

# FFVV-65B-R2N23



8-port sector antenna, 4x 617-894 and 4x 1695-2690 MHz, 65° HPBW, 2x RET

- Meets -153dBc 3rd order PIM for 617-894MHz & 1695-2690MHz, using 2x40W carriers
- Equivalent performance designed into a narrower antenna platform
- Improved aerodynamic design allows for reduced wind load
- Reduced weight platform allows for decreased tower loading

## General Specifications

|                                  |                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------|
| Antenna Type                     | Sector                                                                           |
| Band                             | Multiband                                                                        |
| 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                  | Fiberglass, UV resistant                                                         |
| Radiator Material                | Aluminum   Low loss circuit board                                                |
| Reflector Material               | Aluminum                                                                         |
| RF Connector Interface           | 4.3-10 Female                                                                    |
| RF Connector Location            | Bottom                                                                           |
| RF Connector Quantity, high band | 0                                                                                |
| RF Connector Quantity, mid band  | 4                                                                                |
| RF Connector Quantity, low band  | 4                                                                                |
| RF Connector Quantity, total     | 8                                                                                |

## Remote Electrical Tilt (RET) Information

|                                          |                                   |
|------------------------------------------|-----------------------------------|
| RET Hardware                             | CommRET v2                        |
| RET Interface                            | 8-pin DIN Female   8-pin DIN Male |
| RET Interface, quantity                  | 1 female   1 male                 |
| Input Voltage                            | 10-30 Vdc                         |
| Internal RET                             | Low band (1)   Mid band (1)       |
| Power Consumption, active state, maximum | 10 W                              |
| Power Consumption, idle state, maximum   | 2 W                               |

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|                          |                     |
|--------------------------|---------------------|
| Protocol                 | 3GPP/AISG 2.0       |
| Dimensions               |                     |
| Width                    | 579 mm   22.795 in  |
| Depth                    | 212 mm   8.346 in   |
| Length                   | 1828 mm   71.969 in |
| Net Weight, antenna only | 36 kg   79.366 lb   |

## Array Layout



| Array ID | Frequency (MHz) | RF Connector | RET<br>(SRET) | AISG No. | AISG RET UID         |
|----------|-----------------|--------------|---------------|----------|----------------------|
| R1       | 617-894         | 1 - 2        | 1             | AISG1    | CPxxxxxxxxxxxxxxxxR1 |
| R2       | 617-894         | 3 - 4        |               |          |                      |
| Y1       | 1695-2690       | 5 - 6        | 2             | AISG1    | CPxxxxxxxxxxxxxxxxY1 |
| Y2       | 1695-2690       | 7 - 8        |               |          |                      |

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

## Port Configuration

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## Electrical Specifications

|                            |                                 |
|----------------------------|---------------------------------|
| Impedance                  | 50 ohm                          |
| Operating Frequency Band   | 1695 – 2690 MHz   617 – 894 MHz |
| Polarization               | ±45°                            |
| Total Input Power, maximum | 900 W @ 50 °C                   |

## Electrical Specifications

|                                             | R1,R2   | R1,R2   | Y1,Y2     | Y1,Y2     | Y1,Y2     | Y1,Y2     | Y1,Y2     |
|---------------------------------------------|---------|---------|-----------|-----------|-----------|-----------|-----------|
| Frequency Band, MHz                         | 617-698 | 698-894 | 1695-1880 | 1850-1990 | 1920-2200 | 2300-2500 | 2500-2690 |
| RF Port                                     | 1-4     | 1-4     | 5-8       | 5-8       | 5-8       | 5-8       | 5-8       |
| Gain, dBi                                   | 14.2    | 15.3    | 17.7      | 18        | 18.2      | 18.8      | 19.3      |
| Beamwidth, Horizontal, degrees              | 69      | 60      | 65        | 63        | 63        | 63        | 55        |
| Beamwidth, Vertical, degrees                | 15      | 12.6    | 5.5       | 5.3       | 5.1       | 4.4       | 4.1       |
| Beam Tilt, degrees                          | 2-14    | 2-14    | 2-12      | 2-12      | 2-12      | 2-12      | 2-12      |
| USLS (First Lobe), dB                       | 15      | 15      | 18        | 16        | 17        | 19        | 18        |
| Front-to-Back Ratio at 180°, dB             | 28      | 30      | 34        | 38        | 37        | 32        | 32        |
| Front-to-Back Total Power at 180° ± 30°, dB | 21      | 22      | 28        | 30        | 29        | 26        | 26        |

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|                                              |            |            |            |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
| CPR at Boresight, dB                         | 16         | 15         | 19         | 21         | 23         | 17         | 17         |
| Isolation, Cross Polarization, dB            | 25         | 25         | 25         | 25         | 25         | 25         | 25         |
| Isolation, Inter-band, dB                    | 25         | 25         | 25         | 25         | 25         | 25         | 25         |
| VSWR   Return loss, dB                       | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 | 1.5   14.0 |
| PIM, 3rd Order, 2 x 40 W, dBc                | -153       | -153       | -153       | -153       | -153       | -153       | -153       |
| Input Power per Port at 50°C, maximum, watts | 250        | 250        | 200        | 200        | 200        | 200        | 200        |

## Mechanical Specifications

|                                  |                                           |
|----------------------------------|-------------------------------------------|
| Wind Loading @ Velocity, frontal | 518.0 N @ 150 km/h (116.5 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 223.0 N @ 150 km/h (50.1 lbf @ 150 km/h)  |
| Wind Loading @ Velocity, maximum | 830.0 N @ 150 km/h (186.6 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear    | 526.0 N @ 150 km/h (118.2 lbf @ 150 km/h) |
| Wind Speed, maximum              | 241 km/h (150 mph)                        |

## Packaging and Weights

|                |                    |
|----------------|--------------------|
| Width, packed  | 682 mm   26.85 in  |
| Depth, packed  | 319 mm   12.559 in |
| Length, packed | 1952 mm   76.85 in |
| Weight, gross  | 51 kg   112.436 lb |

## Regulatory Compliance/Certifications

| Agency        | Classification                                                                                                           |
|---------------|--------------------------------------------------------------------------------------------------------------------------|
| 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.andrew.com/ProductCompliance">www.andrew.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. |
|----------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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\* Footnotes

**Performance Note**      Severe environmental conditions may degrade optimum performance