

# 2VV-33C-R4-V5



8-port multibeam antenna, 8x 1695–2690 MHz, 4x 33° HPBW, 4x RET, has tilt scales

- Enhances network capacity and spectrum utilization when used in six sector applications
- Reduces antenna count to minimize Cap-Ex and Op-Ex costs – 3 antennas required for 6 sector configurations

## General Specifications

|                                  |                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------|
| Antenna Type                     | Multibeam                                                                        |
| Band                             | Single band                                                                      |
| 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                | Low loss circuit board                                                           |
| Reflector Material               | Aluminum                                                                         |
| RF Connector Interface           | 4.3-10 Female                                                                    |
| RF Connector Location            | Bottom                                                                           |
| RF Connector Quantity, high band | 8                                                                                |
| 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                 |
| Internal RET                                  | High band (4)                     |
| Power Consumption, idle state, maximum        | 2 W                               |
| Power Consumption, normal conditions, maximum | 10 W                              |
| Protocol                                      | 3GPP/AISG 2.0 (Single RET)        |

## Dimensions

|       |                    |
|-------|--------------------|
| Width | 395 mm   15.551 in |
|-------|--------------------|

# 2VV-33C-R4-V5

|                          |                     |
|--------------------------|---------------------|
| Depth                    | 228 mm   8.976 in   |
| Length                   | 2499 mm   98.386 in |
| Net Weight, antenna only | 29.8 kg   65.698 lb |

## Array Layout

|    |    |       |            |       |               |                   |
|----|----|-------|------------|-------|---------------|-------------------|
|    |    | Array | Freq (MHz) | Conns | RET<br>(SRET) | AISG RET UID      |
| Y2 | Y4 | Y1    | 1695-2690  | 1-2   | 1             | CPxxxxxxxxxxxxxY1 |
|    |    | Y2    | 1695-2690  | 3-4   | 2             | CPxxxxxxxxxxxxxY2 |
| Y1 | Y3 | Y3    | 1695-2690  | 5-6   | 3             | CPxxxxxxxxxxxxxY3 |
|    |    | Y4    | 1695-2690  | 7-8   | 4             | CPxxxxxxxxxxxxxY4 |

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

## Port Configuration

# 2VV-33C-R4-V5



## Electrical Specifications

|                            |                 |
|----------------------------|-----------------|
| Impedance                  | 50 ohm          |
| Operating Frequency Band   | 1695 – 2690 MHz |
| Polarization               | ±45°            |
| Total Input Power, maximum | 1,200 W @ 50 °C |

## Electrical Specifications

| Frequency Band, MHz               | 1695–1880 | 1850–1990 | 1920–2180 | 2300–2500 | 2500–2690 |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|
| Gain, dBi                         | 19.1      | 19.3      | 19.2      | 19.6      | 19.6      |
| Gain at Mid Tilt, dBi             | 18.6      | 19        | 19.2      | 19.3      | 19.4      |
| Beam Centers, Horizontal, degrees | ±27       | ±27       | ±27       | ±27       | ±27       |
| Beamwidth, Horizontal, degrees    | 39        | 38        | 37        | 34        | 31        |

# 2VV-33C-R4-V5

|                                              |            |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|------------|
| Beamwidth, Vertical, degrees                 | 7.8        | 7.3        | 7          | 6.2        | 5.8        |
| Beam Tilt, degrees                           | 2-12       | 2-12       | 2-12       | 2-12       | 2-12       |
| Horizontal Sidelobe, dB                      | 19         | 20         | 20         | 18         | 17         |
| USLS (First Lobe), dB                        | 15         | 15         | 15         | 18         | 18         |
| Front-to-Back Ratio at 180°, dB              | 33         | 39         | 39         | 36         | 32         |
| CPR at Boresight, dB                         | 23         | 26         | 25         | 23         | 20         |
| Isolation, Cross Polarization, dB            | 30         | 30         | 30         | 30         | 30         |
| Isolation, Beam to Beam, dB                  | 30         | 30         | 30         | 30         | 30         |
| VSWR   Return loss, dB                       | 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 20 W, dBc                | -153       | -153       | -153       | -153       | -153       |
| Input Power per Port at 50°C, maximum, watts | 200        | 200        | 200        | 200        | 200        |

## Mechanical Specifications

|                                          |                                           |
|------------------------------------------|-------------------------------------------|
| Effective Projective Area (EPA), frontal | 0.49 m²   5.274 ft²                       |
| Effective Projective Area (EPA), lateral | 0.36 m²   3.875 ft²                       |
| Wind Loading @ Velocity, frontal         | 525.0 N @ 150 km/h (118.0 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral         | 386.0 N @ 150 km/h (86.8 lbf @ 150 km/h)  |
| Wind Loading @ Velocity, maximum         | 898.0 N @ 150 km/h (201.9 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear            | 540.0 N @ 150 km/h (121.4 lbf @ 150 km/h) |
| Wind Speed, maximum                      | 241 km/h (150 mph)                        |

## Packaging and Weights

|                |                      |
|----------------|----------------------|
| Width, packed  | 505 mm   19.882 in   |
| Depth, packed  | 386 mm   15.197 in   |
| Length, packed | 2631 mm   103.583 in |
| Weight, gross  | 43.8 kg   96.562 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                                                                                                                |

# 2VV-33C-R4-V5

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UK-ROHS

Compliant



## 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

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