

Multi Operator Combiner – 60Watt

(4xCDMA800 + 5xGSM1800 + 5xUMTS) or
 (2xCDMA800 + 5xGSM1800 + 5xUMTS)
 (4xCDMA800 + 4xGSM1800 + 4xUMTS)
 (5xCDMA800 + 5xUMTS) or
 (4xGSM1800 + 4xUMTS)

With/without monitoring port (optional)



PW-601-0047



PW-601-0045

Combines up to 14 RBSs into 4 antenna ports

These Multi Operator Combiners enable up to 14 Radio Base Stations connect to the combiner

- 4 CDMA800+GSM900 Radio Base Stations
- 5 GSM1800 Radio Base Stations
- 5 UMTS2100 Radio Base Stations

The combiners combine the signals to the 4 antenna ports, or they split the signal to the 8 or 12 or 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 Small Multi Operator Combiner (SMOC)

By utilizing Pacific Wave's Multi Operator Combiners you will reduce the cost of antennas, feeders and installation. It eliminates the cost in-efficient 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

PW-601-0062 for 14in4out Combiner,
 PW-601-0063, PW-601-0045 for 12in4out Combiner,
 PW-601-0064 for 10in4out Combiner &
 PW-601-0046 for 8in4out Combiner
 come equipped with 4x(-30)dB monitoring port with SMA-female Connector

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

Product Name	<u>PW-SMOC-8In4Out</u>	<u>PW-SMOC-12In4Out</u>	<u>PW-SMOC-8In4Out</u>
Part Code without Monitoring Port	PW-601-0025	PW-601-0048	PW-601-0047
Part Code with 4x(-30dB) Port	PW-601-0035	PW-601-0045	PW-601-0046
<u>Passband:</u>			
Port 1: CDMA800-GSM900	806 - 960 MHz	806 – 960 MHz	-
Port 2: CDMA800-GSM900	806 - 960 MHz	806 – 960 MHz	-
Port 3: CDMA800-GSM900	806 - 960 MHz	806 – 960 MHz	-
Port 4: CDMA800-GSM900	806 - 960 MHz	806 – 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 : UMTS2100	1920 - 2170 MHz	1920 – 2170 MHz	1920 - 2170 MHz
Port 10 : UMTS2100	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 11 : UMTS2100	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 12 : UMTS2100	1920 - 2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
<u>Insertion Loss</u>			
Port 1-4 : CDMA800 to ANT 1-4	≤ 1.0 dB	≤ 1.2 dB	-
Port 5-8 : GSM1800 to ANT 1-4	-	≤ 1.2 dB	≤ 1.0 dB
Port 9-12: UMTS2100 to ANT 1-4	≤ 1.0 dB	≤ 1.2 dB	≤ 1.0 dB
<u>Coupling: (1in – 4out)</u>			
Port 1-4 : CDMA800 to ANT 1-4	6.0 dB +/- 0.6 dB	6.0dB +/- 0.6dB	-
Port 5-8 : GSM1800 to ANT 1-4	-	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
Port 9-12: UMTS2100 to ANT 1-4	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB
<u>Input Return Loss :</u>			
Isolation between systems:	≥ 18.0 dB	≥ 18.0 dB	≥ 18.0 dB
Isolation between same systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB	≥ 25 dB
Intermodulation 2 x (+43) dBm:	≤ 117 dBm (160dBc)	≤ 117 dBm (160dBc)	≤ 117 dBm (160dBc)
Max input power/port:	60 W	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm
<u>Mechanical Specifications</u>			
Dimensions (W x L x D):	300 x 400 x 180 mm	450 x 500 x 250 mm	300 x 400 x 180 mm
No of Connectors on TOP:	8pcs Nfemale	12pcs Nfemale	8pcs Nfemale
Total Weight:	15 kg	24 kg	17kg
<u>Environmental Specifications</u>			
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%

Customer should provide their own Band Pass Filter between CDMA 800Mhz & GSM 900Mhz if these frequency are used together. Factory reserves the right to change product specification at any time (if found necessary).

