



STANDARD
MIL-STD
810

STANDARD
MIL-STD
461

STANDARD
MIL-STD
188-164A

Size:

0.45m

PMAR-45

Robust Maritime Stabilization System

The PALS PMAR-45 is a dedicated maritime antenna featuring a robust 3-axis stabilization system. Equipped with integrated GPS, gyro, and high-precision sensors, it automatically compensates for vessel motion in real time, ensuring continuous satellite acquisition and stable communication in the most challenging sea conditions.

High-Precision Multi-Band Tracking

Designed for Low Ku, Ku, and Ka band operations, the antenna delivers exceptional tracking accuracy. Its advanced conical scan algorithm achieves a pointing precision of 0.2° RMS, while supporting fast multi-satellite switching for flexible and reliable connectivity across different missions and regions.

Intelligent Signal Lock for Maximum Uptime

The system utilizes intelligent digital finding technology, analyzing the Carrier-to-Noise (C/N) ratio to accurately identify and lock onto the target satellite. This ensures rapid, reliable acquisition and sustained high-performance links, providing guaranteed communication uptime for critical offshore and naval operations.

Key Features

- Ku, Ka Band available
- 3-Axes Stabilization System
- 4-Axes Tracking System
- High Dynamic Response by Direct Drive Technology
- Wear-Free Architecture & Minimal Maintenance
- Supports LEO/MEO/GEO Tracking
- Near-silent performance and vibration-free operation
- Optional 4G/5G/LTE supported modem for load balancing and bonding solutions
- Quick and precise automatic satellite acquisition
- High Data Rate Transmission
- Optional Military Ka-Band Feed



GENERAL SPECIFICATIONS

Reflector Diameter
Stabilization Platform
Modem Interface
Modem Support
Power Input
Power Consumption

PMAR-45

0.45m
3-Axis for stability, 4-Axis for tracking
Ethernet, OpenAMIP
iDirect, Newtec, Gilat, Datum, Comtech, etc.
DC 18-36V
≤250W

RF CHARACTERISTIC

Frequency (GHz) Tx
Frequency (GHz) Rx
Antenna Gain @ Midband (±0.2 dBi)Tx
Antenna Gain @ Midband (±0.2 dBi)Rx
G/T (dB/K)
Antenna Pattern Compliance
Pointing Accuracy
Initial Acquisition Time
Signal Tracking Accuracy
Blockage recovery time

Ku-Band

13.75-14.50
10.70 -12.75
34.6
33.0
11
Compliant with MIL-STD-188-164C, ITU-R S.580-6 & ITU-R S.465-6
≤2min
<0.2° (R.M.S)
≤5s (blockage 20min)
<0.2° (R.M.S)

Ka-Band

27.50 - 31.00
17.70 - 21.20
40.8
37.4
13.8
≤2min
<0.2° (R.M.S)
≤5s (blockage 20min)
<0.2° (R.M.S)

MECHANICAL SPECIFICATIONS

Motion Range
Antenna Speed
Antenna Acceleration

Azimuth

360° continuous
200°/s
500°/s²

Elevation

-15° - +110°
200°/s
500°/s²

Roll

± 30°
200°/s
500°/s²

Polarization

± 90°(Ku)

ENVIRONMENTAL SPECIFICATIONS

Temperature Range Operational
Temperature Range Survival
Protection
Wind Speed Operational
Wind Speed Survival
Humidity

PMAR-45

-20 ~ +60°C
-30 ~ +70°C
IP65
80 Knot
110 Knot
0 to 100%

Specifications are subject to change.

