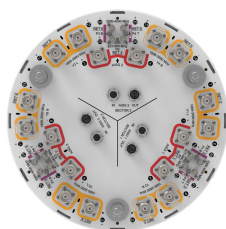


# 3X-KVVSS-65A-R9



30-ports tri-sector antenna, 6x 617-960, 12x 1695-2690 and 12x 3300-4000 MHz, 65° HPBW, 9x RETs.

- Small size tri-sector macro cell canister antenna
- Ideal for deploying low band, mid band and CBRS/C-Band in flagpoles and concealment solutions
- Pole mounting kit not included. Separate pole mounting kit TS-MNT-TOP-370 available for pole diameter from 150mm (5.9 inch) to 273 mm (10.7 inch). Please check Optional Mounting Kits section for more details

## General Specifications

|                                  |                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------|
| Antenna Type                     | DualPol® tri-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                  | ASA, UV stabilized                                                               |
| RF Connector Interface           | 4.3-10 Female   M-LOC                                                            |
| RF Connector Location            | Bottom                                                                           |
| RF Connector Quantity, high band | 12                                                                               |
| RF Connector Quantity, mid band  | 12                                                                               |
| RF Connector Quantity, low band  | 6                                                                                |
| RF Connector Quantity, total     | 30                                                                               |

## Remote Electrical Tilt (RET) Information

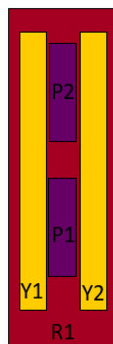
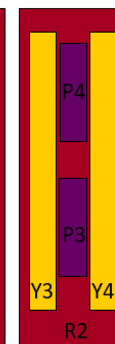
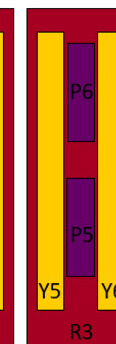
|                                          |                                             |
|------------------------------------------|---------------------------------------------|
| RET Hardware                             | CommRET v2                                  |
| RET Interface            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

# 3X-KVVSS-65A-R9

## Dimensions

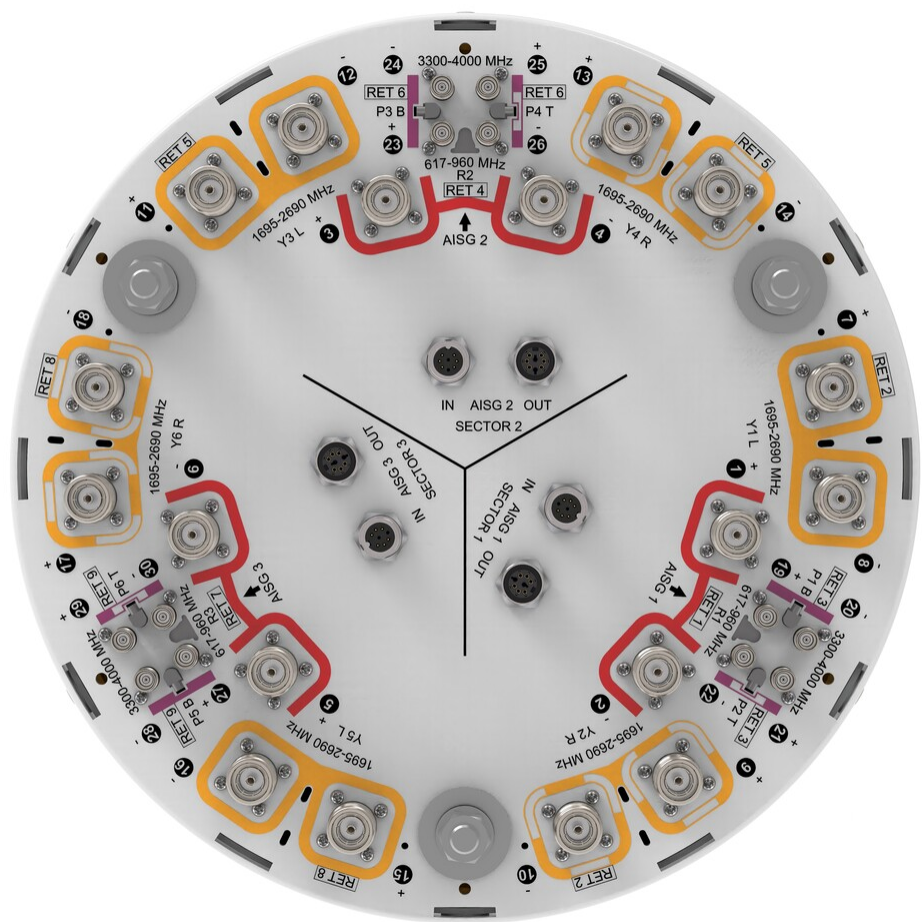
|                          |                     |
|--------------------------|---------------------|
| Length                   | 1446 mm   56.929 in |
| Net Weight, antenna only | 40.2 kg   88.626 lb |
| Outer Diameter           | 370 mm   14.567 in  |

