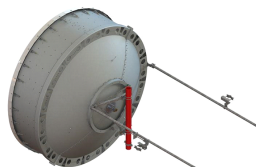


# USX10-7W-2GF



3.0m | 10ft Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized, 7.125 – 8.500 GHz, PBR84 flange

## Product Classification

**Product Type** Microwave antenna

## General Specifications

<b>Antenna Type</b>	USX - Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized
<b>Diameter, nominal</b>	3.0 m   10 ft
<b>Packing</b>	Standard pack
<b>Radome Color</b>	Gray
<b>Radome Material</b>	Fabric
<b>Reflector Construction</b>	Two-piece reflector
<b>Antenna Input</b>	PBR84
<b>Antenna Color</b>	Gray
<b>Antenna Type</b>	USX - Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized
<b>Diameter, nominal</b>	3.0 m   10 ft
<b>Flash Included</b>	Yes
<b>Polarization</b>	Dual

## Electrical Specifications

<b>Operating Frequency Band</b>	7.425 – 8.500 GHz
<b>Beamwidth, Horizontal</b>	0.9 °
<b>Beamwidth, Vertical</b>	0.9 °
<b>Boresite Cross Polarization Discrimination (XPD)</b>	40 dB
<b>Cross Polarization Discrimination (XPD) Electrical Compliance</b>	ETSI EN 302217 XPD Category 3
<b>Electrical Compliance</b>	ACMA FX03_7p5a   ETSI 302 217 Class 3
<b>Front-to-Back Ratio</b>	80 dB
<b>Gain, Low Band</b>	43.7 dBi
<b>Gain, Mid Band</b>	44.4 dBi
<b>Gain, Top Band</b>	45.0 dBi
<b>Operating Frequency Band</b>	7.125 – 8.500 GHz
<b>Radiation Pattern Envelope Reference (RPE)</b>	7425
<b>Return Loss</b>	26.0 dB
<b>VSWR</b>	1.10

