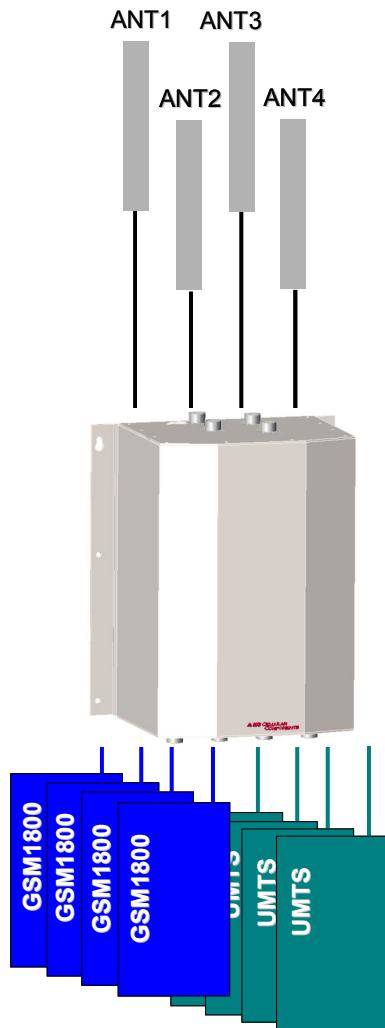
## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0214
Passband:	
Port 1 1800:	1710 -1880 MHz
Port 2 1800:	1710 - 1880 MHz
Port 3 1800:	1710 - 1880 MHz
Port 4 1800:	1710 - 1880 MHz
Port 5 2100:	1920 - 2170 MHz
Port 6 2100:	1920 - 2170 MHz
Port 7 2100:	1920 - 2170 MHz
Port 8 2100:	1920 - 2170 MHz
Coupling + Insertion loss:	
Port 1 - 8: - ANT 1 - 2:	6.3dB +/- 1.5 dB
Input return loss:	
Port 1 - 8:	> 16.0 dB, typ 20dB
Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 180 x 480 mm
Connectors:	7/16 (f)
Weight:	24kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-20 to +65° C
Humidity:	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



## Multi Operator Combiner 4 x GSM1800, UMTS 8 Inputs to 4 Antenna Ports



### Save money by installing our Multi Operator Combiner

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

### Combines 8 RBSs into 4 antenna ports

This multi operator combiner enables 8 Radio Base Stations to connect to the combiner:

- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiner combines the 8 signals to the 4 antenna ports, or splits the signal to the 8 RBSs in the receiving direction. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0033
Passband:	
Port 1 GSM1800:	1710 - 1880 MHz
Port 2 GSM1800:	1710 - 1880 MHz
Port 3 GSM1800:	1710 - 1880 MHz
Port 4 GSM1800:	1710 - 1880 MHz
Port 5 UMTS:	1920 - 2170 MHz
Port 6 UMTS:	1920 - 2170 MHz
Port 7 UMTS:	1920 - 2170 MHz
Port 8 UMTS:	1920 - 2170 MHz

### Insertion loss:

Port 1 - 4 GSM 1800 - ANT 1 - 4:	$\leq 1.0$ dB
Port 5 - 8 UMTS - ANT 1 - 4:	$\leq 1.0$ dB

### Coupling (1 INPUT - 4 OUT):

Port 1 - 4 GSM 1800 - ANT 1 - 4:	6.0 dB +/- 0.5 dB
Port 5 - 8 UMTS - ANT 1 - 4:	6.0 dB +/- 0.5 dB

### Input return loss:

Isolation between systems:	$\geq 50$ dB
Isolation between same systems:	$\geq 25$ dB
Intermodulation 2 x 43 dBm:	$\leq 110$ dBm (153 dBc)

### Max input power/port:

Impedance in/out:	60 W 50 Ohm
-------------------	----------------

### Mechanical Specifications

Dimensions (W x H x D):	300 x 400 x 180 mm
Connectors:	7/16 (f)
Weight:	22 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se

**Multi Operator Combiner  
(4 x GSM900), 4 x GSM1800,  
4 x UMTS  
(With monitoring port option)**



**Combines up to 12 RBSs into 4 antenna ports**

These Multi Operator Combiners enable up to 12 Radio Base Stations to connect to the combiner:

- (4 GSM900 Radio Base Stations)
- 4 GSM1800 Radio Base Stations
- 4 UMTS Radio Base Stations

The combiners combine the signals to the 4 antenna ports, or they split the signal to the 8 or 12 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing Egant's Multi Operator Combiners you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Monitoring port option**

The EG 601 0045 and EG 601 0046 combiners come equipped with four 30 dB monitoring ports (SMA).

