

Hybrid Couplers

RB-NKC1

3dB Hybrid Coupler - CDMA800/GSM900, 800-960MHz



Features

- High input power of 200W.
- Permits combining of CDMA800 and GSM900 services.
- Low insertion loss of 0.15dB.
- High inter-band isolation of >35dB.
- Two combined output ports for split cable systems.



Product Description

The Comba range of combiners provides compact and cost effective solutions for combining two different input frequency bands into one common output. Designed using high performance filters, these units provide excellent inter-band isolation, low insertion loss and good intermodulation performance.

The RB-NKC1 is designed to combine CDMA800 and GSM900 services. The product is particularly suited for integrating two operators' services into an existing inbuilding antenna distribution system, thereby minimizing cost and increasing speed of rollout.

Technical Specifications

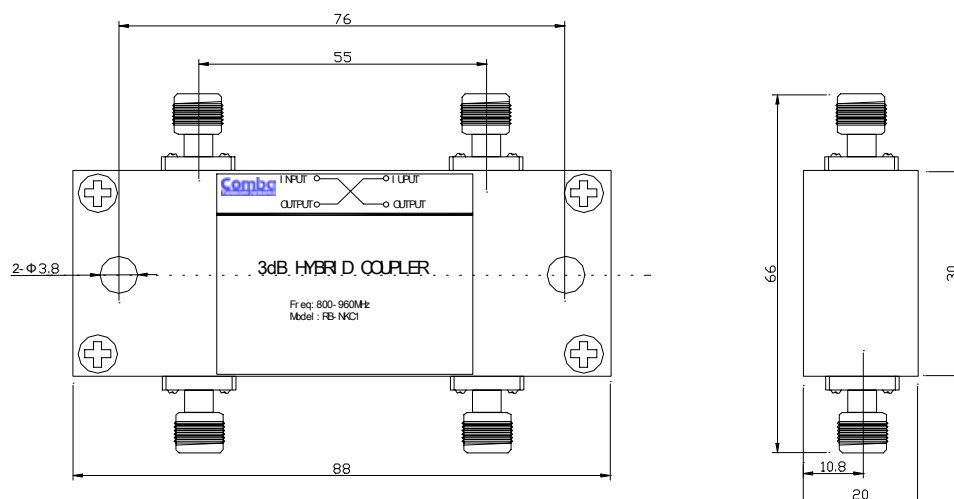
Electrical

Frequency Range – [MHz]	800 -- 960
Insertion Loss – [dB]	≤ 0.15
Isolation – [dB]	≥ 35
Degree of Coupling – [dB]	3.1± 0.2
3 rd Order Intermodulation – [dBc]	≤ -130
Isolation between Bands – [dB]	≥ 35
Group Delay – [nsec]	≤ 1
Pass Band Ripple – [dB]	≤ 0.5
Input Power Rating Per Port – [W]	200
VSWR	≤ 1.1:1
Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	88 x 66 x 20
Weight (approx.) – [kg]	0.2
Number of Output Ports	2
Number of Input Ports	2
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Temperature Range – [°C]	-55 to +125
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Note: Both output ports are the combined output of the two input ports. If only one antenna is connected to either output port, a dummy load should be attached to the other output port.



Features

- High input power of 200W.
- Permits combining of GSM1800 and UMTS services.
- Low insertion loss of 0.2dB.
- High isolation between input ports of >30dB.
- Two combined output ports for split cable systems.



Product Description

The Comba range of combiners provides compact and cost effective solutions for combining two different input frequency bands into one common output. These combiners are designed to provide low insertion loss and good intermodulation performance.

The RB-NKFO is designed to combine GSM1800 and UMTS services. The product is particularly suited for integrating two operators' services into an existing inbuilding antenna distribution system, thereby minimizing cost and increasing speed of rollout.

Technical Specifications

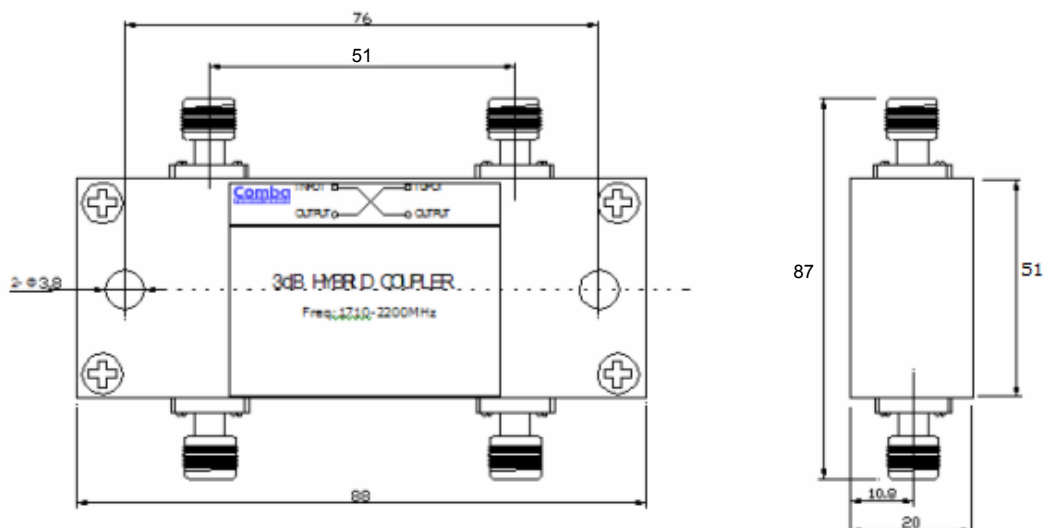
Electrical

Frequency Range – [MHz]	1710 -- 2200
Insertion Loss – [dB]	≤ 0.2
Degree of Coupling (nominal) – [dB]	3
3 rd Order Intermodulation – [dBc]	≤ -130
Isolation between Input Ports – [dB]	≥ 30
Group Delay – [nsec]	≤ 1
Pass Band Ripple – [dB]	≤ 0.5
Input Power Rating – [W]	200
VSWR	≤ 1.15:1
Nominal Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	88 x 87 x 20
Weight (approx.) – [kg]	0.3
Number of Output Ports	2
Number of Input Ports	2
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Temperature Range – [°C]	-40 to +80
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Note: Both output ports are the combined output of the two input ports. If only one antenna is connected to either output port, a dummy load should be attached to the other output port.



