

3-Ft Single-Pole Antenna

With E-Stabilizer Antenna Specifications

3-Ft Single-Pole Antenna Quick Look

- Stabilized 90 cm (3 ft) E-band
- 71 GHz to 86 GHz
- Single-polarized
- Parabolic antenna



General Specifications

Part Number	N800085L001A
Antenna Type	Point-to-point (PTP) antenna
Performance	High performance
Diameter, Nominal	0.9 m (3 ft)
Polarization	Single, V or H
Antenna Color	Gray
Radome Color	Gray
Radome Material	Plastic
RoHS 2015/863/EC	Compliant

Electrical Specifications

Frequency Range	71–86 GHz	VSWR (Return Loss)	1.5 : 1 (14 dB)
Antenna Interface	Cambium single-polarization interface	Regulatory Compliance	ETSI EN 302 217-4 V2.1.1 (2017-05) FCC CFR 47 Part 101.115
Gain, Low Band	54.0 dBi	Side-Lobe Suppression	ETSI EN 302 217-4 V2.1.1 Class 3 (below 2° steering in azimuth) FCC CFR 47 Part 101.115
Gain, High Band	55.5 dBi	Cross Polarization	ETSI EN 302 217-4 V2.1.1 Class 3B FCC CFR 47 Part 101.115
3 dB Beamwidth	0.3°	Operating Voltage	-37 to -57 VDC
XPD	25 dB	Power Consumption	6 W max
F/B Ratio	71 dB		

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Stabilizing System

Beam Steering	±4° for initial alignment
Range	±2° for vibration compensation

Elevation Compensation Performance

Vibration Frequency	Sensor	Maximum Compensated Amplitude	Compensation Accuracy
DC–0.1 Hz	Accelerometer	±2°	0.5°
0.1–3 Hz	Gyroscope	±2°	0.5°
3–6 Hz	Gyroscope	±1.5°	0.5°
6–10 Hz	Gyroscope	±1°	0.5°

Azimuth Compensation Performance

Vibration Frequency	Sensor	Maximum Compensated Amplitude	Compensation Accuracy
0.2 – 3 Hz	Gyroscope	±2°	0.5°
3 – 6 Hz	Gyroscope	±1.5°	0.5°
6 – 10 Hz	Gyroscope	±1°	0.5°

Loss vs Steering Angle

Steering Angle	Loss at Perfect Tracking (Vibrations)	Tracking Inaccuracy Loss (Vibrations)	Total	Steering Angle
0°	0 dB	1 dB	1 dB	0°
0.5°	0.4 dB	1 dB	1.4 dB	0.5°
1°	1.5 dB	1 dB	2.5 dB	1°
1.5°	3 dB	1 dB	4 dB	1.5°
2°	4.5 dB	1 dB	5.5 dB	2°

Interfaces

Radio Interface	Cambium single-polarization interface
Power	3 pins
Data	100Base-T, RJ-45

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Environmental

Wind Speed	ETSI EN 302 085 V1.1.2
Survival	252 km/h
Operation	164 km/h

Loss vs Steering Angle

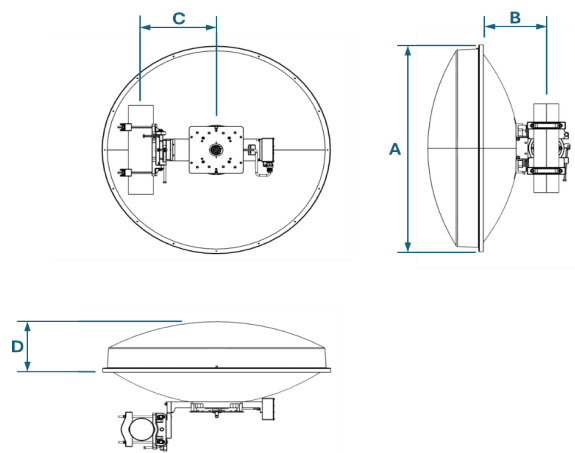
Test	Standard	Duration	Temperature	Conditions
Low Temperature	IEC-60068-2-1	72 h	-55°C	
High Temperature	IEC-60068-2-2	72 h	+71°C	
Temperature Cycling	IEC-60068-2-14	1 h	-45°C to +70°C	3 cycles
Vibration	IEC-60721-3-4	30 min/axis		Random (4M5)
Mechanical Shock	IEC-60721-3-4			4M5
Humidity	EN300 019-2-4 T4.1E	144 h		95%
Water Tightness	IEC 60529			IP66
Solar Radiation	ASTM G53	1000 h		
Salt Spray	IEC-60068-2-11 Ka	500 h		
Ice and Snow				25 mm radial

