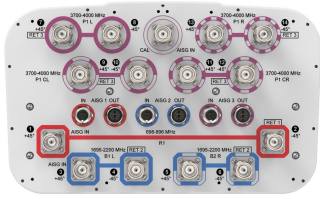


NHHS4-65A-R3B



14 Port Sector Antenna, 2x698-896 MHz, 4x1695-2200 MHz 65° HPBW, and 8x3700-4000 MHz Beamformer, 3XRET

General Specifications

| | |
|---|--|
| Antenna Type | Sector and beamforming |
| Band | Multiband |
| Calibration Connector Interface | 4.3-10 Female |
| Calibration Connector Quantity | 1 |
| 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, mid band | 4 |
| RF Connector Quantity, low band | 2 |
| RF Connector Quantity, total | 14 |

Remote Electrical Tilt (RET) Information

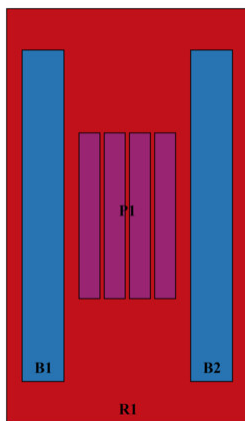
| | |
|--------------------------------|---|
| RET Hardware | CommRET v2 |
| RET Interface | 8-pin DIN Female 8-pin DIN Male |
| RET Interface, quantity | 3 female 3 male |
| Input Voltage | 10–30 Vdc |
| Internal Bias Tee | Cal Port Port 1 Port 3 |
| Internal RET | High band (1) Low band (1) Mid band (1) |
| Protocol | 3GPP/AISG 2.0 (Single RET) |

NHHS4-65A-R3B

Dimensions

| | |
|---------------------------------|--------------------|
| Width | 350 mm 13.78 in |
| Depth | 208 mm 8.189 in |
| Length | 1413 mm 55.63 in |
| Net Weight, antenna only | 23 kg 50.706 lb |

Array Layout

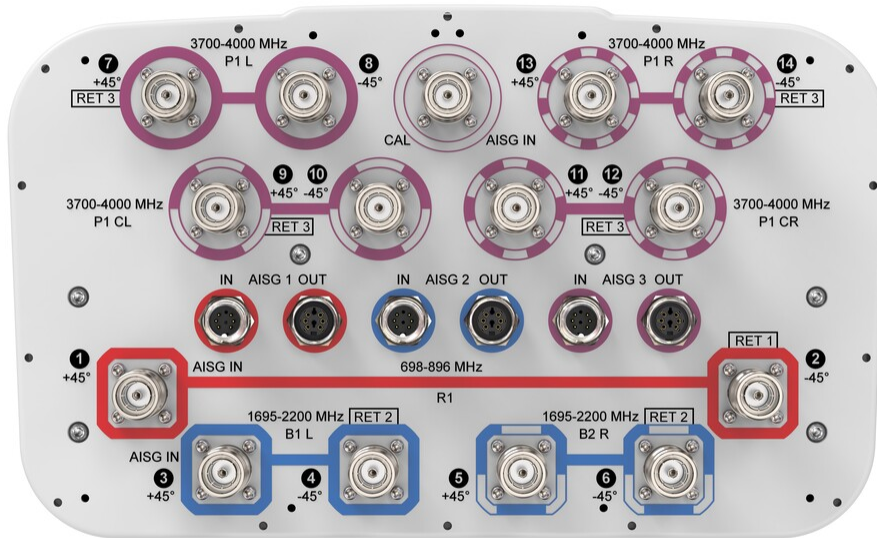


| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG RET UID |
|----------|-----------------|--------------|---------------|------------------|
| R1 | 698-896 | 1 - 2 | 1 | CPxxxxxxxxxxxxR1 |
| B1 | 1695-2200 | 3 - 4 | 2 | CPxxxxxxxxxxxxB1 |
| B2 | 1695-2200 | 5 - 6 | | |
| P1 | 3700-4000 | 7 - 14 | 3 | CPxxxxxxxxxxxxP1 |

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

Port Configuration

NHHS4-65A-R3B



Electrical Specifications

| | |
|-----------------------------------|---|
| Impedance | 50 ohm |
| Operating Frequency Band | 1695 – 2200 MHz 3700 – 4000 MHz 698 – 896 MHz |
| Polarization | ±45° |
| Total Input Power, maximum | 1,040 W @ 50 °C |

