

# FFHH-65A-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: 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                              |

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**Protocol** 3GPP/AISG 2.0 (Single RET)

## Dimensions

**Width** 640 mm | 25.197 in

**Depth** 235 mm | 9.252 in

**Length** 1224 mm | 48.189 in

**Net Weight, without mounting kit** 33 kg | 72.752 lb

## Array Layout



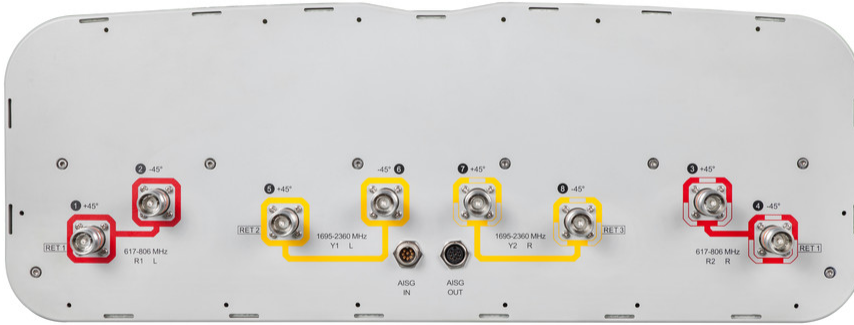
| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID         |
|-------|------------|-------|------------|----------------------|
| R1    | 617-806    | 1-2   | 1          | ANxxxxxxxxxxxxxxxxx1 |
| R2    | 617-806    | 3-4   |            |                      |
| Y1    | 1695-2360  | 5-6   | 2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

Left Bottom Right

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

## Port Configuration

# FFHH-65A-R3



## 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>                         | 12.9     | 13.4     | 16.6      | 17.1      | 17.9      | 18.4      |
| <b>Beamwidth, Horizontal, degrees</b>    | 65       | 61       | 67        | 63        | 60        | 52        |
| <b>Beamwidth, Vertical, degrees</b>      | 20.7     | 19.1     | 8         | 7.5       | 7         | 6.2       |
| <b>Beam Tilt, degrees</b>                | 5–22     | 5–22     | 2–12      | 2–12      | 2–12      | 2–12      |
| <b>USLS (First Lobe), dB</b>             | 15       | 14       | 16        | 17        | 18        | 18        |
| <b>Front-to-Back Ratio at 180°, dB</b>   | 29       | 30       | 38        | 36        | 37        | 39        |
| <b>Isolation, Cross Polarization, dB</b> | 25       | 25       | 25        | 25        | 25        | 25        |
| <b>Isolation, Inter-band, dB</b>         | 25       | 25       | 25        | 25        | 25        | 25        |
| <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

| <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>        | 12.6                                  | 12.8                                  | 16.1                                 | 16.9                                 | 17.3                                 | 18.1                                 |
| <b>Gain by all Beam Tilts Tolerance, dB</b>        | ±0.6                                  | ±0.8                                  | ±0.7                                 | ±0.4                                 | ±0.6                                 | ±0.5                                 |
| <b>Gain by Beam Tilt, average, dBi</b>             | 5°   12.8<br>14°   12.7<br>22°   12.1 | 5°   13.2<br>14°   12.9<br>22°   12.0 | 2°   16.1<br>7°   16.2<br>12°   15.8 | 2°   16.9<br>7°   17.0<br>12°   16.6 | 2°   17.1<br>7°   17.4<br>12°   17.0 | 2°   17.9<br>7°   18.3<br>12°   17.7 |
| <b>Beamwidth, Horizontal Tolerance, degrees</b>    | ±6.5                                  | ±5                                    | ±4.2                                 | ±4.2                                 | ±6.2                                 | ±5.8                                 |
| <b>Beamwidth, Vertical Tolerance, degrees</b>      | ±1.5                                  | ±1.8                                  | ±0.5                                 | ±0.5                                 | ±0.6                                 | ±0.3                                 |
| <b>USLS, beampeak to 20° above beampeak, dB</b>    |                                       |                                       | 14                                   | 15                                   | 15                                   | 15                                   |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 21                                    | 20                                    | 31                                   | 31                                   | 31                                   | 30                                   |
| <b>CPR at Boresight, dB</b>                        | 18                                    | 18                                    | 17                                   | 18                                   | 18                                   | 19                                   |
| <b>CPR at Sector, dB</b>                           | 7                                     | 5                                     | 9                                    | 7                                    | 8                                    | 8                                    |

## Mechanical Specifications

|   |   |
|---|---|
| <b>Wind Loading @ Velocity, frontal</b> | 505.0 N @ 150 km/h (113.5 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, lateral</b> | 156.0 N @ 150 km/h (35.1 lbf @ 150 km/h)  |
| <b>Wind Loading @ Velocity, maximum</b> | 688.0 N @ 150 km/h (154.7 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, rear</b>    | 520.0 N @ 150 km/h (116.9 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> | 1379 mm   54.291 in  |
| <b>Weight, gross</b>  | 49.5 kg   109.129 lb |

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b> |
|---------------|-----------------------|
|---------------|-----------------------|

# FFHH-65A-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  |



## 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 |
|-------------------------|---|