

# NNV4-45A-R6



12-port sector antenna, 4x 698–896 and 8x 1695–2690 MHz, 45° HPBW, 6x RET

- Independent tilt for all arrays
- Array configuration provides capability for 4T4R (4x MIMO) on Low band and Dual 4T4R (4x MIMO) on Mid band
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics

## 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                                                         |
| 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  | 8                                                                                |
| RF Connector Quantity, low band  | 4                                                                                |
| RF Connector Quantity, total     | 12                                                                               |

## Remote Electrical Tilt (RET) Information

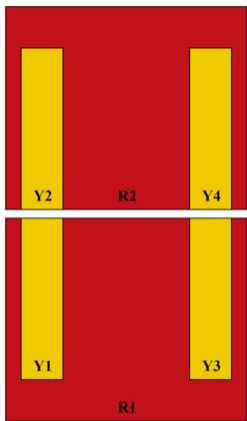
|                                          |                                   |
|------------------------------------------|-----------------------------------|
| RET Hardware                             | CommRET v2                        |
| RET Interface                            | 8-pin DIN Female   8-pin DIN Male |
| RET Interface, quantity                  | 1 female   1 male                 |
| Input Voltage                            | 10–30 Vdc                         |
| Internal RET                             | Low band (2)   Mid band (4)       |
| Power Consumption, active state, maximum | 8 W                               |
| Power Consumption, idle state, maximum   | 1 W                               |
| Protocol                                 | 3GPP/AISG 2.0 (Single RET)        |

# NNV4-45A-R6

## Dimensions

|                                  |                     |
|----------------------------------|---------------------|
| Width                            | 457 mm   17.992 in  |
| Depth                            | 178 mm   7.008 in   |
| Length                           | 1399 mm   55.079 in |
| Net Weight, without mounting kit | 27.2 kg   59.966 lb |

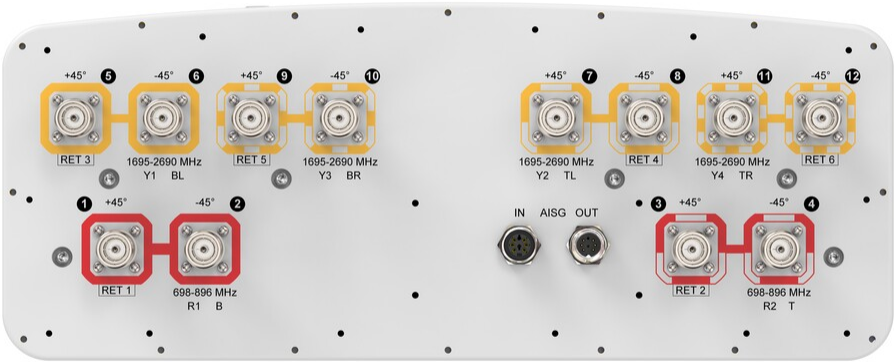
## Array Layout



| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID     |
|----------|-----------------|--------------|------------|----------|------------------|
| R1       | 698-896         | 1 - 2        | 1          | AISG1    | CPxxxxxxxxxxxxR1 |
| R2       | 698-896         | 3 - 4        | 2          | AISG1    | CPxxxxxxxxxxxxR2 |
| Y1       | 1695-2690       | 5 - 6        | 3          | AISG1    | CPxxxxxxxxxxxxY1 |
| Y2       | 1695-2690       | 7 - 8        | 4          | AISG1    | CPxxxxxxxxxxxxY2 |
| Y3       | 1695-2690       | 9 - 10       | 5          | AISG1    | CPxxxxxxxxxxxxY3 |
| Y4       | 1695-2690       | 11 - 12      | 6          | AISG1    | CPxxxxxxxxxxxxY4 |

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

## Port Configuration



# NNV4-45A-R6

## Electrical Specifications

|                            |                                 |
|----------------------------|---------------------------------|
| Impedance                  | 50 ohm                          |
| Operating Frequency Band   | 1695 – 2690 MHz   698 – 896 MHz |
| Polarization               | ±45°                            |
| Total Input Power, maximum | 900 W @ 50 °C                   |

## Electrical Specifications

| Frequency Band, MHz                          | 698–806    | 806–896    | 1695–1880  | 1850–1990  | 1920–2180  | 2300–2500  | 2300–2690  |
|----------------------------------------------|------------|------------|------------|------------|------------|------------|------------|
| Gain, dBi                                    | 12.6       | 13.5       | 15.4       | 16         | 16.7       | 17.1       | 17.1       |
| Beamwidth, Horizontal, degrees               | 49         | 45         | 44         | 43         | 40         | 34         | 34         |
| Beamwidth, Vertical, degrees                 | 36         | 31         | 15         | 14         | 13         | 11         | 11         |
| Beam Tilt, degrees                           | 2–18       | 2–18       | 2–12       | 2–12       | 2–12       | 2–12       | 2–12       |
| USLS (First Lobe), dB                        | 17         | 17         | 19         | 17         | 17         | 17         | 16         |
| Front-to-Back Ratio at 180°, dB              | 33         | 34         | 35         | 35         | 33         | 32         | 31         |
| CPR at Boresight, dB                         | 20         | 21         | 16         | 18         | 19         | 20         | 21         |
| 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 20 W, dBc                | -150       | -150       | -150       | -150       | -150       | -150       | -150       |
| Input Power per Port at 50°C, maximum, watts | 300        | 300        | 250        | 250        | 250        | 200        | 200        |

## Mechanical Specifications

|                                  |                                           |
|----------------------------------|-------------------------------------------|
| Wind Loading @ Velocity, frontal | 788.0 N @ 150 km/h (177.1 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 157.0 N @ 150 km/h (35.3 lbf @ 150 km/h)  |
| Wind Loading @ Velocity, maximum | 788.0 N @ 150 km/h (177.1 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear    | 692.0 N @ 150 km/h (155.6 lbf @ 150 km/h) |
| Wind Speed, maximum              | 241 km/h (150 mph)                        |

## Packaging and Weights

|               |                    |
|---------------|--------------------|
| Width, packed | 563 mm   22.165 in |
| Depth, packed | 355 mm   13.976 in |

# NNV4-45A-R6

---

|                |                     |
|----------------|---------------------|
| Length, packed | 1572 mm   61.89 in  |
| Weight, gross  | 38.8 kg   85.539 lb |

## Regulatory Compliance/Certifications

| Agency        | Classification                                                                 |
|---------------|--------------------------------------------------------------------------------|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

## 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

|                  |                                                                 |
|------------------|-----------------------------------------------------------------|
| Performance Note | Severe environmental conditions may degrade optimum performance |
|------------------|-----------------------------------------------------------------|