RB-NKW0

3dB Hybrid Coupler - CDMA800, GSM900, GSM1800 and UMTS, 800-2200MHz



Features

- Permits combining of CDMA800, GSM900, GSM1800 and UMTS services.
- Low insertion loss of 0.3dB.
- High isolation between input ports of >27dB.
- Two combined output ports for split cable systems.

Product Description

The Comba range of combiners provides compact and cost effective solutions for combining two different input frequency bands into one common output. These combiners are designed to provide low insertion loss and good intermodulation performance.

The RB-NKW0 is designed to combine CDMA800, GSM900, GSM1800 and UMTS services. This product is particularly suited for integrating two operators' services into an existing inbuilding antenna distribution system, thereby minimizing cost and increasing speed of rollout.



Technical Specifications

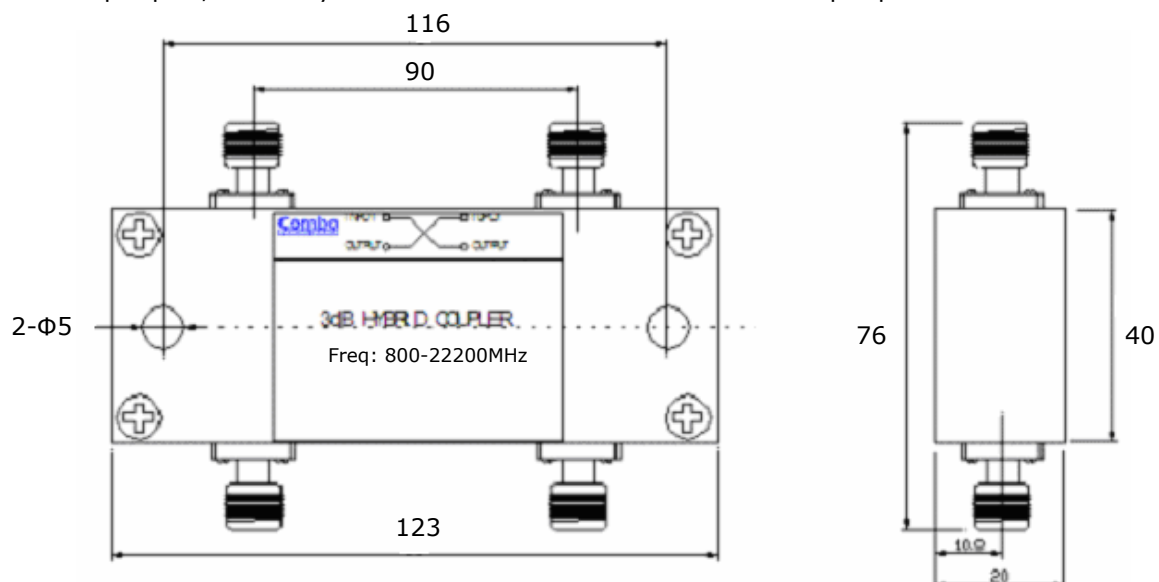
Electrical

Frequency Range – [MHz]	800 -- 2200
Insertion Loss – [dB]	≤ 0.3
Degree of Coupling (nominal) – [dB]	3
3 rd Order Intermodulation – [dBc]	≤ -130
Isolation between Input Ports – [dB]	≥ 27
Pass Band Ripple – [dB]	± 0.25
Average Input Power Rating – [W]	120
VSWR	≤ 1.2:1
Nominal Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	123 x 76 x 20
Weight (approx.) – [kg]	0.5
Number of Output Ports	2
Number of Input Ports	2
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Temperature Range – [°C]	-30 to +75
Operating Humidity – [%]	< 95
Environmental Class	IP65

Note: Both output ports are the combined output of the two input ports. If only one antenna is connected to either output port, a dummy load should be attached to the other output port.



RB-DKW0

3dB Hybrid Coupler - CDMA800, GSM900, GSM1800 and UMTS, 800-2200MHz



Features

- Permits combining of CDMA800, GSM900, GSM1800 and UMTS services.
- Low insertion loss of 0.3dB.
- High isolation between input ports of >27dB.
- Two combined output ports for split cable systems.

Product Description

The Comba range of combiners provides compact and cost effective solutions for combining two different input frequency bands into one common output. These combiners are designed to provide low insertion loss and good intermodulation performance.

The RB-NKW0 is designed to combine CDMA800, GSM900, GSM1800 and UMTS services. This product is particularly suited for integrating two operators' services into an existing inbuilding antenna distribution system, thereby minimizing cost and increasing speed of rollout.



