## EGRZZHHTT-65A-R8



# 18-port sector antenna, 2x 694-862, 2x 880-960, 2x 694-960, 4x 1427-2690, $4 \times 1695-2180$ and $4 \times 2490-2690 \mathrm{MHz}, 65^{\circ} \mathrm{HPBW}, 8 \times$ RET 

- All Internal RET actuators are connected in "Cascaded SRET" configuration
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios
- Antenna shape optimized for wind load reduction


## General Specifications

## Antenna Type

Band
Color
Grounding Type

Performance Note
Radome Material
Reflector Material
RF Connector Interface
RF Connector Location
RF Connector Quantity, mid band
RF Connector Quantity, low band
RF Connector Quantity, total

Sector
Multiband
Light Gray (RAL 7035)
RF connector inner conductor and body grounded to reflector and mounting bracket

Outdoor usage
Fiberglass, UV resistant
Aluminum
4.3-10 Female

Bottom
12
6
18

## Remote Electrical Tilt (RET) Information

## RET Hardware

RET Interface
RET Interface, quantity
Input Voltage
Internal RET
Power Consumption, active state, maximum
Power Consumption, idle state, maximum
Protocol

CommRET v2
8-pin DIN Female | 8-pin DIN Male
2 female | 2 male
$10-30 \mathrm{Vdc}$
Low band (3) | Mid band (5)
8 W
1 W
3GPP/AISG 2.0 (Single RET)

Dimensions

## EGRZZHHTT-65A-R8

| Width | $498 \mathrm{~mm} \mid 19.606 \mathrm{in}$ |
| :--- | :--- |
| Depth | $197 \mathrm{~mm} \mid 7.756 \mathrm{in}$ |
| Length | $1600 \mathrm{~mm} \mid 62.992 \mathrm{in}$ |
| Net Weight, antenna only | $40.4 \mathrm{~kg} \mathrm{\mid} 89.067 \mathrm{lb}$ |

## Array Layout



| Array ID | Frequency (MHz) | RF Connector | RET <br> (SRET) | AISG No. | AISG RET UID |
| :---: | :---: | :---: | :---: | :---: | :---: |
| R1 | $694-862$ | $1-2$ | 1 | AISG1 | CPxxxxxxxxxxxxxxxxR1 |
| R2 | $880-960$ | $3-4$ | 2 | AISG1 | CPxxxxxxxxxxxxxxxxR2 |
| R3 | $694-960$ | $5-6$ | 3 | AISG1 | CPxxxxxxxxxxxxxxxxR3 |
| B1 | $1695-2180$ | $7-8$ | 4 | AISG1 | CPxxxxxxxxxxxxxxxx1 |
| B2 | $1695-2180$ | $9-10$ | 5 | AISG1 | CPxxxxxxxxxxxxxxxxB2 |
| Y1 | $2490-2690$ | $11-12$ |  | 6 | AISG1 |
| Y4 | $2490-2690$ | $17-18$ |  |  |  |
| Y2 | $1427-2690$ | $13-14$ | 7 | AISG1 | CPxxxxxxxxxxxxxxxxxxxy1 |
| Y3 | $1427-2690$ | $15-16$ | 8 | AISG1 | CPxxxxxxxxxxxxxxxxxxy3 |

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

## Port Configuration



Electrical Specifications

## EGRZZHHTT-65A-R8

Impedance
Operating Frequency Band

Polarization
Total Input Power, maximum

50 ohm
$1427-2690 \mathrm{MHz}$ | $1695-2180 \mathrm{MHz}$ | $2490-2690 \mathrm{MHz} \mid 694-862$ MHz | $694-960 \mathrm{MHz}$ | $880-960 \mathrm{MHz}$
$\pm 45^{\circ}$
900 W @ $50^{\circ} \mathrm{C}$