Product Name	PW-SMOC-14In4Out	PW-SMOC-12in4Out	PW-SMOC-12In4Out	PW-SMOC-10In4Out
Code without Monitoring Port	PW-601-0052	PW-601-0060	PW-601-0048	PW-601-0054
Code with 4x(-30dB) Port	PW-601-0062	PW-601-0063	PW-601-0045	PW-601-0064
<u>Passband:</u>				
Port 1: CDMA800-GSM900	806 - 960 MHz	806-960MHz	806 – 960 MHz	-
Port 2: CDMA800-GSM900	806 - 960 MHz	806-960MHz	806 – 960 MHz	-
Port 3: CDMA800-GSM900	806 - 960 MHz	-	806 – 960 MHz	-
Port 4: CDMA800-GSM900	806 - 960 MHz	-	806 – 960 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	1710 – 1880 MHz
Port 7 : GSM1800	1710 - 1880 MHz	1710-1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 8 : GSM1800	1710 - 1880 MHz	1710-1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 9 : GSM1800	1710 - 1880 MHz	1710-1880 MHz	1710 - 1880 MHz	1710 - 1880 MHz
Port 10 : UMTS2100	1920 - 2170 MHz	1920-2170 MHz	-	1920 - 2170 MHz
Port 11 : UMTS2100	1920 - 2170 MHz	1920-2170 MHz	1920 – 2170 MHz	1920 - 2170 MHz
Port 12 : UMTS2100	1920 - 2170 MHz	1920-2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 13 : UMTS2100	1920 - 2170 MHz	1920-2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
Port 14 : UMTS2100	1920 – 2170 MHz	1920-2170 MHz	1920 - 2170 MHz	1920 - 2170 MHz
<u>Insertion Loss</u>				
CDMA800 to ANT 1-4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB	-
GSM1800 to ANT 1-4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
UMTS to ANT 1-4	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB	≤ 1.2 dB
<u>Coupling: (1in – 4out)</u>				
CDMA800 to ANT 1-4	6 dB +/- 0.6 dB	6 dB +/- 0.6 dB	6.0dB +/- 0.6dB	-
GSM1800 to ANT 1-4	6-9 dB +/- 0.6 dB	6-9 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6-9 dB +/- 0.6 dB
UMTS to ANT 1-4	6-9 dB +/- 0.6 dB	6-9 dB +/- 0.6 dB	6.0 dB +/- 0.6 dB	6-9 dB +/- 0.6 dB
<u>Input Return Loss :</u>				
	≥ 18.0 dB	≥ 18.0 dB	≥ 18.0 dB	≥ 18.0 dB
Isolation between systems:	≥ 50 dB	≥ 50 dB	≥ 50 dB	≥ 50 dB
Isolation between same systems:	≥ 25 dB	≥ 25 dB	≥ 25 dB	≥ 25 dB
Intermodulation 2 x (+43) dBm:	≤ 117 dBm (160 dBc)	≤ 117 dBm (160 dBc)	≤ 117 dBm (160dBc)	≤ 117dBm (160dBc)
Max input power/port:	60 Watt	60 Watt	60 W	60 W
Impedance in/out:	50 Ohm	50 Ohm	50 Ohm	50 Ohm
<u>Mechanical Specifications</u>				
Dimensions (W x L x D):	450x500x250 mm	450x500x250 mm	450x500x250 mm	450x500x250 mm
Input/Output Connectors Type :	Nfemale	Nfemale	Nfemale	Nfemale
Monitoring Port Connectors :	SMA-female	SMA-female	SMA-female	SMA-female
Total Weight:	28 kg	28 kg	20 kg	24Kg
<u>Environmental Specifications</u>				
Temp. Range (normal):	-30 to +70° C	-30 to +70° C	-30 to +70° C	-30 to +70° C
Humidity:	Relative 5 - 100%	Relative 5 - 100%	Relative 5 - 100%	Relative 5 - 100%

Customer should provide their own Band Pass Filter between CDMA 800Mhz & GSM 900Mhz if these frequency are used together.
 Factory reserves the right to change product specification at any time (if found necessary).