Technical Specifications

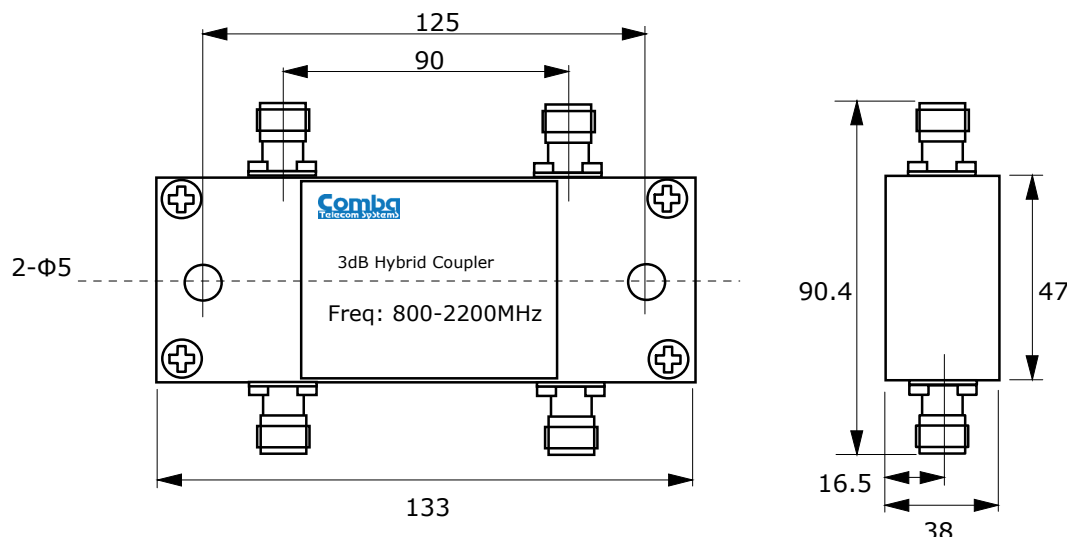
Electrical

Frequency Range - [MHz]	800 -- 2200
Insertion Loss - [dB]	≤ 0.3
Degree of Coupling (nominal) - [dB]	3
3 rd Order Intermodulation - [dBc]	≤ -130
Isolation between Input Ports - [dB]	≥ 27
Pass Band Ripple - [dB]	± 0.25
Average Input Power Rating - [W]	120
VSWR	≤ 1.2:1
Nominal Impedance - [ohm]	50

Mechanical

Dimension LxWxH - [mm]	133 x 90.4 x 38
Weight (approx.) - [kg]	0.3
Number of Output Ports	2
Number of Input Ports	2
Connector Type - Input	7-16 DIN-Female
Connector Type - Output	7-16 DIN-Female
Temperature Range - [°C]	-30 to +75
Operating Humidity - [%]	< 95
Environmental Class	IP65

Note: Both output ports are the combined output of the two input ports. If only one antenna is connected to either output port, a dummy load should be attached to the other output port.



Diplexers and Triplexers

CM-2G3GNN00

800-960, 1710-1880 / 1920-2170 Wideband Diplexer

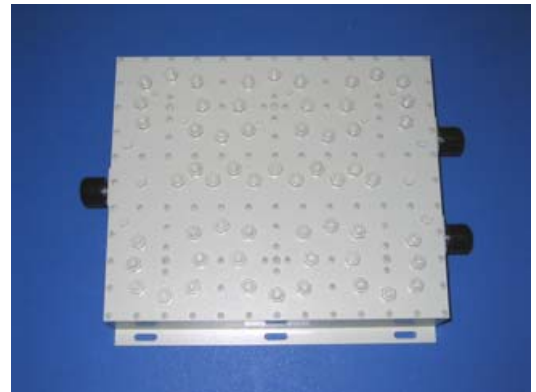


Features

- Combines GSM, DCS, and UMTS Bands.
- 200W high input power.
- Low Loss – maximizes system performance.
- Good isolation – minimizes interference.
- Compact – minimizes space requirements

Product Description

The Comba range of diplexers provides compact and cost effective solutions for combining two different input frequency bands into one common output. The CM-2G3GNN00 is a wideband diplexer designed to combine existing GSM and DCS services with UMTS network. The product is particularly suited for integrating new UMTS services into existing 2G in-building antenna distribution systems, thereby minimizing cost and increasing speed of rollout.



Technical Specifications

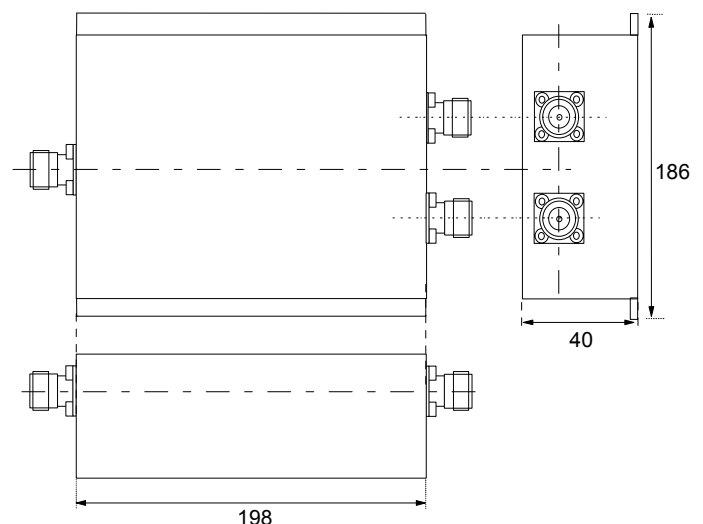
Electrical

Frequency Range – [MHz]	
- Low Band	800-960 / 1710-1880
- High Band	1920-2170
Insertion Loss – [dB]	
- Low Band : 800-960 MHz	< 0.4
- Low Band : 1710-1880 MHz	≤ 0.6
- High Band : 1920-2170 MHz	≤ 0.6
Input Power – [W]	≤ 200
3rd Order Intermod – [dBc] (at 2x43dBm carrier at either input)	-153
Pass Band Ripple (typ.) – [dB]	
- Low Band : 800-960 MHz	≤ 0.3
- Low Band : 1710-1880 MHz	≤ 0.4
- High Band : 1920-2170 MHz	≤ 0.4
Isolation Between Bands – [dB]	
- 800-960 / 1920-2170	≥ 60
- 1710-1880 / 1920-2170	≥ 60
Group Delay – [nsec]	< 100
Return Loss – [dB]	≥ 18
Impedance – [ohm]	50

Mechanical

Dimension (excl. conn) LxWxH – [mm]	198×186×40
Housing Material	Aluminum
Finish	Grey Paint
Weight – [kg]	1.8
Connector Type - Input	2x N-Female
Connector Type - Output	1x N-Female
Mounting Holes, at bottom	4 x 3mm dia
Temperature Range – [°C]	-35 to +70
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Mechanical Outline Drawing



CM-CLNN00

800-960, 1710-2170 / 2400-2500 Wideband Diplexer



Features

- Combines Cellular, PMDN, UMTS and ISM Bands.
- 150W High Power.
- No tuning required.
- Low Loss – maximizes system performance.
- High isolation – minimizes interference.
- Compact – minimizes space requirements



Product Description

The Comba range of diplexers provides compact and cost effective solutions for combining two different input frequency bands into one common output. Designed using high performance filters, these units provide excellent inter-band isolation, low insertion loss and good intermodulation performance.

The CM-CLNN00 is a wideband diplexer designed to combine existing cellular and PMDN services from 800-2200MHz with WLAN. The product is particularly suited for integrating new WLAN services into existing inbuilding antenna distribution systems, thereby minimising cost and increasing speed of rollout.

Technical Specifications

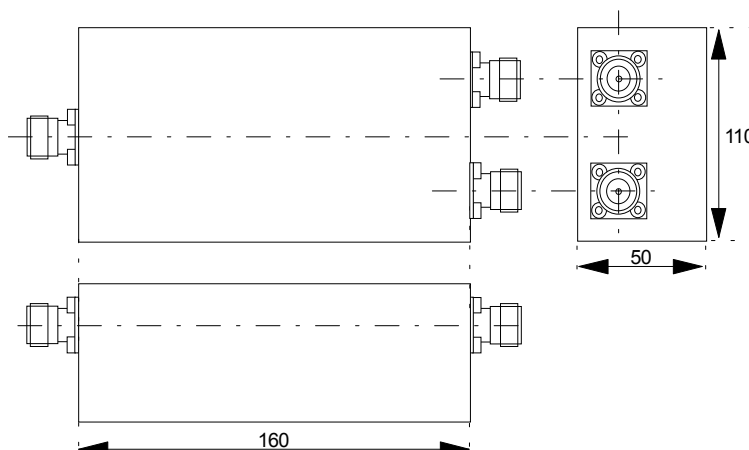
Electrical

Frequency Range – [MHz]	
- Low Band	800-960 / 1710-2170
- High Band	2400-2500
Insertion Loss – [dB]	
- Low Band : 800-960 MHz	< 0.4
- Low Band : 1710-2170 MHz	≤ 0.6
- High Band: 2400-2500 MHz	≤ 0.4
Input Power – [W]	≤ 150
3rd Order Intermod – [dBc] (at 2x43dBm carrier at either input)	-153
Pass Band Ripple (typ.) – [dB]	< 0.3
Isolation Between Bands – [dB]	≥ 60
Group Delay – [nsec]	< 100
Return Loss – [dB]	> 18
Impedance – [ohm]	50

Mechanical

Dimension (excl. conn) LxWxH – [mm]	160 x 110 x 50
Housing Material	Aluminum
Finish	Grey Paint
Weight – [kg]	1.0
Connector Type - Input	2x N-Female
Connector Type - Output	1x N-Female
Mounting Holes, at bottom	4 holes 10mm dia
Temperature Range – [°C]	-35 to +75
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Mechanical Outline Drawing



CM-2CDDD01

806-960 / 1710-1880 Dual Band Diplexer



Features

- Combines CDMA800/GSM900 and GSM1800 Band.
- 250W high input power.
- Low Loss – maximizes system performance.
- High isolation – minimizes interference.
- Compact – minimizes space requirements

Product Description

The Comba range of diplexers provides compact and cost effective solutions for combining two different input frequency bands into one common output. The CM-2CDDD01 is an outdoor dual band diplexer designed to combine CDMA800/GSM900 and GSM1800 services. The product is particularly suited for integrating new GSM1800 services into existing CDMA800/GSM900 outdoor BTS antenna systems, thereby minimising cost and increasing speed of rollout.



Technical Specifications

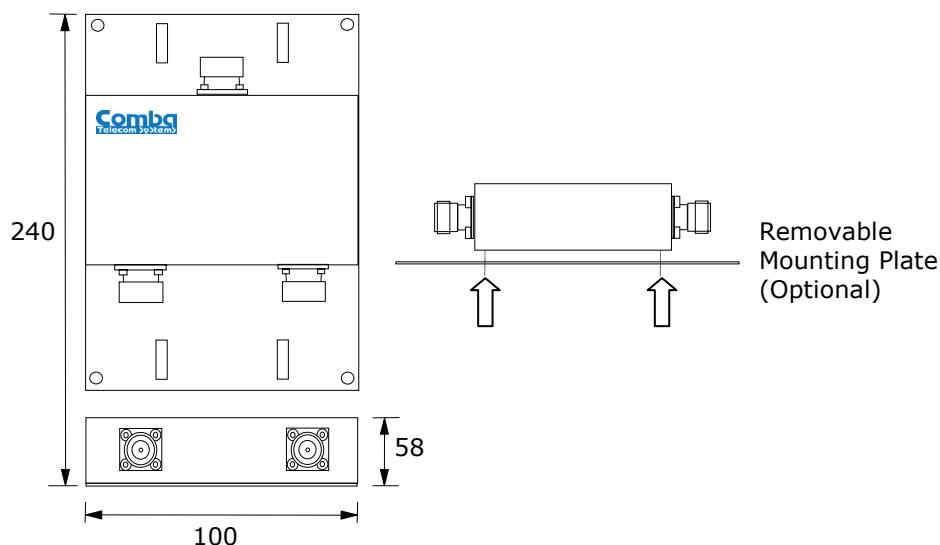
Electrical

Frequency Range – [MHz]	
- Low Band	806-960
- High Band	1710-1880
Insertion Loss – [dB]	
- Low Band : 800-960 MHz	< 0.3
- High Band : 1710-1880 MHz	< 0.3
Input Power Per Band – [W]	≤ 250
3rd Order Intermod – [dBc]	> 140
(at 2x43dBm carrier at either input)	
Pass Band Ripple (typ.) – [dB]	< 0.3
Isolation Between Bands – [dB]	
- 800-960 <-> 1710-1880	> 80
Group Delay – [nsec]	< 1
Return Loss – [dB]	> 20
Impedance – [ohm]	50