## Array Layout

|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|-----------------------------------------------------------------------------------|----------|-----------------|--------------|---------------|----------|------------------|--|--|--|
|   | Array ID | Frequency (MHz) | RF Connector | RET<br>(SRET) | AISG No. | AISG RET UID     |  |  |  |
|                                                                                   | R1       | 617-960         | 1 - 2        | 1             | AISG1    | CPxxxxxxxxxxxxR1 |  |  |  |
|                                                                                   | Y1       | 1695-2690       | 7 - 8        | 2             | AISG1    | CPxxxxxxxxxxxxY1 |  |  |  |
|                                                                                   | Y2       | 1695-2690       | 9 - 10       |               |          |                  |  |  |  |
|                                                                                   | P1       | 3300-4000       | 19 - 20      | 3             | AISG1    | CPxxxxxxxxxxxxP1 |  |  |  |
|                                                                                   | P2       | 3300-4000       | 21 - 22      |               |          |                  |  |  |  |
|                                                                                   | R2       | 617-960         | 3 - 4        | 4             | AISG2    | CPxxxxxxxxxxxxR2 |  |  |  |
|                                                                                   | Y3       | 1695-2690       | 11 - 12      | 5             | AISG2    | CPxxxxxxxxxxxxY3 |  |  |  |
|                                                                                   | Y4       | 1695-2690       | 13 - 14      |               |          |                  |  |  |  |
|                                                                                   | P3       | 3300-4000       | 23 - 24      | 6             | AISG2    | CPxxxxxxxxxxxxP3 |  |  |  |
|  | P4       | 3300-4000       | 25 - 26      |               |          |                  |  |  |  |
|                                                                                   | R3       | 617-960         | 5 - 6        | 7             | AISG3    | CPxxxxxxxxxxxxR3 |  |  |  |
|                                                                                   | Y5       | 1695-2690       | 15 - 16      | 8             | AISG3    | CPxxxxxxxxxxxxY5 |  |  |  |
|                                                                                   | Y6       | 1695-2690       | 17 - 18      |               |          |                  |  |  |  |
|                                                                                   | P5       | 3300-4000       | 27 - 28      | 9             | AISG3    | CPxxxxxxxxxxxxP5 |  |  |  |
|                                                                                   | P6       | 3300-4000       | 29 - 30      |               |          |                  |  |  |  |
|  |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |
|                                                                                   |          |                 |              |               |          |                  |  |  |  |

## Port Configuration

# 3X-KVVSS-65A-R9



## Electrical Specifications

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| Impedance                  | 50 ohm                                            |
| Operating Frequency Band   | 1695 – 2690 MHz   3300 – 4000 MHz   617 – 960 MHz |
| Polarization               | ±45°                                              |
| Total Input Power, maximum | 1,500 W                                           |

## Electrical Specifications

|                                | R1-R3   | R1-R3   | R1-R3   | R1-R3   | Y1-Y6     | Y1-Y6     | Y1-Y6     | P1-P6     | P1-P6     | P1-P6     |
|--------------------------------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|
| Frequency Band, MHz            | 617-698 | 698-806 | 806-894 | 894-960 | 1695-1920 | 1920-2200 | 2300-2690 | 3300-3550 | 3550-3700 | 3700-4000 |
| RF Port                        | 1-6     | 1-6     | 1-6     | 1-6     | 7-18      | 7-18      | 7-18      | 19-30     | 19-30     | 19-30     |
| Gain at Mid Tilt, dBi          | 12.6    | 13.1    | 13.4    | 13.2    | 16.6      | 17.2      | 17        | 15.5      | 15.3      | 14.8      |
| Beamwidth, Horizontal, degrees | 76      | 75      | 74      | 71      | 64        | 61        | 70        | 60        | 60        | 61        |

# 3X-KVVSS-65A-R9

|                                              |            |            |            |            |            |            |            |            |            |            |
|----------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Beamwidth, Vertical, degrees                 | 18.7       | 16.9       | 15.1       | 14.1       | 7          | 6.2        | 5.2        | 7.4        | 7          | 6.7        |
| Beam Tilt, degrees                           | 4-14       | 4-14       | 4-14       | 4-14       | 2-12       | 2-12       | 2-12       | 2-12       | 2-12       | 2-12       |
| USLS (First Lobe), dB                        | 16         | 17         | 17         | 17         | 15         | 12         | 12         | 16         | 15         | 15         |
| Front-to-Back Ratio at 180°, dB              | 27         | 29         | 29         | 27         | 30         | 30         | 30         | 30         | 30         | 30         |
| CPR at Boresight, dB                         | 16         | 20         | 19         | 22         | 18         | 21         | 18         | 13         | 13         | 15         |
| Isolation, Cross Polarization, dB            | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         | 25         |
| Isolation, Inter-band, dB                    | 25         | 25         | 25         | 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 | 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       | -145       | -145       | -145       |
| Input Power per Port at 50°C, maximum, watts | 250        | 250        | 250        | 250        | 200        | 200        | 200        | 100        | 100        | 100        |

## Mechanical Specifications

|                                  |                                          |
|----------------------------------|------------------------------------------|
| Wind Loading @ Velocity, frontal | 319.0 N @ 150 km/h (71.7 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 319.0 N @ 150 km/h (71.7 lbf @ 150 km/h) |
| Wind Loading @ Velocity, maximum | 319.0 N @ 150 km/h (71.7 lbf @ 150 km/h) |
| Wind Speed, maximum              | 241 km/h (150 mph)                       |

## Packaging and Weights

|                |                      |
|----------------|----------------------|
| Width, packed  | 478 mm   18.819 in   |
| Depth, packed  | 464 mm   18.268 in   |
| Length, packed | 1784 mm   70.236 in  |
| Weight, gross  | 46.8 kg   103.176 lb |

## Regulatory Compliance/Certifications

| Agency     | Classification                    |
|------------|-----------------------------------|
| CHINA-ROHS | Above maximum concentration value |
| ROHS       | Compliant/Exempted                |
| UK-ROHS    | Compliant/Exempted                |



# 3X-KVVSS-65A-R9

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\* Footnotes

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