## Electrical Specifications

|  | R1 | R1 | R2 | R3 | R3 | R3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency Band, MHz | 698-806 | 790-862 | 880-960 | 698-806 | 790-894 | 890-960 |
| RF Port | 1,2 | 1,2 | 3,4 | 5,6 | 5,6 | 5,6 |
| Gain at Mid Tilt, dBi | 13.4 | 13.6 | 13.8 | 13.9 | 14.3 | 14.4 |
| Beamwidth, Horizontal, degrees | 71 | 67 | 65 | 71 | 67 | 65 |
| Beamwidth, Vertical, degrees | 13.5 | 12.7 | 11.7 | 13.8 | 12.7 | 11.6 |
| Beam Tilt, degrees | 3-16 | 3-16 | 3-16 | 3-16 | 3-16 | 3-16 |
| USLS (First Lobe), dB | 16 | 15 | 13 | 16 | 17 | 16 |
| Front-to-Back Ratio at $\mathbf{1 8 0}^{\circ}$, dB | 30 | 30 | 28 | 30 | 27 | 28 |
| Front-to-Back Total Power at $180^{\circ} \pm 30^{\circ}$, dB | 20 | 20 | 20 | 19 | 20 | 21 |
| Isolation, Cross Polarization, dB | 25 | 25 | 25 | 25 | 25 | 25 |
| Isolation, Inter-band, dB | 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 |
| PIM, 3rd Order, $2 \times 20$ W, dBc | -150 | -150 | -150 | -150 | -150 | -150 |
| Input Power per Port at $50^{\circ} \mathrm{C}$, maximum, watts | 300 | 300 | 300 | 300 | 300 | 300 |

## Electrical Specifications, BASTA

Frequency Band, MHz
Gain by all Beam Tilts,
average, dBi
Gain by all Beam Tilts
Tolerance, dB
Beamwidth, Horizontal
698-806 790-862

| 13.3 | 13.5 | 13.6 | 13.8 | 14.2 | 14.3 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $\pm 0.5$ | $\pm 0.4$ | $\pm 0.4$ | $\pm 0.3$ | $\pm 0.5$ | $\pm 0.4$ |
| $\pm 10$ | $\pm 5$ | $\pm 3$ | $\pm 7$ | $\pm 4$ | $\pm 5$ |
| $\pm 0.9$ | $\pm 0.6$ | $\pm 1$ | $\pm 1$ | $\pm 0.9$ | $\pm 0.9$ |

Tolerance, degrees
Beamwidth, Vertical
Tolerance, degrees

## EGRZZHHTT-65A-R8

| USLS, beampeak to $\mathbf{2 0}^{\circ}$ above <br> beampeak, $\mathbf{d B}$ | 16 | 15 | 13 | 16 | 15 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CPR at Boresight, dB | 20 | 19 | 18 | 20 | 20 | 18 |
| CPR at Sector, $\mathbf{d B}$ | 12 | 9 | 11 | 12 | 10 | 12 |