Mechanical

Dimension (excl. conn) LxWxH – [mm]	240×100×58
Housing Material	Aluminum
Finish	Grey Paint
Weight – [kg]	3.0(Indoor type)/ 5.0(Outdoor type)
Connector Type - Input	2x 7-16 Din-Female
Connector Type - Output	1x 7-16 Din-Female
Mounting Clamps for pipe - [mm]	4x M4 at bottom
Mounting Plate	Optional
Temperature Range – [°C]	-40 to +70
Operating Humidity – [%]	< 95
Environmental Class	IP65

Mechanical Outline Drawing



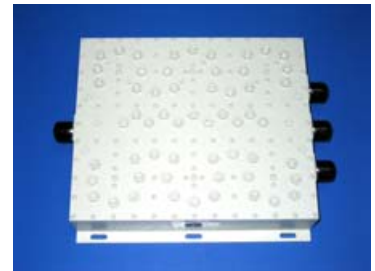
CM-CG/DCS/3GNN00

800-960/1710-1880/1920-2170 MHz, Wideband Triplexer



Features

- Combines CDMA800, GSM900, GSM1800 and UMTS Bands.
- 150W high input power.
- Low Loss – maximizes system performance.
- High isolation – minimizes interference.
- Compact – minimizes space requirements



Product Description

The Comba range of triplexers provides compact and cost effective solutions for combining three different input frequency bands into one common output. The CM-CG/DCS/3GNN00 is a wideband Triplexer designed to combine existing CDMA800, GSM900, GSM1800 and UMTS services from 800-2170MHz. The product is particularly suited for integrating new UMTS services into existing 2G inbuilding antenna distribution systems, thereby minimising cost and increasing speed of rollout.

Technical Specifications

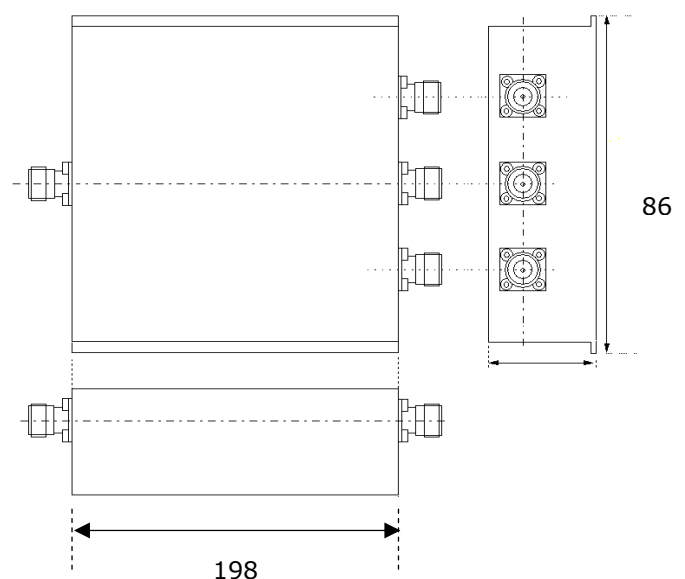
Electrical

Frequency Range – [MHz]	
- Low Band	800-960
- Mid Band	1710-1880
- High Band	1920-2170
Insertion Loss – [dB]	
- Low Band : 800-960 MHz	< 0.4
- Low Band : 1710-1880 MHz	≤ 0.6
- High Band : 1920-2170 MHz	≤ 0.6
Input Power – [W]	
- Low and Mid Band	≤ 150
- High Band	≤ 80
3rd Order Intermod – [dBc] (at 2x43dBm carrier at either input)	-153
Pass Band Ripple (typ.) – [dB]	
- Low Band	< 0.3
- Mid and High Band	< 0.4
Isolation Between Bands – [dB]	
- 2G / 2G	≥ 90
- 2G / 3G	≥ 60
Group Delay – [nsec]	< 100
DC Pass (at UMTS Port) – [mA]	1000
Return Loss – [dB]	> 20
Impedance – [ohm]	50

Mechanical

Dimension (excl. conn) LxWxH – [mm]	198×186×43
Housing Material	Aluminum
Finish	Grey Paint
Weight – [kg]	3.7
Connector Type - Input	3x N-Female
Connector Type - Output	1x N-Female
Mounting Holes, at bottom	6 holes x 10mm dia
Temperature Range – [°C]	-35 to +75
Operating Humidity – [%]	< 95
Environmental Class	Indoor

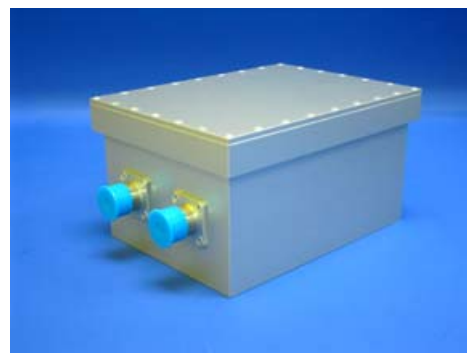
Mechanical Outline Drawing



Base Station Filters

Features

- Designed for 800 MHz AMPS/CDMA transmit applications co-located with GSM system.
- Improves GSM system performance by cleaning AMPS/CDMA sideband spurious signals.
- Provides high 60dB rejection in the GSM receive frequency band minimizing interference.
- Compact - Enables easy installation into existing radio base stations with space limitations.
- Environmentally sealed – IP65
- performance even in open-air environments.
- Low insertion loss - Ensures minimal impact on transmitted EIRP and coverage.
- Also available in 716 DIN connector.



Product Description

Comba designs and manufactures a wide range of filters to suit most applications in the range 800-2500MHz. Using the latest design techniques, we offer compact designs featuring high quality and performance. Filters can be implemented using 2 to 8 cavities to meet customer-specific bandwidth requirements and can be silver-plated for improved intermod performance and reduced insertion loss. All filters are custom designed to customer specifications at the factory.

The CF-0811NA00 bandpass filter is designed for 800 MHz CDMA or AMPS transmit applications. It improves GSM system performance by cleaning the sidebands of CDMA/AMPS transmission. Designed using high performance cavity filters, these units provide high level of rejection to CDMA/AMPS sidebands, low insertion loss and good intermodulation performance. The CF-0811NA00 can be installed into an existing 800 MHz CDMA/AMPS base station, co-located with a GSM system, to resolve interference problems with minimal impact to the overall system performance. The unit is housed in a milled aluminum case that is sealed to IP65. Suitable for applications with several AMPS/CDMA carriers.

Technical Specifications

Electrical

Pass Band – [MHz]	869 - 880
Bandwidth – [MHz]	11
Insertion Loss – [dB]	≤ 0.6
Pass Band Flatness – [dB] (over any 2MHz band)	< 0.3
Pass Band Return Loss – [dB]	
- Minimum	> 18
- At room temperature	> 20
Integrated Mean Sq. Phase Error - [rad ²]	≤ 0.0045
Filter Selectivity – [dB]	
DC – 776 MHz	> 65
776 – 820 MHz	> 48
820 – 824 MHz	> 45
824 – 849 MHz	> 25
856 – 866 MHz	> 0
869 – 880 MHz	< 0.6
890 – 915 MHz	> 60
920 – 2000 MHz	> 40
2600 – 2690 MHz	> 0

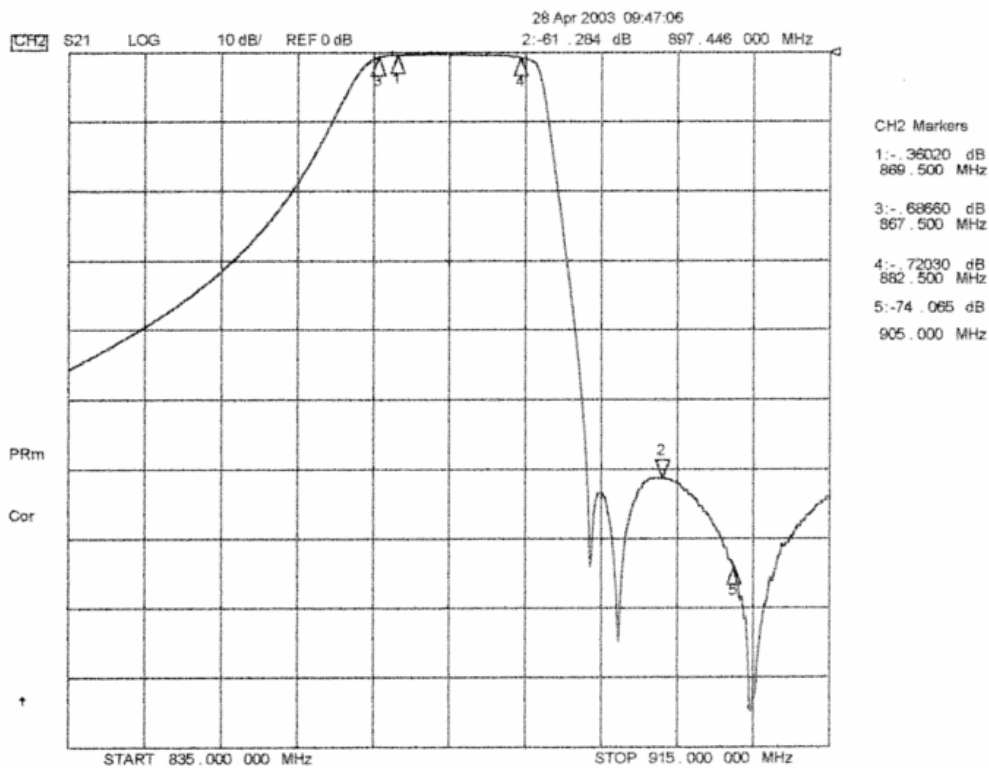
Electrical

Power Handling (Peak, 5us) – [W]	4000
3rd Order Intermod – [dBc] (at 890-915 and 856-866 MHz)	≥ 130 @ 2x43dBm carrier
Group Delay – [nsec]	< 75
Absolute Group Delay – [nsec] (at Pass Band Center)	45 - 140
Impedance – [ohm]	50

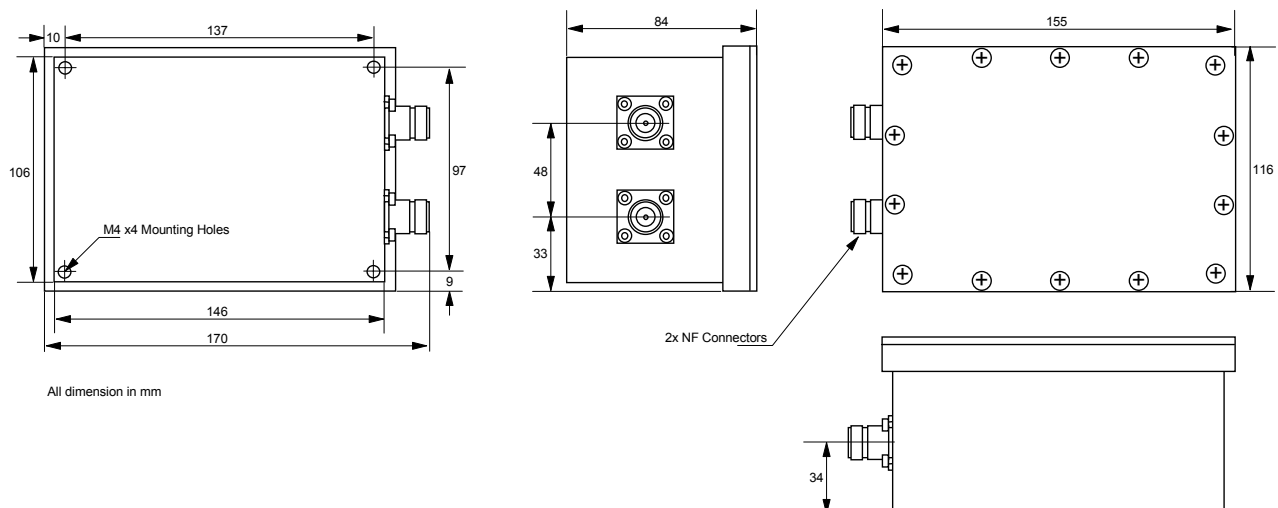
Mechanical

Dimension (excl. conn) LxWxH – [mm]	155 x 116 x 84
Housing Material	Aluminum
Finish	Silver Painted
Connector Type	2x N-Female
Weight – [kg]	2.0
Mounting Holes at Bottom	4 x M4
Temperature Range – [°C]	-40 to +85
Operating Humidity – [%]	< 95
Environmental Class	IP65