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	EG 601 0045	EG 601 0046	EG 601 0047
Product number:	EG 601 0045	EG 601 0046	EG 601 0047
Passband:			
Port 1: GSM900	880 - 960 MHz		
Port 2: GSM900	880 - 960 MHz		
Port 3: GSM900	880 - 960 MHz		
Port 4: GSM900	880 - 960 MHz		
Port 5 (1): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 6 (2): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 7 (3): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 8 (4): GSM1800	1710 - 1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 9 (5): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 10 (6): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 11 (7): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 12 (8): UMTS	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Insertion loss:			
Port 1 - 4: GSM900 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Port 5 - 8 (1 - 4): GSM1800 - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Port 9 - 12 (5 - 8): UMTS - ANT 1 - 4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
Coupling: (1 IN - 4 OUT)			
Port 1 - 4: GSM900 - ANT 1 - 4	6.0 dB +/- 0.6 dB		
Port 5 - 8 (1 - 4): GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 9 - 12 (5 - 8): UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Input return loss:	> 18.0 dB	> 18.0 dB	> 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)	≤ 110 dBm (53 dBc)	≤ 110 dBm (153 dBc)
Max input power/port:	60 W	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm
<b>Mechanical Specifications</b>			
Dimensions (W x H x D):	450 x 250 x 500 mm	450 x 250 x 500 mm	450 x 250 x 500 mm
Connectors:	N (f)	N (f)	N (f)
Monitoring ports (-30 dB):	SMA (f)	SMA (f)	
Weight:	24 kg	21 kg	18 kg
<b>Environmental Specifications</b>			
Temp. range (normal operation):	-30 to +70° C	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
 Box 945  
 SE-114 79 Stockholm  
 Sweden  
 Phone: +46 [0]8 620 06 50  
 E-mail: info@egant.se  
 www.egant.se



**Multi Operator Combiner**  
**4 x1800, 1x2100, 1x2600, 3xANT**  
**6 Inputs to 3 Antenna Port**



**Combines 1800/ UMTS2100/LTE2600 into 3 antenna ports**

The Multi Operator Combiner enables a maximum of 6 Radio Base Stations to connect to the combiner:

- 4 x 1800 Radio Base Stations
- 1 x 2100 Radio Base Stations
- 1 x 2600 Radio Base Stations

The combiner combines the 6 signals to the 3 antenna ports, or splits the signal to the 6 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0203
Passband:	
Port 1 1800:	1710 -1880 MHz
Port 2 1800:	1710 - 1880 MHz
Port 3 1800:	1710 -1880 MHz
Port 4 1800:	1710 - 1880 MHz
Port 5 2100:	1920 - 2170 MHz
Port 6 2600:	2500 - 2690 MHz
Coupling + Insertion loss:	
Port 1 - 2: - ANT 1 - 3:	9.25dB +/- 1.25 dB
Port 3: - ANT 1 - 3:	5.45dB +/- 1.15 dB
Port 4 - 6: - ANT 4 - 6:	5.7dB +/- 1.2 dB
Input return loss:	
Port 1 - 6:	> 16.0 dB, typ 20dB
Isolation between systems:	
Isolation between same systems:	≥ 50 dB
Intermodulation 2 x 46 dBm:	≥ 26 dB
	≤ 110 dBm (156 dBc)
Max input power/port:	
Impedance in/out:	40 W
	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 180 x 480 mm
Connectors:	7/16 (f)
Weight:	22 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +65° C
Humidity:	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se





**Multi Operator Combiner**  
**4 x1800, 4x2100, 4x2600, 4xANT**  
**12 Inputs to 4 Antenna Port**



**Combines 1800 / 2100 / 2600 into 4 antenna ports**

The Multi Operator Combiner enables a maximum of 12 Radio Base Stations to connect to the combiner:

- 4 x 1800 Radio Base Stations
- 4 x 2100 Radio Base Stations
- 4 x 2600 Radio Base Stations

The combiner combines the 12 signals to the 4 antenna ports, or splits the signal to the 12 RBSs in the receiving direction. This is a very important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0205
Passband:	
Port 1 1800:	1710 -1880 MHz
Port 2 1800:	1710 - 1880 MHz
Port 3 1800:	1710 - 1880 MHz
Port 4 1800:	1710 - 1880 MHz
Port 5 2100:	1920 - 2170 MHz
Port 6 2100:	1920 - 2170 MHz
Port 7 2100:	1920 - 2170 MHz
Port 8 2100:	1920 - 2170 MHz
Port 9 2600:	2500 - 2690 MHz
Port 10 2600:	2500 - 2690 MHz
Port 11 2600:	2500 - 2690 MHz
Port 12 2600:	2500 - 2690 MHz
Coupling + Insertion loss:	
Port 1 - 12: - ANT 1 - 4:	6.3dB +/- 1.5 dB
Input return loss:	
Port 1 - 12:	> 16.0 dB, typ 20dB
Isolation between systems:	
Isolation between same systems:	$\geq 50$ dB
Intermodulation 2 x 43 dBm:	$\geq 25$ dB
	$\leq 110$ dBm (153 dBc)
Max input power/port:	
Impedance in/out:	60 W
	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	300 x 180 x 480 mm
Connectors:	7/16 (f)
Weight:	24kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-20 to +65° C
Humidity:	Relative 5 - 95%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**5 x GSM1800, 5 x UMTS**  
**4 Antenna Ports**



**Combines up to 10 RBSs into 4 antenna ports**

This Multi Operator Combiner enables up to 10 Radio Base Stations to connect to the combiner:

- 5 GSM1800 Radio Base Stations
- 5 UMTS Radio Base Stations

The combiner combines the signals to the 4 antenna ports, or splits the signal to the 10 RBSs in the receiving direction. This is a highly important function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

**Save money by installing our Multi Operator Combiner**

By utilizing the Egant Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

## Technical Specifications for the Multi Operator Combiner

Below are some typical data. For more detailed information, please contact us.

