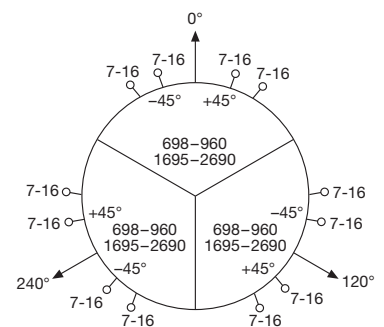


## 12-Port Tri-Sector Antenna Frequency Range Dual Polarization HPBW Fixed Electr. DT

|         |         |         |           |           |           |
|---------|---------|---------|-----------|-----------|-----------|
| 0°      | 120°    | 240°    | 0°        | 120°      | 240°      |
| 698-960 | 698-960 | 698-960 | 1695-2690 | 1695-2690 | 1695-2690 |
| X       | X       | X       | X         | X         | X         |
| 65°     | 65°     | 65°     | 65°       | 65°       | 65°       |
| 2°      | 2°      | 2°      | 2°        | 2°        | 2°        |

### 12-Port Tri-Sector Antenna 698-960/1695-2690 65°/65° 11/13dBi 2°/2°T with GPS

|  |                                  |   |                      |   |
|--|----------------------------------|---|----------------------|---|
| Type No.                                     | <b>80010775</b>                  |   | <b>80010776</b>      |   |
| Radome Colour                                | Brown                            |   | Grey                 |   |
| <b>Lowband</b>                               |                                  | <b>Electrical data per sector</b>               |                      |   |
|  |                                  | <b>698-960</b>                                  |                      |   |
| Frequency range                              | MHz                              | 698 – 824                                       | 824 – 894            | 880 – 960                                       |
| Polarization                                 | °                                | +45, -45  | +45, -45             | +45, -45  |
| Gain   | dBi                              | 2 x 10.0  | 2 x 10.6             | 2 x 11.0  |
| <b>Horizontal Pattern:</b>                   |                                  |   |                      |   |
| Half-power beam width                        | °                                | 73  | 67                   | 65  |
| Front-to-back ratio, copolar                 | dB                               | > 26  | > 26                 | > 30  |
| Cross polar ratio<br>Maindirection<br>Sector | 0°<br>±60°<br>dB                 | Typically: 19<br>> 10                           | Typically: 30<br>> 8 | Typically: 30<br>> 8                            |
| <b>Vertical Pattern:</b>                     |                                  |   |                      |   |
| Half-power beam width                        | °                                | 42  | 40                   | 36  |
| Electrical tilt                              | °                                | 2, fixed  |                      |   |
| Impedance                                    | Ω                                | 50  |                      |   |
| VSWR   |                                  | < 1.5   |                      |   |
| Isolation                                    | Intrasystem<br>Intersystem<br>dB | > 25<br>> 26, typ. 30<br>(698-894 // 1695-2690) |                      | > 25<br>> 23, typ. 30<br>(880-960 // 1695-2690) |
| Intermodulation IM3                          | dBc                              | < -153 (2 x 43 dBm carrier)                     |                      |   |
| Max. power per input                         | W                                | 250 (at 50 °C ambient temperature)              |                      |   |
| Max. power for the antenna                   | W                                | 900 (at 50 °C ambient temperature)              |                      |   |



