

## HEX654CW0000x

TRI BAND | HEX PORT | PANEL ANTENNA | XXX-POL | 65° / 65° / 65° | 13.8 / 16.8 / 16.8 DBI | VARIABLE TILT

### Features

- AWS-3 Ready
- 4x4 MIMO high band compatible
- Patented internal RET actuator adds no additional length to the antenna
- Can be ordered with a Multi-Device Dual Unit (MDDU) with two separate inputs for independent control of each band

### Connector Description

The antenna has six (6) connectors located at the bottom, each marked with a colored ring.

Low Band	■ R1	696-960 MHz	(2x) 7/16-DIN Female
Mid Band #1	■ B1	1695-2180 MHz	(2x) 7/16-DIN Female
Mid Band #2	■ B2	1695-2180 MHz	(2x) 7/16-DIN Female

### Electrical Characteristics

Electrical Characteristics	R1		B1 B2		
Frequency Bands (MHz)	696-960 MHz		(2x) 1695-2180 MHz		
	696-806	806-960	1695-1850	1850-1990	2100-2180
Polarization	±45°		(2x) ±45°		
Horizontal Beamwidth	72°	68°	70°	67°	65°
Vertical Beamwidth	19°	16°	8.3°	7.5°	7.0°
Gain	12.9 dBi	13.8 dBi	15.8 dBi	16.5 dBi	16.8 dBi
Electrical Downtilt	0-14°		0-10°		
Impedance	50Ω		50Ω		
VSWR	< 1.5:1		< 1.5:1		
Upper Sidelobe Suppression	> 16 dB Typical		> 15 dB Typical		
Front-to-Back Ratio	> 30 dB		> 28 dB		
In-Band Isolation	> 25 dB		> 28 dB		
Isolation Between Ports	> 30 dB		> 30 dB		
IM3 (2x20W carrier)	< -153 dBc		< -153 dBc		
Input Power	(2x) 500 W		(4x) 250 W		
Diplexed	No				
Lightning Protection	Direct Ground				
Operating Temperature	-40° to +60° C (-40° to +140° F)				

### Mechanical Characteristics



Dimensions (Length x Width x Depth)		1298 x 305 x 180 mm	51.1 x 12.0 x 7.1 in
Weight	Antenna Only	13.5 kg	29.8 lbs
	Antenna with Mounting Bracket Kit <b>MKS09P01</b>	16.2 kg	35.7 lbs
	Antenna with Mounting Bracket Kit <b>MKS09T01</b>	18.0 kg	39.7 lbs
Survival Wind Speed		241 km/hr	150 mph
Wind Loads (160 km/hr or 100 mph)	Front	480 N	108 lbf
	Side	284 N	64 lbf

