

# FFHH-65C-R3



8-port sector antenna, 4x 617-806 and 4x 1695–2360 MHz, 65° HPBW, 3x RET, 600 MHz-Ready Antenna Technology

## OBSOLETE

This product was discontinued on: November 30, 2023

### Replaced By:

NNHH-65C-R4

8-port sector antenna, 4x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 4x RETs

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Aluminum   Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	4.3-10 Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, total</b>	8

## Remote Electrical Tilt (RET) Information

<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (2)   Low band (1)

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<b>Power Consumption, idle state, maximum</b>	1 W
<b>Power Consumption, normal conditions, maximum</b>	10 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)

## Dimensions

<b>Width</b>	640 mm   25.197 in
<b>Depth</b>	235 mm   9.252 in
<b>Length</b>	2437 mm   95.945 in
<b>Net Weight, without mounting kit</b>	57.9 kg   127.647 lb

## Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	617-806	1-2	1	ANxxxxxxxxxxxxxxxxx1
R2	617-806	3-4		
Y1	1695-2360	5-6	2	ANxxxxxxxxxxxxxxxxx2
Y2	1695-2360	7-8	3	ANxxxxxxxxxxxxxxxxx3

Left Bottom Right

(Sizes of colored boxes are not true depictions of array sizes)

## Port Configuration

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## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2360 MHz   617 – 806 MHz
<b>Polarization</b>	±45°
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## Electrical Specifications

Frequency Band, MHz	617–698	698–806	1695–1880	1850–1990	1920–2200	2300–2360
<b>Gain, dBi</b>	15.4	15.8	17.9	18.4	18.8	19.6
<b>Beamwidth, Horizontal, degrees</b>	66	61	64	65	64	56
<b>Beamwidth, Vertical, degrees</b>	10.2	9.2	5.7	5.3	4.9	4.4
<b>Beam Tilt, degrees</b>	2–13	2–13	2–12	2–12	2–12	2–12
<b>USLS (First Lobe), dB</b>	18	17	19	19	19	22
<b>Front-to-Back Ratio at 180°, dB</b>	33	31	38	41	40	38
<b>Isolation, Cross Polarization, dB</b>	28	28	28	28	28	28
<b>Isolation, Inter-band, dB</b>	28	28	28	28	28	28
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0

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<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-150	-153	-153	-153	-153	-153
<b>Input Power per Port at 50°C, maximum, watts</b>	250	250	250	250	250	200

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>617–698</b>	<b>698–806</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2200</b>	<b>2300–2360</b>
<b>Gain by all Beam Tilts, average, dBi</b>	15.2	15.5	17.5	18	18.4	19.2
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.4	±0.4	±0.5	±0.5	±0.6
<b>Gain by Beam Tilt, average, dBi</b>	2°   15.0 8°   15.3 13°   15.1	2°   15.3 8°   15.6 13°   15.3	2°   17.3 7°   17.6 12°   17.5	2°   17.8 7°   18.1 12°   17.9	2°   18.1 7°   18.5 12°   18.4	2°   18.7 7°   19.3 12°   19.2
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±3	±5.1	±5.9	±5.6	±5.9	±7.2
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.6	±0.6	±0.4	±0.3	±0.4	±0.2
<b>USLS, beampeak to 20° above beampeak, dB</b>	17	14	15	15	16	17
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	23	21	30	31	31	30
<b>CPR at Boresight, dB</b>	21	20	18	18	19	19
<b>CPR at Sector, dB</b>	7	10	8	7	8	7

## Mechanical Specifications

<b>Mechanical Tilt Range</b>	0°–10°
<b>Wind Loading @ Velocity, frontal</b>	1,055.0 N @ 150 km/h (237.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	355.0 N @ 150 km/h (79.8 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,433.0 N @ 150 km/h (322.2 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	1,086.0 N @ 150 km/h (244.1 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

## Packaging and Weights

<b>Width, packed</b>	752 mm   29.606 in
<b>Depth, packed</b>	382 mm   15.039 in
<b>Length, packed</b>	2590 mm   101.969 in
<b>Weight, gross</b>	82 kg   180.779 lb

## Regulatory Compliance/Certifications

# FFHH-65C-R3

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## Agency

CHINA-ROHS

ISO 9001:2015

REACH-SVHC

ROHS

UK-ROHS



## Classification

Below maximum concentration value

Designed, manufactured and/or distributed under this quality management system

Compliant as per SVHC revision on [www.commscope.com/ProductCompliance](http://www.commscope.com/ProductCompliance)

Compliant

Compliant/Exempted

## Included Products

- BSAMNT-4 – 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.
- BSAMNT-M4 – Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.

## \* Footnotes

### Performance Note

Severe environmental conditions may degrade optimum performance