Filter Response Curve



Mechanical Outline Drawing



Point-Of-Interface (POI)

Features

- High input power of 100W.
- Permits combining of 2 GSM900, 3 GSM1800 and 3 UMTS operators.
- Low insertion loss.
- High inter-band isolation.

Product Description

The CS148 is one of a range of compact, low intermodulation, cellular combiners for cost effective, multi-operator in-building combining system. This high power combiner is designed to allow 2 GSM 900, 3 GSM 1800 and 3 UMTS operators to share the same system. Each individual input provides full duplex capability according to customer frequency bands, while providing >90dB isolation between 2G and 3G systems.

With extensive range of passive components, Comba is capable of providing solutions for almost any combination of frequency bands, ensuring systems work correctly, and keeping insertion loss to a minimum.



Technical Specifications

Electrical

Frequency Range (GSM900) – [MHz]		
- GSM900-A	RX:	901.2 – 915.0
	TX:	946.2 – 960.0
- GSM900-B	RX:	890.1 – 900.9
	TX:	935.1 – 945.9
Frequency Range (GSM1800) – [MHz]		
- GSM1800-A	RX:	1710.0 - 1730.5
	TX:	1805.0 - 1825.5
- GSM1800-B	RX:	1759.9 - 1779.9
	TX:	1854.9 - 1874.9
- GSM1800-C	RX:	1739.8 – 1755.0
	TX:	1834.8 – 1850.0
Frequency Range (UMTS) – [MHz]		
- UMTS-A	RX:	1935.1 - 1950.1
	TX:	2125.1 - 2140.1
- UMTS-B	RX:	1950.1 - 1964.9
	TX:	2140.1 - 2154.9
- UMTS-C	RX:	1920.3 - 1935.1
	TX:	2110.3 - 2125.1
Insertion Loss – [dB]		
- GSM900		< 5.0
- GSM1800		< 6.0
- UMTS		< 6.0
Isolation – [dB]		
- GSM900/GSM900		> 25
- GSM1800/GSM1800		> 25
- 3G/3G		> 33
- GSM900/GSM1800		> 90
- 2G/3G		> 90

Electrical (con't)

Number of Output Ports	2
Number of Monitor Ports	2
Signal Output at Monitor – [dBc]	-30 ± 2
3 rd Order IM3@ 2x43dBm – [dBc]	≥ 125
Input Power Rating Per Port – [W]	100
Return Loss, Input Port – [dB]	> 20
Return Loss, Output Port – [dB]	> 6
Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	600 x 600 x 160
Weight – [kg]	40
Connector Type - Input	N-Female or 7/16 Din Female
Connector Type - Output	N-Female or 7/16 Din Female
Mounting	Wall Mount Case
Temperature Range – [°C]	-20 to +55
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Features

- High input power of 100W.
- Permits combining of one PMDN, GSM900, GSM1800 and UMTS services.
- Low insertion loss of 5dB.
- High inter-band isolation of >90dB.
- Two combined output ports for split cable systems.
- Compact size permits space saving wall mount.



Product Description

The POI-006 is one of a range of compact, low intermodulation, cellular combiners for cost effective, multi-band in-building combining system. This high power combiner is designed to combine 1 PMDN, GSM900, GSM1800 and UMTS to share the same system. Each individual input provides full duplex capability according to customer frequency bands, while providing >95dB isolation between 2G and 3G systems. Main applications are in convention centers, exhibition halls, airports, underground tunnels and other large buildings.

With extensive range of passive components, Comba is capable of providing solutions for almost any combination of frequency bands, ensuring systems work correctly, and keeping insertion loss to a minimum.

Technical Specifications

Electrical

Frequency Range – [MHz]		
- PMDN, Uplink:		811.0 – 818.0
Downlink:		856.0 – 863.0
- GSM900, Uplink:		901.2 – 915.0
Downlink:		946.2 – 960.0
- GSM1800, Uplink:		1710.0 – 1730.4
Downlink:		1805.0 – 1825.4
- UMTS, Uplink:		1935.1 – 1950.1
Downlink:		2125.1 – 2140.1
Insertion Loss – [dB]		
- PMDN		< 5
- GSM900		< 5
- GSM1800		< 5
- UMTS		< 5
Isolation – [dB]		
- PMDN/GSM900/GSM1800		> 90
- 2G/3G		> 95
Input Power Rating Per Port – [W]		100
Return Loss, Input Port – [dB]		> 20
Return Loss, Output Port – [dB]		> 15
Impedance – [ohm]		50
3 rd Order IM3 @ 2 x 43dBm – [dBc]		<-150

Mechanical

Dimension LxWxH – [mm]	557 x 320 x 185
Weight (approx.) – [kg]	25
Number of Output Ports	2
Number of Input Ports	4
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Mounting	Wall Mount Case
Temperature Range – [°C]	-20 to +55
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Features

- High input power of 100W.
- Permits combining of 1x CDMA, 1x GSM900 and 3x GSM1800 operators.
- Low insertion loss.
- High inter-band isolation.