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| Highband                     |                            | Electrical data per sector         |               |               |               |               |
|------------------------------|----------------------------|------------------------------------|---------------|---------------|---------------|---------------|
|                              |                            | 1695–2690                          |               |               |               |               |
| Frequency range              | MHz                        | 1695 – 1880                        | 1850 – 1990   | 1920 – 2180   | 2200 – 2490   | 2490 – 2690   |
| Polarization                 | °                          | +45, –45                           | +45, –45      | +45, –45      | +45, –45      | +45, –45      |
| Gain                         | dBi                        | 2 x 13.5                           | 2 x 13.5      | 2 x 13.2      | 2 x 13.5      | 2 x 14.0      |
| <b>Horizontal Pattern:</b>   |                            |                                    |               |               |               |               |
| Half-power beam width        | °                          | 60                                 | 60            | 60            | 60            | 60            |
| Front-to-back ratio, copolar | dB                         | > 30                               | > 30          | > 30          | > 30          | > 30          |
| Cross polar ratio            | dB                         |                                    |               |               |               |               |
| Main direction               | 0°                         | Typically: 25                      | Typically: 25 | Typically: 25 | Typically: 25 | Typically: 25 |
| Sector                       | ±60°                       | > 9                                | > 9           | > 8           | > 8           | > 8           |
| <b>Vertical Pattern:</b>     |                            |                                    |               |               |               |               |
| Half-power beam width        | °                          | 18                                 | 17.5          | 16.5          | 14.5          | 14            |
| Electrical tilt              | °                          | 2, fixed                           |               |               |               |               |
| Impedance                    | Ω                          | 50                                 |               |               |               |               |
| VSWR                         |                            | < 1.55                             |               | > 28          | < 1.6         | < 1.5         |
| Isolation                    | Intrasystem<br>Intersystem | > 30 (1695–2690 // 698–960)        |               |               |               |               |
| Intermodulation IM3          | dBc                        | < –153 (2 x 43 dBm carrier)        |               |               |               |               |
| Max. power per input         | W                          | 200 (at 50 °C ambient temperature) |               |               |               |               |

### GPS specifications

|                               |     |  |
|-------------------------------|-----|--|
| Frequency range               | MHz | 1575.42 ± 3                                    |
| LNA gain                      | dB  | 27 typical                                     |
| Pre-amp filtering             | dB  | –30 at ± 100 MHz                               |
| Polarization                  |     | Right-hand circular                            |
| H-plane beam width            |     | Omni   |
| E-plane half-power beam width | °   | 105  |
| Connector                     |     | N female                                       |
| DC power                      | Vdc | +3–5.5, 18–25 mA<br>Through N output connector |
| Temperature range             | ° C | –35 to +70                                     |

### Mechanical specifications

|   |                            |                                       |
|---|----------------------------|---------------------------------------|
| Input   | 12 x 7-16 connector female |                                       |
| Connector position                              | Bottom                     |                                       |
| Weight  | kg<br>lb                   | 19.2<br>42.3                          |
| Wind load<br>(at Rated Wind<br>Speed: 150 km/h) | N<br>lbf                   | 138<br>32                             |
| Max. wind<br>velocity                           | km/h<br>mph                | 242<br>150                            |
| Packing size                                    | mm<br>inches               | 755 x 480 x 480<br>29.7 / 18.9 / 18.9 |
| Height / diameter                               | mm<br>inches               | 626 / 407<br>24.6 / 16                |

