

# FFHH-65B-R3



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

This product will be discontinued on: March 30, 2024

## 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)      |
| <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)        |

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## Dimensions

|   |                     |
|---|---------------------|
| <b>Width</b>                            | 640 mm   25.197 in  |
| <b>Depth</b>                            | 235 mm   9.252 in   |
| <b>Length</b>                           | 1830 mm   72.047 in |
| <b>Net Weight, without mounting kit</b> | 46 kg   101.413 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      Right  
Bottom

(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>                         | 14.1     | 14.3     | 17.6      | 18.4      | 19        | 19.7      |
| <b>Beamwidth, Horizontal, degrees</b>    | 65       | 60       | 66        | 60        | 60        | 54        |
| <b>Beamwidth, Vertical, degrees</b>      | 14.9     | 13.3     | 5.7       | 5.3       | 4.9       | 4.4       |
| <b>Beam Tilt, degrees</b>                | 2–14     | 2–14     | 2–12      | 2–12      | 2–12      | 2–12      |
| <b>USLS (First Lobe), dB</b>             | 19       | 17       | 20        | 19        | 19        | 20        |
| <b>Front-to-Back Ratio at 180°, dB</b>   | 33       | 29       | 36        | 40        | 40        | 42        |
| <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>                | -153 | -153 | -153 | -153 | -153 |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 250  | 250  | 200  | 200  | 200  |

## Electrical Specifications, BASTA

| Frequency Band, MHz                                | 617–698                              | 698–806                              | 1695–1880                            | 1850–1990                            | 1920–2200                            | 2300–2360                            |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| <b>Gain by all Beam Tilts, average, dBi</b>        | 13.6                                 | 13.9                                 | 17.2                                 | 18.1                                 | 18.5                                 | 19.3                                 |
| <b>Gain by all Beam Tilts Tolerance, dB</b>        | ±0.6                                 | ±0.6                                 | ±0.6                                 | ±0.5                                 | ±0.5                                 | ±0.5                                 |
| <b>Gain by Beam Tilt, average, dBi</b>             | 2°   13.4<br>8°   13.7<br>14°   13.5 | 2°   13.8<br>8°   13.9<br>14°   13.8 | 2°   17.1<br>7°   17.3<br>12°   17.1 | 2°   18.0<br>7°   18.2<br>12°   17.9 | 2°   18.3<br>7°   18.6<br>12°   18.4 | 2°   19.0<br>7°   19.4<br>12°   19.2 |
| <b>Beamwidth, Horizontal Tolerance, degrees</b>    | ±3                                   | ±4.0                                 | ±4.5                                 | ±5.6                                 | ±6.5                                 | ±7.9                                 |
| <b>Beamwidth, Vertical Tolerance, degrees</b>      | ±1.1                                 | ±1.1                                 | ±0.3                                 | ±0.3                                 | ±0.4                                 | ±0.2                                 |
| <b>USLS, beampeak to 20° above beampeak, dB</b>    | 19                                   | 17                                   | 15                                   | 15                                   | 16                                   | 17                                   |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 24                                   | 21                                   | 29                                   | 32                                   | 32                                   | 32                                   |
| <b>CPR at Boresight, dB</b>                        | 22                                   | 24                                   | 18                                   | 16                                   | 18                                   | 22                                   |
| <b>CPR at Sector, dB</b>                           | 8                                    | 9                                    | 7                                    | 7                                    | 9                                    | 9                                    |

## Mechanical Specifications

|   |   |
|---|---|
| <b>Wind Loading @ Velocity, frontal</b> | 765.0 N @ 150 km/h (172.0 lbf @ 150 km/h)   |
| <b>Wind Loading @ Velocity, lateral</b> | 251.0 N @ 150 km/h (56.4 lbf @ 150 km/h)    |
| <b>Wind Loading @ Velocity, maximum</b> | 1,041.0 N @ 150 km/h (234.0 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, rear</b>    | 788.0 N @ 150 km/h (177.1 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>  | 387 mm   15.236 in  |
| <b>Length, packed</b> | 1982 mm   78.032 in |
| <b>Weight, gross</b>  | 57 kg   125.663 lb  |

## Regulatory Compliance/Certifications

| Agency | Classification |
|--------|----------------|
|--------|----------------|

# FFHH-65B-R3

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|               |  |
|---------------|--|
| CHINA-ROHS    | Below maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system   |
| REACH-SVHC    | Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a> |
| ROHS          | Compliant  |
| UK-ROHS       | 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. |
|----------|---|--|

## \* Footnotes

|                         |   |
|-------------------------|---|
| <b>Performance Note</b> | Severe environmental conditions may degrade optimum performance |
|-------------------------|---|