Electrical Specifications

|  | B1,B2 | B1,B2 | Y1,Y4 | Y2,Y3 | Y2,Y3 | Y2,Y3 | Y2,Y3 | Y2,Y3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Frequency Band, MHz | 1695-1995 1920-2180 2490-2690 1427-1518 1695-1995 1920-2300 2300-2500 2490-2690 |  |  |  |  |  |  |  |
| RF Port | 7-10 | 7-10 | 11,12, | 13-16 | 13-16 | 13-16 | 13-16 | 13-16 |
| Gain at Mid Tilt, dBi | 16.7 | 17.5 | 17.8 | 15.4 | 16.9 | 17.7 | 18.2 | 18.1 |
| Beamwidth, Horizontal, degrees | 69 | 63 | 56 | 73 | 64 | 60 | 58 | 57 |
| Beamwidth, Vertical, degrees | 6.1 | 5.6 | 4.6 | 8 | 6.4 | 5.7 | 4.9 | 4.6 |
| Beam Tilt, degrees | 2-12 | 2-12 | 2-12 | 2-12 | 2-12 | 2-12 | 2-12 | 2-12 |
| USLS (First Lobe), dB | 16 | 16 | 17 | 17 | 16 | 16 | 16 | 16 |
| Front-to-Back Ratio at $18 \mathbf{0}^{\circ}$, dB | 32 | 31 | 31 | 31 | 32 | 32 | 31 | 30 |
| Front-to-Back Total Power at $180^{\circ} \pm 30^{\circ}$, dB | 26 | 25 | 26 | 24 | 26 | 26 | 26 | 26 |
| Isolation, Cross Polarization, dB | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Isolation, Inter-band, dB | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| VSWR \| Return loss, dB | 1.5114.0 | 1.5\|14.0 | 1.5114. | 1.5\|14.0 | $1.5 \mid 14.0$ | 1.5114.0 | 1.5\|14.0 | 1.5114.0 |
| PIM, 3rd Order, $2 \times 20$ W, dBc | -150 | -150 | -150 | -150 | -150 | -150 | -150 | -150 |
| Input Power per Port at $50^{\circ} \mathrm{C}$, maximum, watts | 250 | 250 | 150 | 250 | 250 | 250 | 200 | 200 |

## Electrical Specifications, BASTA

Frequency Band, MHz
Gain by all Beam Tilts, average, dBi

Gain by all Beam Tilts
Tolerance, dB
Beamwidth, Horizontal
Tolerance, degrees
Beamwidth, Vertical Tolerance, degrees USLS, beampeak to $\mathbf{2 0}^{\circ}$ above 14 beampeak, dB

1695-1995 1920-2180 2490-2690 1427-1518 1695-1995 1920-2300 2300-2500 2490-2690

| $166-17.3-17.4-17.9$ | 17.8 |
| :--- | :--- | :--- | :--- |

$\pm 0.9 \quad \pm 0.5 \quad \pm 0.5 \quad \pm 0.3 \quad \pm 0.6 \quad \pm 0.5 \quad \pm 0.5 \quad \pm 0.9$

$\pm$| $\pm 7$ | $\pm 7$ | $\pm 4$ | $\pm 8$ | $\pm 5$ | $\pm 3$ | $\pm 6$ | $\pm 8$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

$\pm 0.5 \quad \pm 0.4 \quad \pm 0.2 \quad \pm 0.3 \quad \pm 0.5 \quad \pm 0.5 \quad \pm 0.3 \quad \pm 0.3$

| 14 | 12 | 13 | 15 | 15 | 16 | 16 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## EGRZZHHTT-65A-R8

| CPR at Boresight, dB | 22 | 22 | 17 | 15 | 21 | 19 | 19 | 19 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| CPR at Sector, $\mathbf{d B}$ | 4 | 4 | 1 | 8 | 6 | 4 | 4 | 2 |

## Mechanical Specifications

Wind Loading @ Velocity, frontal
Wind Loading @ Velocity, lateral
Wind Loading @ Velocity, maximum
Wind Loading @ Velocity, rear
Wind Speed, maximum
544.0 N @ 150 km/h (122.3 lbf @ 150 km/h)
142.0 N @ 150 km/h (31.9 lbf @ 150 km/h)
723.0 N @ 150 km/h (162.5 lbf @ 150 km/h)
374.0 N @ 150 km/h (84.1 lbf @ 150 km/h)

241 km/h (150 mph)

Packaging and Weights
Width, packed
Depth, packed
565 mm | 22.244 in

Length, packed
Weight, gross
368 mm | 14.488 in
1775 mm | 69.882 in
$54.2 \mathrm{~kg} \mid 119.49 \mathrm{lb}$

## Regulatory Compliance/Certifications

Agency
CHINA-ROHS
ISO 9001:2015
ROHS
UK-ROHS

## Classification

Above maximum concentration value
Designed, manufactured and/or distributed under this quality management system
Compliant/Exempted
Compliant/Exempted

Included Products

- 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