Product Description

The POI-00X is one of Comba range of compact, low intermodulation, cellular combiners that is designed for integration of cost effective, multi-operator in-building combining system. This high power combiner is designed to allow 1 CDMA, 1 GSM 900 and 3 GSM 1800 operators to share a common antenna system. Each individual input provides full duplex capability according to customer frequency bands, while providing high isolation between the systems.

With extensive range of passive components, Comba is capable of providing solutions for almost any combination of frequency bands, ensuring systems work correctly, and keeping insertion loss to a minimum.



PROVISIONAL

Technical Specifications

Electrical

Frequency Range (GSM900) – [MHz]			
- GSM900	RX:	897.5 – 915	
	TX:	942.5 – 960	

Frequency Range (GSM1800) – [MHz]			
- GSM1800-A	RX:	1710.0 – 1722.6	
	TX:	1805.0 – 1817.6	
- GSM1800-B	RX ₁ :	1722.6 – 1747.8	
	RX ₂ :	1760.4 – 1784.8	
	TX ₁ :	1817.6 – 1842.8	
	TX ₂ :	1855.4 – 1879.8	

- GSM1800-C	RX:	1747.8 – 1760.4	
	TX:	1842.8 – 1855.4	

Frequency Range (CDMA) – [MHz]			
- CDMA	RX:	825 – 835	
	TX:	870 – 880	

Insertion Loss – [dB]		
- GSM900		< 5.0
- GSM1800		< 6.0
- CDMA		< 5.0

Isolation – [dB]		
- GSM900/CDMA		> 50
- GSM1800/GSM1800		> 45
- GSM900/GSM1800		> 80

Electrical (con't)

Number of Output Ports	2
Number of Input Ports	5
Number of Monitor Ports	2
Signal Output at Monitor – [dBc]	-30 ± 2
3 rd Order IM3@ 2x43dBm – [dBc]	≥ 125
Input Power Rating Per Port – [W]	100
Return Loss, Input Port – [dB]	> 20
Return Loss, Output Port – [dB]	> 18
Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	TBD
Weight – [kg]	TBD
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Mounting	Wall Mount Case
Temperature Range – [°C]	-20 to +70
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Features

- High input power of 100W.
- Permits combining of 4x GSM1800 operators.
- Low insertion loss.
- High inter-band isolation.

Product Description

The POI-G1800X is one of Comba range of compact, low intermodulation, cellular combiners that is designed for integration of cost effective, multi-operator in-building combining system. This high power combiner is designed to allow 4 GSM 1800 operators to share a common antenna system. Each individual input provides full duplex capability according to customer frequency bands, while providing high isolation between the systems.

With extensive range of passive components, Comba is capable of providing solutions for almost any combination of frequency bands, ensuring systems work correctly, and keeping insertion loss to a minimum.



PROVISIONAL

Technical Specifications

Electrical

Frequency Range – [MHz]		
- GSM1800-A	RX: 1710 – 1721.2 / 1759 – 1760.8 TX: 1805 – 1816.2 / 1854 – 1855.8	
- GSM1800-B	RX: 1721.4 – 1732.4 TX: 1816.4 – 1827.4	
- GSM1800-C	RX: 1732.6 – 1743.6 / 1757 – 1758.8 TX: 1827.6 – 1838.0 / 1852 – 1853.8	
- GSM1800-D	RX: 1743.8 – 1756.8 / 1761 – 1762.8 TX: 1838.8 – 1851.8 / 1856 – 1857.8	
Insertion Loss – [dB]	≤6.0	
Isolation – [dB]		
- GSM1800/GSM1800	≥ 45	

Electrical (con't)

Number of Output Ports	2
Number of Input Ports	4
Number of Monitor Ports	2
Signal Output at Monitor – [dBc]	30 ± 2
3 rd Order IM3@ 2x43dBm –[dBc]	≥125
Input Power Rating Per Port – [W]	100
Return Loss, Input Port – [dB]	≥ 20
Return Loss, Output Port – [dB]	≥ 20
Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	Compact
Weight – [kg]	TBD
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Mounting	Wall Mount Case
Temperature Range – [°C]	-20 to +70
Operating Humidity – [%]	< 95
Environmental Class	Indoor

Features

- High input power of 150W.
- Permits combining of multiple GSM1800 operator services.
- Low insertion loss of 5dB.
- Compact size permits space saving wall mount.

Product Description

The COM-DDN08 offers multi operator combining services for cost effective in-building solution. This high power combiner is specially designed to combine 3 different GSM1800 frequency bands to share a common antenna system. Each individual input provides full duplex capability according to customer frequency bands, while providing good isolation between bands. Main applications are in convention centers, exhibition halls, airports, underground tunnels and other large buildings.

With extensive range of passive components, Comba is capable of providing solutions for almost any combination of frequency bands, ensuring systems work correctly, and keeping insertion loss to a minimum.



Technical Specifications

Electrical

Frequency Range – [MHz]	
- GSM1800A, Uplink:	1710.0 – 1720.5
Downlink:	1805.0 – 1815.5
- GSM1800B, Uplink:	1744.8 – 1755.0
Downlink:	1839.8 – 1850.0
- GSM1800C, Uplink:	1759.9 – 1772.3
Downlink:	1854.9 – 1867.3
Insertion Loss – [dB]	
- GSM1800	< 5
Isolation – [dB]	
- Input Port	> 60
- TX/RX	> 90
Input Power Rating Per Port – [W]	150
Return Loss, Input Port – [dB]	> 20
Return Loss, Output Port – [dB]	> 20
3 rd Order IM3 @ 2 x 43dBm – [dBc]	> 125
Impedance – [ohm]	50

Mechanical

Dimension LxWxH – [mm]	557 x 300 x 185
Weight (approx.) – [kg]	30
Number of Monitoring Ports (-30dBc ±2)	9
Number of Output Ports	4
Number of Input Ports	5
Connector Type - Input	N-Female
Connector Type - Output	N-Female
Mounting	Wall Mount Case
Temperature Range – [°C]	-20 to +55
Operating Humidity – [%]	< 95
Environmental Class	Indoor