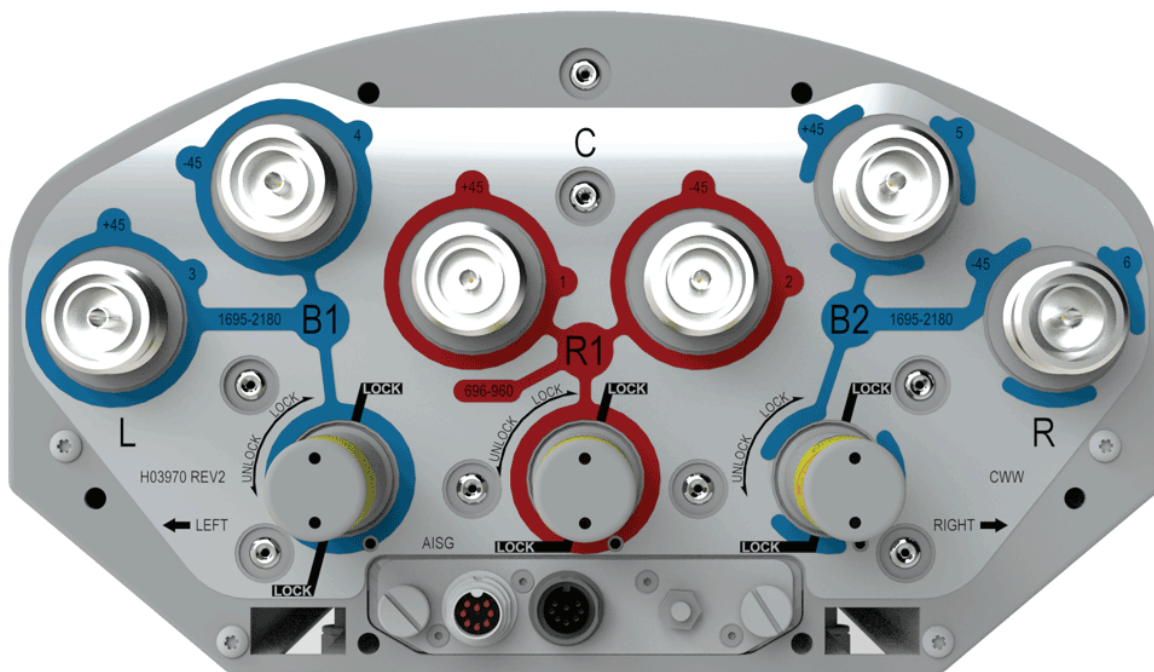


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## Electrical Downtilt Control

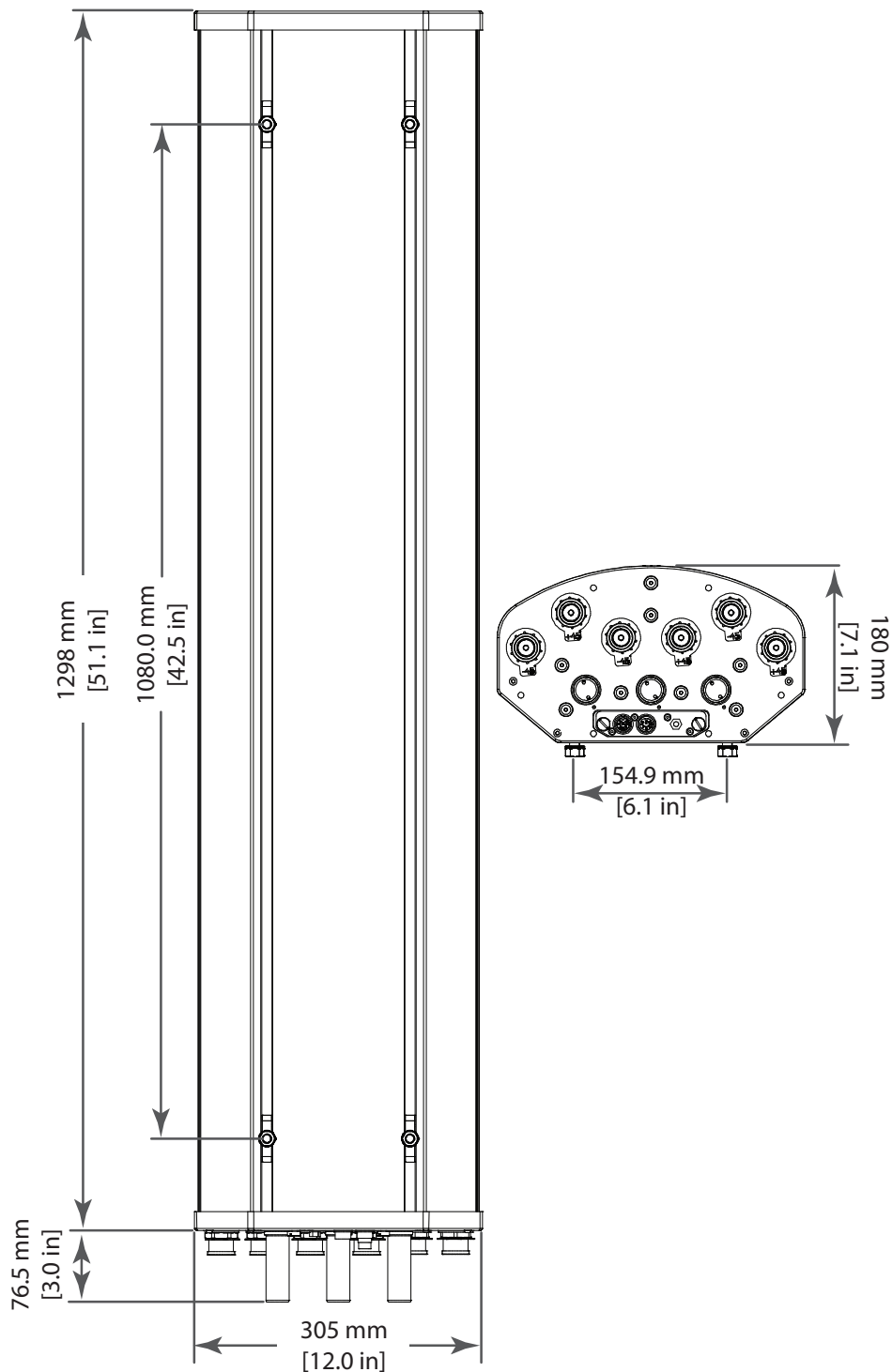
Manual Electrical Tilt (MET) Control	Electrical downtilt for each band can be controlled separately. A colored knob at the end of the tilt indicator allows change of the tilt without need of a tool. The knob color is identical to the corresponding connector ring color. To access the knob, remove the cap by turning it counter-clockwise. It is re-installed by opposite rotation. <b>Do not remove the transparent cap(s) from the antenna.</b>	
Remote Electrical Tilt (RET) Control	Electrical downtilt for each band can be controlled separately. The remote control of the electrical tilt is managed by either a Multi-Device Control Unit (MDCU) or a Multi-Device Dual Unit (MDDU) inserted in the bottom of the antenna. A single actuator individually controls the tilt of each band (no need for daisy chain cables between the bands). This module does not add any additional length to the antenna. For RET control, the transparent caps must be in place and locked. The tilt angle indicators always remain visible and the antenna still has manual tilt control (manual override). <b>Do not remove the transparent cap(s) from the antenna.</b>	
RET Actuators (Units are Field Replaceable)	Multi-Device Control Unit (MDCU) An electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. The MDCU is factory installed.	Multi-Device Dual Unit (MDDU) Allows two separate RET Controllers to independently drive the RETs in Amphenol antennas with factory installed motors (for antenna sharing). The MDDU is factory installed. Refer to Ordering Options for unique AISG port configurations
		 <div>Port A      Port B</div> <div>Two separate inputs for independent control of each band</div>



Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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### Antenna Ordering Options

Select Electrical Tilt Type	Actuator Description	Select RET Actuator Port Configuration		Antenna Model Number
		Port A	Port B	
Manual Electrical Tilt	---	---	---	HEX654CW0000 <b>0M</b>
Remote Electrical Tilt AISG v2.0 / 3GPP with an <b>MDCU</b> RET Actuator	The <b>MDCU</b> (Multi-Device Control Unit) is an electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. The MDCU is factory installed.	---	---	HEX654CW0000 <b>0G</b>
Remote Electrical Tilt AISG v2.0 / 3GPP with an <b>MDDU</b> RET Actuator	The <b>MDDU</b> (Multi-Device Dual Unit) allows two separate RET Controllers to independently drive the RETs in Amphenol antennas with factory installed motors (for antenna sharing). The MDDU is factory installed.	R1 696-960 MHz	B2 / B1 1695-2180 / 1695-2180 MHz	HEX654CW0000 <b>0L</b>
		B1 1695-2180 MHz	B2 / R1 1695-2180 / 696-960 MHz	HEX654CW0000 <b>L1</b>
		B2 1695-2180 MHz	B1 / R1 1695-2180 / 696-960 MHz	HEX654CW0000 <b>L2</b>

### Mounting Kit Ordering Options All mounting bracket kits are ordered separately unless otherwise indicated.

Mounting Options	Part Number	Image	Fits Pipe Diameter	Weight
2-Point Mounting Bracket Kit	MKS09P01		50-115 mm 2.0-4.5 in	2.7 kg 6 lbs
2-Point Mounting & Downtilt Bracket Kit	MKS09T01		50-115 mm 2.0-4.5 in	4.5 kg 10 lbs

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