### Electrical Specifications

Product number:	EG 601 0054
Passband:	
Port 1 : GSM1800	1710 - 1880 MHz
Port 2: GSM1800	1710 - 1880 MHz
Port 3: GSM1800	1710 - 1880 MHz
Port 4: GSM1800	1710 - 1880 MHz
Port 5: GSM1800	1710 - 1880 MHz
Port 6: UMTS	1920 - 2170 MHz
Port 7: UMTS	1920 - 2170 MHz
Port 8: UMTS	1920 - 2170 MHz
Port 9: UMTS	1920 - 2170 MHz
Port 10: UMTS	1920 - 2170 MHz

Insertion loss:	
Port 1 - 5: GSM1800 - ANT 1 - 4	≤ 1.2 dB
Port 6 - 10: UMTS - ANT 1 - 4	≤ 1.2 dB

Coupling:	
Port 1 - 3: GSM1800 - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 4 - 5: GSM1800 - ANT 1 - 4	9.0 dB +/- 0.6 dB
Port 6 - 8: UMTS - ANT 1 - 4	6.0 dB +/- 0.6 dB
Port 9 - 10: UMTS - ANT 1 - 4	9.0 dB +/- 0.6 dB

Input return loss:	> 18.0 dB
Isolation between systems:	≥ 50 dB
Isolation between same systems:	≥ 25 dB
Intermodulation 2 x 43 dBm:	≤ 110 dBm (153 dBc)

Max input power/port:	60 W
Impedance in/out:	50 Ohm

### Mechanical Specifications

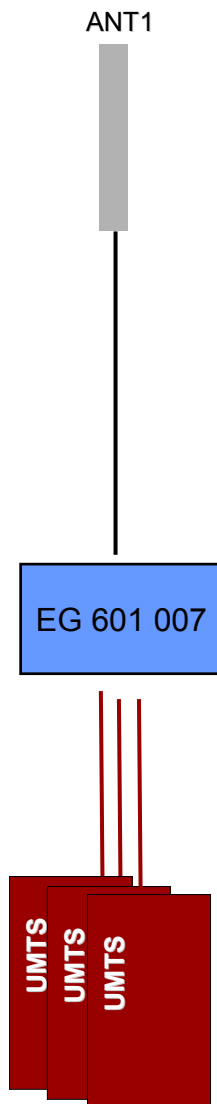
Dimensions (W x H x D):	450 x 250 x 500 mm
Connectors:	N (f)
Weight:	26 kg

### Environmental Specifications

Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se



**Multi Operator Combiner**  
**UMTS**  
**3 Inputs - 1 Output**

**Save money by installing our Multi Operator Combiner**

By utilizing our Multi Operator Combiner you will reduce the cost of antennas, feeders and installation. It eliminates the cost inefficient need to make one antenna installation for each system. By simply connecting the RBSs into the combiner it will immediately render you all the benefits of antenna sharing.

**Combines 3 UMTS signals into 1 antenna port**

This Multi Operator Combiner enables the connection of 3 RBSs/repeaters to the combiner.

The combiner combines the 3 signals to the antenna port, or splits the signal to the 3 RBSs in the receiving way. This is a highly desirable function when designing shared antenna systems wishing to connect multiple RBSs to the shared antennas.

## **Technical Specifications for the Multi Operator Combiner**

Below are some typical data. For more detailed information, please contact us.

<b>Electrical Specifications</b>	
Product number:	EG 601 0007
Passband:	
Port 1 - 3 UMTS:	1920 - 2170 MHz
Coupling/Insertion loss:	
Port 1 - 3 UMTS - ANT 1:	5.0 dB +/- 1,2dB
Input return loss:	> 18.0 dB
Isolation between same systems:	≥ 25 dB
Max input power/port:	60 W
Impedance in/out:	50 Ohm
<b>Mechanical Specifications</b>	
Dimensions (W x H x D):	450 x 115 x 305 mm
Connectors:	7/16 (f)
Weight:	7 kg
<b>Environmental Specifications</b>	
Temp. range (normal operation):	-30 to +70° C
Humidity:	Relative 5 - 100%

Egant reserves the right to change this product specification at any time without notice.

Egant AB  
Box 945  
SE-114 79 Stockholm  
Sweden  
Phone: +46 (0)8 620 06 50  
E-mail: info@egant.se  
www.egant.se