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# Accessories

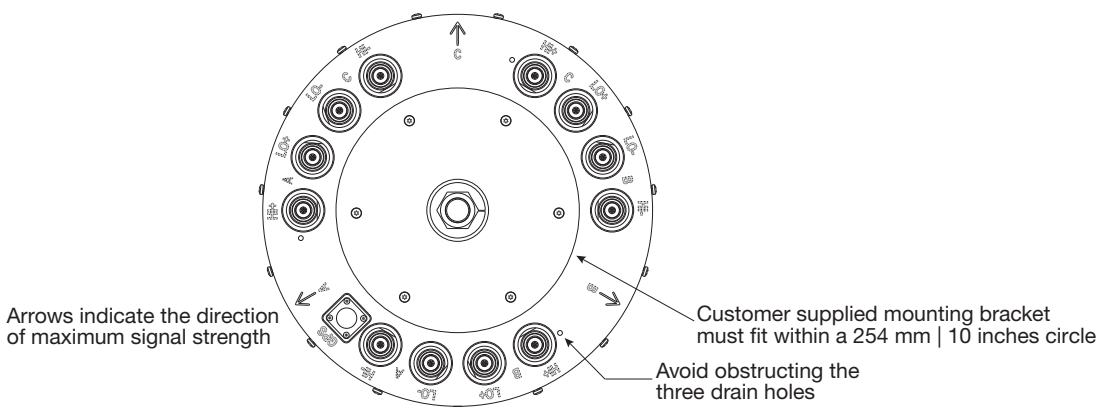
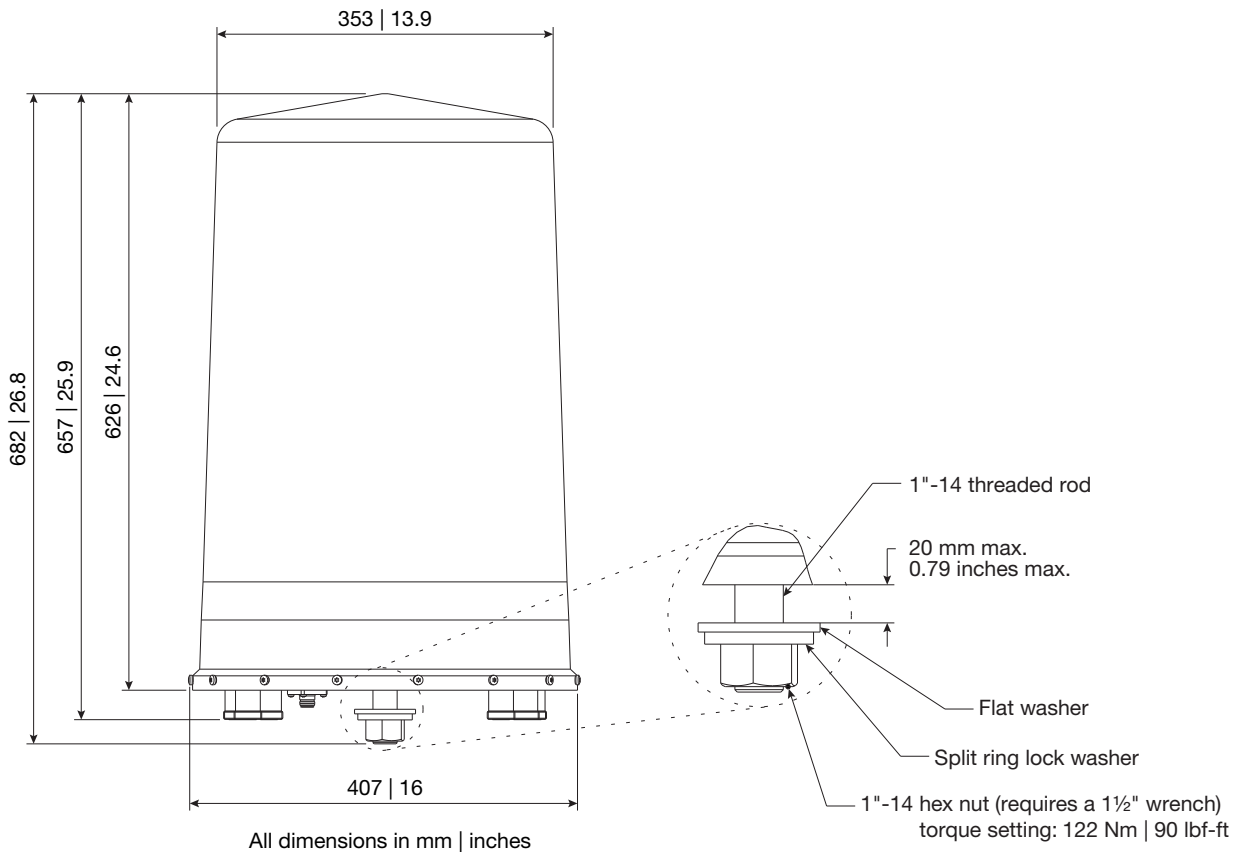
## General Information

**Antenna area:**

**Reflector screen:** Aluminum. **Radiator:** Tin plated zinc.  
**Cylindrical fiberglass radome:** The max. radome diameter is 407 mm | 16 inches. Fiberglass material guarantees optimum performance with regards to stability, stiffness, UV resistance and painting.  
 Radome colour **80010775: Brown.**  
**80010776: Grey.**

**Mounting:**

Designed to be mounted on top of a utility pole using a custom mounting bracket supplied by the customer.



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**Any previous data sheet issues have now become invalid.**

All specifications are subject to change without notice.  
 The latest specifications are available at [www.kathreinusa.com](http://www.kathreinusa.com)