Standards

EMC	FCC CFR 47 part 15: 2021, Class A (US) ICES-003: 2020 issue 7, Class A (Canada) EN 300 489-1 Class A, EN 300489-4 Class A (Europe) EN55032 EN55035 GR-1089-GORE: 2011 Issue 6, Section 4.2.2(R4-2) (US) IEEE1613.1 Section 6.2 (Table 3)
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Outline Dimensions



A	1,050 mm
B	306 mm
C	360 mm
D	239 mm

Package Dimensions

Size 1,170 mm x 1,170 mm x 470 mm

Weight 33 kg

Antenna Weight 12 kg

Mounting Bracket Weight 4 kg

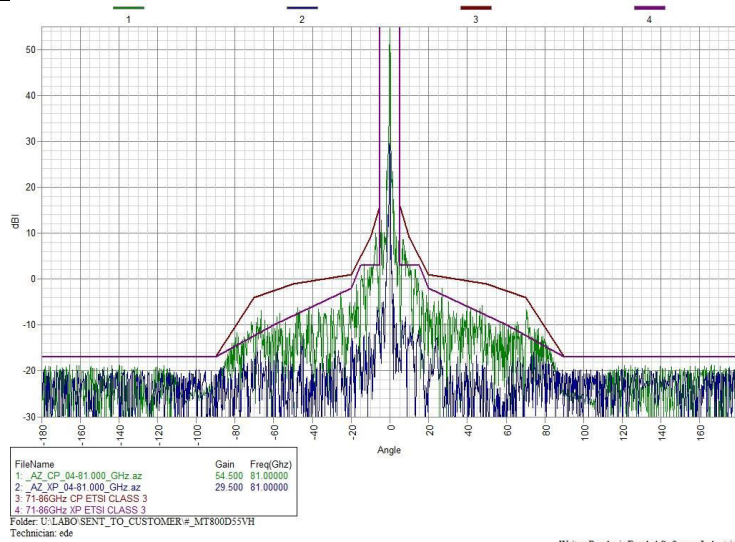
Pole Dimensions

Diameter 50.8 mm x 114.3 mm
(2 in x 4.5 in)

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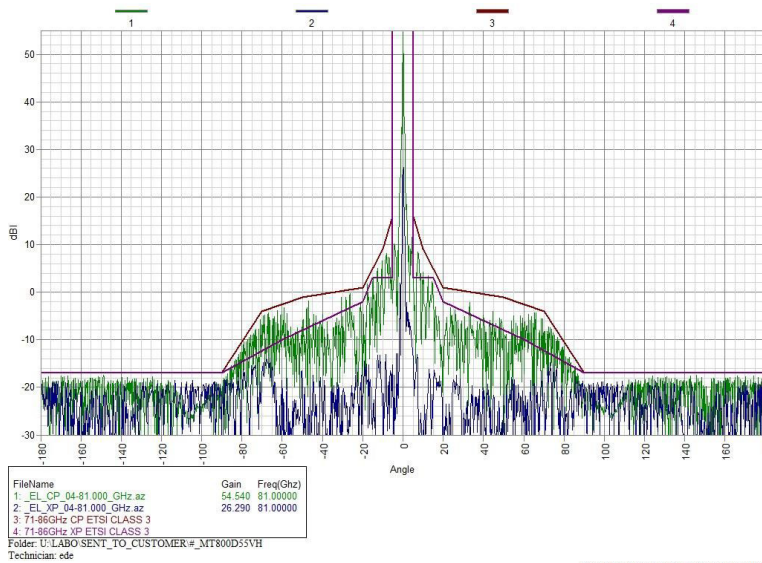
Radiation Pattern Envelope

Azimuth and Cross Polarization 81 GHz



Written By: Amir Frenkel Software Industries

Elevation and Cross Polarization 81 GHz



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