Electrical Specifications

| | R1 | R1 | B1,B2 | B1,B2 | B1,B2 | P1 |
|--|----------------|----------------|------------------|------------------|------------------|------------------|
| Frequency Band, MHz | 698–806 | 806–896 | 1695–1880 | 1850–1990 | 1920–2200 | 3700–4000 |
| RF Port | 1,2 | 1,2 | 3-6 | 3-6 | 3-6 | 7-14 |
| Gain, dBi | 13.9 | 14.2 | 16.7 | 17.1 | 17.1 | 16.4 |
| Beamwidth, Horizontal, degrees | 69 | 67 | 67 | 65 | 67 | 80 |
| Beamwidth, Vertical, degrees | 16.9 | 15.1 | 6.6 | 6.1 | 5.8 | 5.7 |
| Beam Tilt, degrees | 0–18 | 0–18 | 0–10 | 0–10 | 0–10 | 0–10 |
| USLS (First Lobe), dB | 20 | 20 | 15 | 16 | 17 | 13 |
| Front-to-Back Ratio at 180°, dB | 39 | 35 | 32 | 40 | 37 | 30 |

NHHS4-65A-R3B

| | | | | | | |
|--|------------|------------|------------|------------|------------|------------|
| Coupling level, Amp, Antenna port to Cal port, dB | | | | | | 26 |
| Coupling level, max Amp Δ, Antenna port to Cal port, dB | | | | | | ± 2 |
| Coupler, max Amp Δ, Antenna port to Cal port, dB | | | | | | 0.5 |
| Coupler, max Phase Δ, Antenna port to Cal port, degrees | | | | | | 5 |
| Isolation, Cross Polarization, dB | 25 | 25 | 25 | 25 | 25 | 25 |
| Isolation, Inter-band, dB | 25 | 25 | 25 | 25 | 25 | 25 |
| Isolation, Co-polarization, dB | | | | | | 19 |
| 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 |
| PIM, 3rd Order, 2 x 20 W, dBc | -153 | -153 | -153 | -153 | -153 | -145 |
| Input Power per Port at 50°C, maximum, watts | 300 | 300 | 250 | 250 | 250 | 75 |

Electrical Specifications, Broadcast 65°

| | |
|---|------------------|
| Frequency Band, MHz | 3700–4000 |
| Gain, dBi | 16.9 |
| Beamwidth, Horizontal, degrees | 65 |
| Beamwidth, Vertical, degrees | 5.7 |
| Beamwidth, Vertical Tolerance, degrees | ± 0.3 |
| Front-to-Back Total Power at 180° \pm 30°, dB | 25 |
| USLS (First Lobe), dB | 14 |

Electrical Specifications, Envelope Pattern

| | |
|----------------------------|------------------|
| Frequency Band, MHz | 3700–4000 |
| Gain, dBi | 20.7 |

Electrical Specifications, Service Beam

| | |
|--|------------------|
| Frequency Band, MHz | 3700–4000 |
| Steered 0° Gain, dBi | 20.7 |
| Steered 0° Gain Tolerance, dBi | ± 0.6 |
| Steered 0° Beamwidth, Horizontal, degrees | 22 |

NHHS4-65A-R3B

| | |
|--|------|
| Steered 0° Front-to-Back Total Power at 180° ± 30°, dB | 29 |
| Steered 0° Horizontal Sidelobe, dB | 13 |
| Steered 30° Gain, dBi | 19.7 |
| Steered 30° Gain Tolerance, dBi | ±0.8 |
| Steered 30° Beamwidth, Horizontal, degrees | 28 |
| Steered 30° Front-to-Back Total Power at 180° ± 30°, dB | 27 |

Electrical Specifications, Soft Split

| | |
|--|------------------|
| Frequency Band, MHz | 3700–4000 |
| Gain, dBi | 19.1 |
| Beamwidth, Horizontal, degrees | 32 |
| Front-to-Back Total Power at 180° ± 30°, dB | 26 |
| Horizontal Sidelobe, dB | 16 |

Mechanical Specifications

| | |
|---|---|
| Wind Loading @ Velocity, frontal | 224.0 N @ 150 km/h (50.4 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 187.0 N @ 150 km/h (42.0 lbf @ 150 km/h) |
| Wind Loading @ Velocity, maximum | 474.0 N @ 150 km/h (106.6 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear | 237.0 N @ 150 km/h (53.3 lbf @ 150 km/h) |
| Wind Speed, maximum | 241 km/h (150 mph) |

Packaging and Weights

| | |
|-----------------------|---------------------|
| Width, packed | 448 mm 17.638 in |
| Depth, packed | 355 mm 13.976 in |
| Length, packed | 1557 mm 61.299 in |
| Weight, gross | 33.4 kg 73.634 lb |

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|-----------------------------------|
| CHINA-ROHS | Below maximum concentration value |

NHHS4-65A-R3B

| | |
|---------------|--|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| REACH-SVHC | Compliant as per SVHC revision on www.commscope.com/ProductCompliance |
| ROHS | Compliant |
| 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

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