

▼ Electrical

Ports			4 x Low Band Ports for 698-896 MHz	
Frequency Range	698-896 MHz	824-896 MHz		
Gain ¹	14.5 dBi	15.1 dBi		
Gain (Average) ²	13.6 dBi	14.4 dBi		
Azimuth Beamwidth (-3dB)	73°	63°		
Elevation Beamwidth (-3dB)	12.9°	11.1°		
Electrical Downshift	2° to 12°	2° to 12°		
Elevation Sidelobes (1st Upper)	< -17 dB	< -17 dB		
Front-to-Back Ratio @180°	> 30 dB	> 35 dB		
Front-to-Back Ratio ±20°	> 28 dB	> 30 dB		
Cross-Polar Discrimination at Peak	> 25 dB	> 25 dB		
Cross-Polar Discrimination at Sector ²	11.2 dB	12.1 dB		
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB		
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1		
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc		
Input Power Continuous Wave (CW)	500 watts	500 watts		
Polarization	Dual Linear 45°	Dual Linear 45°		
Input Impedance	50 ohms	50 ohms		
Lightning Protection	DC Ground	DC Ground		

¹Real gain across sub-bands

²Electrical specifications follow document: Recommendation on Base Station Antenna Standards (B47M) v9.6

Ports			8 x High Band Ports for 1695-2400 MHz			
Frequency Range	1695-1880 MHz	1850-1990 MHz	1920-2180 MHz	2300-2400 MHz		
Gain ¹	17.8 dBi	18.1 dBi	18.4 dBi	18.0 dBi		
Gain (Average) ²	16.6 dBi	17.0 dBi	17.3 dBi	16.9 dBi		
Azimuth Beamwidth (-3dB)	70°	66°	66°	60°		
Elevation Beamwidth (-3dB)	5.7°	5.2°	4.8°	4.0°		
Electrical Downshift	0° to 8°	0° to 8°	0° to 8°	0° to 8°		
Elevation Sidelobes (1st Upper)	< -10 dB	< -10 dB	< -10 dB	< -10 dB		
Front-to-Back Ratio @180°	> 35 dB	> 35 dB	> 35 dB	> 35 dB		
Front-to-Back Ratio ±20°	> 30 dB	> 30 dB	> 30 dB	> 30 dB		
Cross-Polar Discrimination at Peak	> 18 dB	> 18 dB	> 18 dB	> 20 dB		
Cross-Polar Discrimination at Sector ²	12.4 dB	10.4 dB	10.8 dB	8.5 dB		
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB	> 25 dB	> 25 dB		
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1	< 1.5:1	< 1.5:1		
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc	≤ -153 dBc		
Input Power Continuous Wave (CW)	300 watts	300 watts	300 watts	300 watts		
Polarization	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°	Dual Linear 45°		
Input Impedance	50 ohms	50 ohms	50 ohms	50 ohms		
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground		

¹Real gain across sub-bands

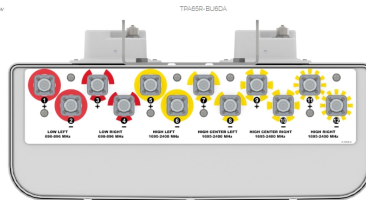
²Electrical specifications follow document: Recommendation on Base Station Antenna Standards (B47M) v9.6

▼ Mechanical

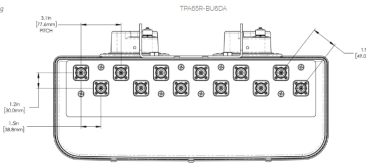
Dimensions (LxWxD)	71.2x20.7x7.7 in (1808x525x197 mm)
Survival Wind Speed	> 150 mph (241 kph)
Front Wind Load	325 lbs (1446 N) @ 100 mph (161 kph)
Side Wind Load	144 lbs (642 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	12.7 m ² (1.2 m ²)
Weight*	68.3 lbs (31.0 kg)
Packaging Dimensions (LxWxD)	81.4x25.2x13.9 in (2067x641x354 mm)
Packaged Weight	116.8 lbs (53.0 kg)
Connector	12 x 4.3-10 Female
Mounting Pole	2 to 5 in (5 to 12 cm)

*Weight includes mounting

Bottom View



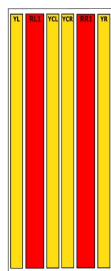
Connector Spacing



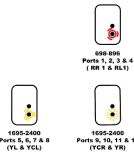
RET to Elements Configuration

TR45DR-BL2DC Elements and RET configuration (Type 1 External RET)

Top of antenna Viewed from rear



RET placement as viewed from rear of antenna



Array	Ports	Freq (MHz)	Ports controlled by common RET
RL1	1, 2	698-896	1, 2, 3, 4
RR1	3, 4	698-896	
YL	5, 6	1695-2400	5, 6, 7, 8
YCR	7, 8	1695-2400	
YR	9, 10	1695-2400	
YR	11, 12	1695-2400	9, 10, 11, 12

▼ Typical Antenna Patterns

For detailed information on additional antenna patterns, contact customer support at support@ccpproducts.com

