

3.0m | 10ft Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized, 3.600 – 4.200 GHz, grey, PDR40 flange

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Product Classification

Product Type Microwave antenna

General Specifications

Antenna Type USX - Sentinel® Ultra High Performance, Super

High XPD Antenna, dual-polarized

PolarizationDualAntenna InputPDR40

Antenna Color Gray

Reflector Construction Two-piece reflector

Radome ColorGrayRadome MaterialFabricFlash IncludedNo

Side Struts, Included
Side Struts, Optional

Dimensions

Diameter, nominal 3.0 m | 10 ft

Electrical Specifications

Operating Frequency Band 3.600 - 4.200 GHz

Gain, Low Band38.3 dBiGain, Mid Band38.9 dBiGain, Top Band39.5 dBiBoresite Cross Polarization Discrimination (XPD)40 dB

Front-to-Back Ratio 69 dB **Beamwidth, Horizontal** 1.9 °

Beamwidth, Vertical $$1.9\ ^{\circ}$$

COMMSCOPE®

23 dB **Return Loss**

VSWR 1.15

Radiation Pattern Envelope Reference (RPE) 7422

Electrical Compliance ACMA FX03_3.8a | ETSI 302 217 Class 3 | US

FCC Part 101A

±5°

ETSI EN 302217 XPD Category 3 **Cross Polarization Discrimination (XPD) Electrical Compliance**

Mechanical Specifications

Fine Elevation Adjustment Range

Compatible Mounting Pipe Diameter 115 mm | 4.5 in

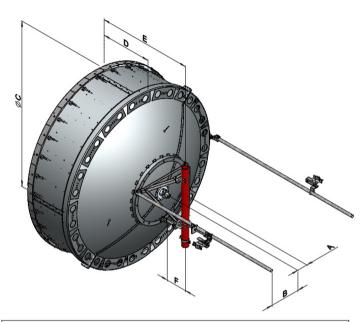
Fine Azimuth Adjustment Range ±5°

Wind Speed, operational 180 km/h | 111.847 mph

Wind Speed, survival 200 km/h | 124.274 mph

Antenna Dimensions and Mounting Information

USX10



| Dimensions in inches (mm) | | | | | | |
|---------------------------|--------------|---------------|-----------------|---------------|----------------|---------------|
| Antenna Size, ft (m) | А | В | С | D | E | F |
| 10 (3) | 8.0 (203) | 22.5 (572) | 125.0 (3174) | 38.6 (980) | 71.1 (1807) | 10.3 (262) |

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA)

Angle α for MT Max

Side Force (FS)

Twisting Moment (MT)

Force on Inboard Strut Side

Force on Outboard Strut Side

Zcg without Ice

Zcg with 1/2 in (12 mm) Radial Ice

18800 N | 4,226.409 lbf

-130°

-6560 N | -1,474.747 lbf

-10725 N-m | -94,924.25 in lb

9500 N | 2,135.686 lbf

3350 N | 753.11 lbf

618 mm | 24.331 in

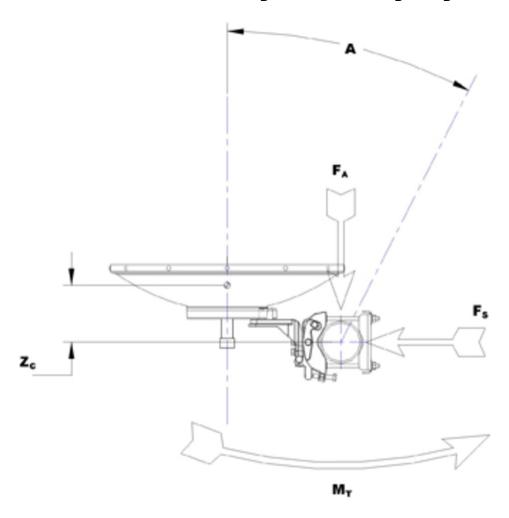
744 mm | 29.291 in

COMMSCOPE°

Weight with 1/2 in (12 mm) Radial Ice

466 kg | 1,027.353 lb

Wind Forces at Wind Velocity Survival Rating Image



Packaging and Weights

 Height, packed
 1170 mm | 46.063 in

 Width, packed
 1930 mm | 75.984 in

Length, packed 3410 mm | 134.252 in

Packaging Type Standard pack

 Volume
 7.7 m³ | 271.923 ft³

 Weight, gross
 513 kg | 1,130.97 lb

Weight, net 263 kg | 579.815 lb

Regulatory Compliance/Certifications



Agency

Classification

ISO 9001:2015

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

* Footnotes

Operating Frequency Band Bands correspond with CCIR recommendations or common

allocations used throughout the world. Other ranges can be

accommodated on special order.

Gain, Mid Band 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.

Boresite Cross Polarization Discrimination (XPD) 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.

Front-to-Back Ratio Denotes highest radiation relative to the main beam, at 180°

> ±40°, across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.

Return Loss The figure that indicates the proportion of radio waves

incident upon the antenna that are rejected as a ratio of

those that are accepted.

VSWR Maximum; is the guaranteed Peak Voltage-Standing-Wave-

Ratio within the operating band.

Radiation Pattern Envelope Reference (RPE) 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 +/-1° throughout

Cross Polarization Discrimination (XPD) Electrical Compliance 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.

For VHLP(X), SHP(X), HX and USX antennas, the wind speed Wind Speed, operational

where 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.

Wind Speed, survival 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.

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Axial Force (FA)

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.

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.

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.

Andrew standard packing is suitable for export. Antennas are shipped as standard in totally recyclable cardboard or wirebound crates (dependent on product). For your convenience, Andrew offers heavy duty export packing options.

Side Force (FS)

Twisting Moment (MT)

Packaging Type