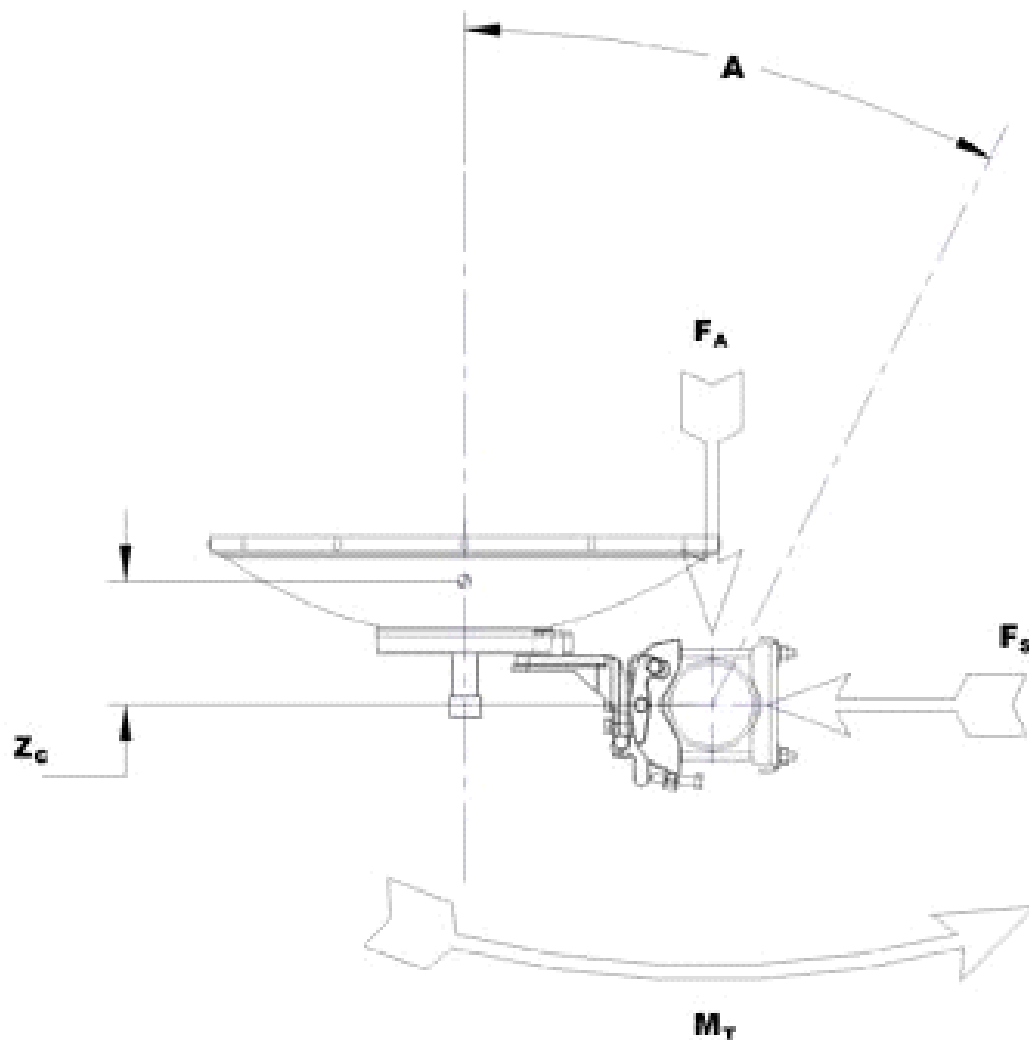
## Mechanical Specifications

<b>Fine Azimuth Adjustment</b>	±5°
<b>Fine Elevation Adjustment</b>	±5°
<b>Mounting Pipe Diameter</b>	115 mm   4.5 in
<b>Net Weight</b>	263 kg   580 lb
<b>Side Struts, Included</b>	2
<b>Side Struts, Optional</b>	3
<b>Wind Velocity Operational</b>	180 km/h   112 mph
<b>Wind Velocity Survival Rating</b>	200 km/h   124 mph

## Wind Forces At Wind Velocity Survival Rating

<b>Angle <math>\alpha</math> for MT Max</b>	-130 °
<b>Axial Force (FA)</b>	18800 N   4226 lbf
<b>Force on Inboard Strut Side</b>	9500 N   2136 lbf
<b>Force on Outboard Strut Side</b>	3350 N   753 lbf
<b>Side Force (FS)</b>	-6560 N   -1475 lbf
<b>Twisting Moment (MT)</b>	-10725 N-m   -7910 ft lb
<b>Weight with 1/2 in (12 mm) Radial Ice</b>	466 kg   1027 lb
<b>Zcg with 1/2 in (12 mm) Radial Ice</b>	744 mm   29 in
<b>Zcg without Ice</b>	618 mm   24 in

## Wind Forces At Wind Velocity Survival Rating Image



### Packed Dimensions

**Gross Weight, Packed Antenna**

513.0 kg | 1131.0 lb

**Height**

1170.0 mm | 46.1 in

**Length**

3410.0 mm | 134.3 in

**Volume**

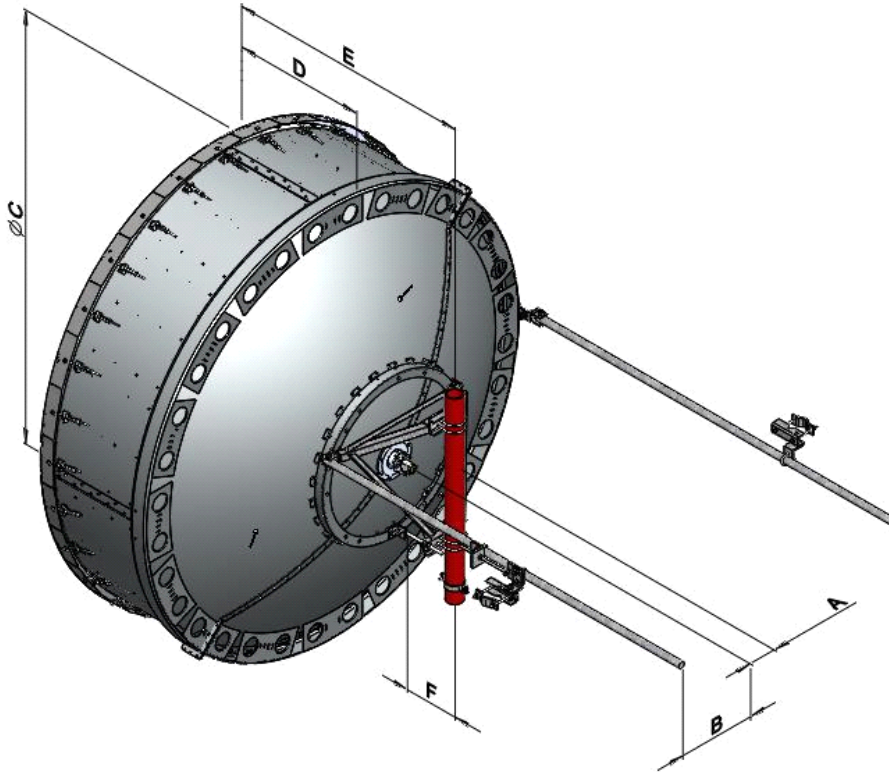
7.7 m<sup>3</sup>

**Width**

1930.0 mm | 76.0 in

## Antenna Dimensions And Mounting Information

### USX10



Dimensions in inches (mm)						
Antenna Size, ft (m)	A	B	C	D	E	F
10 (3)	8.0 (203)	22.5 (572)	125.0 (3174)	38.6 (980)	71.1 (1807)	10.3 (262)

## Regulatory Compliance/Certifications

### Agency

ISO 9001:2015

### Classification

Designed, manufactured and/or distributed under this quality management system



## \* Footnotes

<b>Axial Force (FA)</b>	Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
<b>Boresite Cross Polarization Discrimination (XPD)</b>	The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.
<b>Cross Polarization Discrimination (XPD) Electrical Compliance</b>	The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.
<b>Front-to-Back Ratio</b>	Denotes highest radiation relative to the main beam, at $180^{\circ} \pm 40^{\circ}$ , across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.
<b>Gain, Mid Band</b>	For a given frequency band, gain is primarily a function of antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the measured antenna patterns.
<b>Operating Frequency Band</b>	Bands correspond with CCIR recommendations or common allocations used throughout the world. Other ranges can be accommodated on special order.
<b>Packing</b>	Andrew standard packing is suitable for export. Antennas are shipped as standard in totally recyclable cardboard or wire-bound crates (dependent on product). For your convenience, Andrew offers heavy duty export packing options.
<b>Radiation Pattern Envelope Reference (RPE)</b>	Radiation patterns define an antenna's ability to discriminate against unwanted signals. Under still dry conditions, production antennas will not have any peak exceeding the current RPE by more than 3dB, maintaining an angular accuracy of $\pm 1^{\circ}$ throughout
<b>Return Loss</b>	The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.
<b>Side Force (FS)</b>	Maximum side force exerted on the mounting pipe as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
<b>Twisting Moment (MT)</b>	Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.
<b>VSWR</b>	Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.
<b>Wind Velocity Operational</b>	For VHLP(X), SHP(X), HX and USX antennas, the wind speed where

## Wind Velocity Survival Rating

the maximum antenna deflection is 0.3 x the 3 dB beam width of the antenna. For other antennas, it is defined as a deflection is equal to or less than 0.1 degrees.

The maximum wind speed the antenna, including mounts and radomes, where applicable, will withstand without permanent deformation. Realignment may be required. This wind speed is applicable to antenna with the specified amount of radial ice.