

Appendix D Antenna Type

NTA.2407 Panel Antenna

The NTA-2407 is a compact, light-weight, vertically polarized panel antenna intended to mount to the APU Enclosure. The antenna consists of a printed patch array enclosed in an aluminum cavity with a UV stabilized ASA radome. The antenna is sealed and intended for outdoor use.



Electrical Specifications

Frequency Range : 2400-2483 MHz

Gain : 14 +/- dBi

VSWR : 2.0;1 MAX.

Polarization : Vertical

Power : 20 Watts

H-Plane Beamwidth : 27 degrees

E-Plane Beamwidth : 36 degrees

Front to Back Ratio : 25 dB min (azimuth)

Cross Pol. Discrimination : 13 dB min.

Electrical Beamtilt : N/A

Impedance : 50 ohms nominal

Termination : SMA female

Mechanical Specifications

Length : 8 in. (203 mm)

Diameter : N/A

Width : 11 in. (279.4 mm)

Depth : 0.44 in. (11 mm)

Weight (incl. hardware) : 1.66 lb. (0.75 kg)

Rated Wind Velocity : 125mph (200 km/h)

Horizontal Thrust at rated wind : 38 lb. (17.2 kg)

Mechanical Tilt : 0 +/- 22.5° Pan

Mounting : Mounts to APU Enclosure

Pig-Tail Length : N/A

Material Specifications

Radiating Elements : Plated copper on PCB

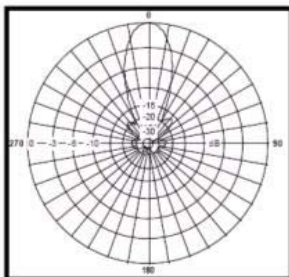
Reflector : Irridited aluminum

Radome : Gray UV stabilized ASA

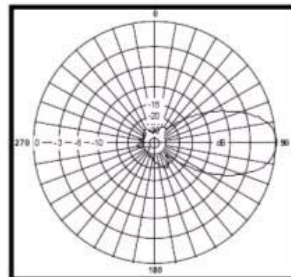
Mounting Hardware : Aluminum and HDG steel

Radiation Patterns/Masks

H-Plane



E-Plane



NTA.2412 Bidirectional Antenna

The NTA-2412 is a vertically polarized bidirectional antenna intended to mount to the APU Enclosure. The antenna consists of a printed dipole array enclosed in a UV stabilized ASA radome for superior weatherability. It is designed for wireless data in the ISM band and is at DC ground to aid in lightning protection.



Electrical Specifications

Frequency Range : 2400-2483 MHz

Gain : 9 dBi (peak)

VSWR : 1.5;1 max.

Polarization : Vertical

Power : 5 Watts

H-Plane Beamwidth : 60 degrees

E-Plane Beamwidth : 28 degrees

Front to Back Ratio : N/A

Cross Pol. Discrimination : 20 dB min.

Electrical Beamtilt : N/A

Impedance : 50 ohms nominal

Termination : N male

Mechanical Specifications

Length : 10.5 in. (267 mm)

Diameter : 3 in. (76 mm)

Width : N/A

Depth : N/A

Weight (incl. hardware) : 2 lb. (0.9 kg)

Rated Wind Velocity : 125mph (200 km/h)

Horizontal Thrust at rated wind : 9 lb. (4 kg)

Mechanical Tilt : N/A

Mounting : Mounts to APU Enclosure

Pig-Tail Length : 12 in. (304.8 mm)

Material Specifications

Radiating Elements : Plated copper on PCB

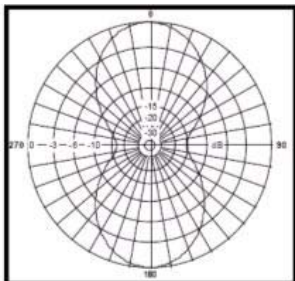
Reflector : Irridited aluminum

Radome : Gray UV stabilized ASA

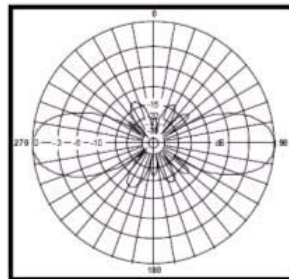
Mounting Hardware : Aluminum and HDG steel

Radiation Patterns/Masks

H-Plane



E-Plane



NTA.2400 Omni directional Antenna

The NTA-2400 is a vertically polarized, medium gain, omni-directional antenna that covers the 2.4 - 2.5 GHz ISM band. This antenna is a robust point to multi-point antenna designed to be completely waterproof. The antenna is intended to mount to the APU Enclosure.



Electrical Specifications

Frequency Range : 2400-2483 MHz
Gain : 7 dBi typ
VSWR : 2.0;1 typ.
Polarization : Vertical
Power : 5 Watts
H-Plane Beamwidth : 360 degrees
E-Plane Beamwidth : 14 degrees typ
Front to Back Ratio : N/A
Cross Pol. Discrimination : 18 dB typ.
Electrical Beamtilt : N/A
Impedance : 50 ohms nominal
Termination : N female

Mechanical Specifications

Length : 26 in. (660 mm)
Diameter : 3.9 in. (100 mm)
Width : N/A
Depth : N/A

Weight (incl. hardware) : 1.25 lb. (0.57 kg)
Rated Wind Velocity : 125mph (200 km/h)
Horizontal Thrust at rated wind : 7 lb. (3.2 kg)

Mechanical Tilt : N/A
Mounting : Mounts to APU Enclosure

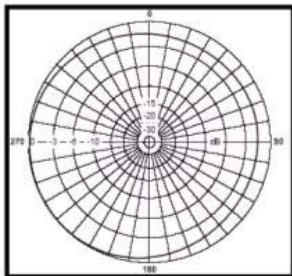
Pig-Tail Length : N/A

Material Specifications

Radiating Elements : Copper
Reflector : N/A
Radome : Gray UV stabilized ASA
Mounting Hardware : Aluminum and HDG steel

Radiation Patterns/Masks

H-Plane



E-Plane

