HHT4-65B-R2

12-port, Dual Band, DualPol® Planar Array® Antenna, 4x 1850–1995 and 8x 2490-2690MHz, 65° HPBW, 2x internal RET.

- 2 columns for 1895 MHz and 4 columns for 2490-2690 MHz
- Two internal RETs to control the antenna arrays
- Integrated with a calibration board

OBSOLETE

This product was discontinued on: March 31, 2021

General Specifications

Antenna Type	Sector
Band	Multiband
Calibration Connector Interface	N Female
Calibration Connector Quantity	1
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	PVC, UV resistant
Radiator Material	Brass | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.1-9.5 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, high band	12
RF Connector Quantity, total	12

Remote Electrical Tilt (RET) Information

RET Interface, quantity	2 male
Input Voltage	10–30 Vdc
Internal RET	High band (2)

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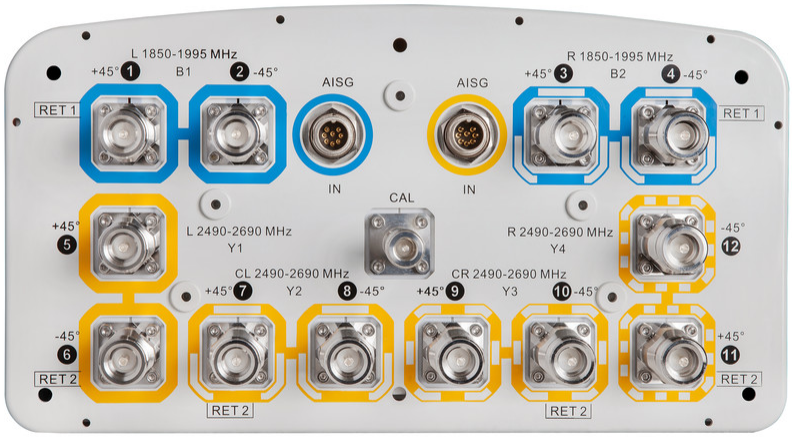
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	13 W
Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	320 mm | 12.598 in
Depth	170 mm | 6.693 in
Length	1820 mm | 71.654 in
Net Weight, without mounting kit	24 kg | 52.911 lb
TDD Column Spacing	75 mm | 2.953 in

Port Configuration



Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1850 – 1995 MHz | 2490 – 2690 MHz
Polarization	±45°

Beam Forming Weights

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Prefered New wt/phase table										
HHT4-65B-R2			Port1	Port2	Port3	Port4	Port5	Port6	Port7	Port8
P0	Broadcast_65° for tilt 0-3	Amp(voltage)	0.81	0	1	0	0.73	0	0.6	0
		Phz	0	0	115	0	100	0	0	0
P1	Broadcast_65° for tilt 0-3	Amp(voltage)	0	0.81	0	1	0	0.73	0	0.6
		Phz	0	0	0	115	0	100	0	0
P0	Broadcast_65° for tilt 4-8	Amp(voltage)	0.81	0	1	0	0.73	0	0.6	0
		Phz	0	0	130	0	100	0	7	0
P1	Broadcast_65° for tilt 4-8	Amp(voltage)	0	0.81	0	1	0	0.73	0	0.6
		Phz	0	0	0	130	0	100	0	7
P0	FullPower_Boardcast_65° for tilt0-8	Amp(voltage)	1	1	1	1	0	0	0	0
		Phz	80	57	0	137	0	0	0	0
P1	FullPower_Boardcast_65° for tilt0-8	Amp(voltage)	0	0	0	0	1	1	1	1
		Phz	0	0	0	0	93	-123	0	-30
+45	Service Beam_0° for tilt0-8	Amp(voltage)	1	0	1	0	1	0	1	0
		Phz	0	0	0	0	0	0	0	0
-45	Service Beam_0° for tilt0-8	Amp(voltage)	0	1	0	1	0	1	0	1
		Phz	0	0	0	0	0	0	0	0
+45	Service Beam_30° for tilt0-8	Amp(voltage)	1	0	1	0	1	0	1	0
		Phz	0	0	120	0	-120	0	0	0
-45	Service Beam_30° for tilt0-8	Amp(voltage)	0	1	0	1	0	1	0	1
		Phz	0	0	0	120	0	-120	0	0
+45	Service Beam_-30° for tilt0-8	Amp(voltage)	1	0	1	0	1	0	1	0
		Phz	0	0	-120	0	120	0	0	0
-45	Service Beam_-30° for tilt0-8	Amp(voltage)	0	1	0	1	0	1	0	1
		Phz	0	0	0	-120	0	120	0	0

Electrical Specifications

Frequency Band, MHz	**1850–1995**	**2490–2690**
Beam Tilt, degrees	0–8	0–8
Beam Tilt Tolerance, degrees	±1	±1
Coupling level, Amp, Antenna port to Cal port, dB		26
Coupling level, max Amp Δ, Antenna port to Cal port, dB		±2
Coupler, max Amp Δ, Antenna port to Cal port, dB		0.9
Coupler, max Phase Δ, Antenna port to Cal port, degrees		7
Isolation, Cross Polarization, dB	25	25
Isolation, Cross Polarization, port to port, dB	25	25
Isolation, Cross Polarization, port to port, between two columns, dB	25	25
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-146

Electrical Specifications, Broadcast 65°

Frequency Band, MHz	**2490–2690**
Gain, dBi	17
Beamwidth, Horizontal, degrees	65
Beamwidth, Horizontal Tolerance, degrees	±5
Beamwidth, Vertical, degrees	5
Beamwidth, Vertical Tolerance, degrees	±0.5

CPR at Boresight, dB	17
Front-to-Back Total Power at 180° ± 30°, dB	27
Null Fill, dB	-22
USLS (First Lobe), dB	18

Electrical Specifications, Service Beam

Frequency Band, MHz	**2490–2690**
Steered 0° Gain, dBi	22.5
Steered 0° Gain Tolerance, dBi	±0.5
Steered 0° Beamwidth, Horizontal, degrees	22
Steered 0° CPR at Beampeak, dB	18
Steered 0° Front-to-Back Total Power at 180° ± 30°, dB	30
Steered 0° Horizontal Sidelobe, dB	-10
Steered 13° USLS (First Lobe), dB	5
Steered 30° Gain, dBi	21
Steered 30° Gain Tolerance, dBi	±0.5
Steered 42° Front-to-Back Total Power at 180° ± 30°, dB	5

Electrical Specifications, Single Column

Frequency Band, MHz	**1850–1995**	**2490–2690**
Gain, dBi	17.4	17.6
Beamwidth, Horizontal, degrees	64	70
Beamwidth, Horizontal Tolerance, degrees	±8	±8
Beamwidth, Vertical, degrees	5.4	4.1
Beamwidth, Vertical Tolerance, degrees	±0.5	±0.5
CPR at Sector, dB	10	10
Front-to-Back Total Power at 180° ± 30°, dB	30	25
USLS (First Lobe), dB	18	18
Input Power per Port, maximum, watts	300	25

Mechanical Specifications

Wind Loading @ Velocity, maximum	1,253.0 N @ 150 km/h (281.7 lbf @ 150 km/h)
Wind Speed, maximum	250 km/h (155 mph)

Packaging and Weights

Width, packed	427 mm | 16.811 in

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Depth, packed	304 mm | 11.969 in
Length, packed	1931 mm | 76.024 in
Weight, gross	36 kg | 79.366 lb

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

Included Products

BSAMNT-3	–	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance