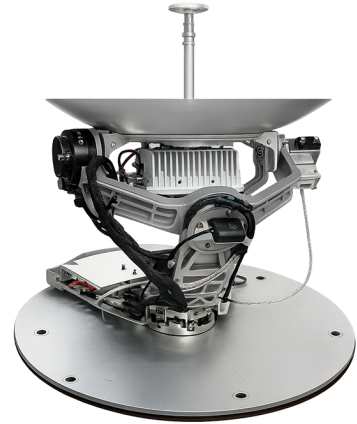




STANDARD
MIL-STD
810

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

- X, Ku and Ka bands available
- Lower Ku & Ku/Ka simultaneous versions optional
- Highly reliable Direct Drive System
- Optional 4G/ 5G/LTE supported modem for load balancing and bonding solutions
- Rapid Blockage Recovery Time
- 3-Axes Stability System
- 4-Axes Tracking System
- Consistently high data rate
- Broad modem connectivity
- Easy installation and retrofit
- Operational sea level 5 and ship speed up to 60knots ship size 5-20m manned/unmanned



GENERAL SPECIFICATIONS

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

PMAR-45

0.45m
3-Axis for stability, 4-Axis for tracking
Circle against symmetrical reflector and cap feed
Ethernet, OpenAMIP
iDirect, Newtec, Gilat, Datum, Comtech, etc.
DC 18-32V
≤250W

RF CHARACTERISTIC

Frequency (GHz) Tx
Frequency (GHz) Rx
Antenna Gain (dBi) Tx
Antenna Gain (dBi) Rx
Tx/ Rx Isolation (dB)
Rx/ Tx Isolation (dB)
Cross Polarization (dB)
EIRP (dBw)
G/T (dB/K)
Antenna Pattern Compliancy
Pointing Accuracy
Initial Acquisition Time
Blockage Recovery Time

Ku-Band

13.75-14.50
10.70 -12.75
34.6 dBi @ 14.15 GHz
33.0 dBi @ 11.75 GHz
85
35
30 (Axis)
46(16W BUC)
11
ITU-R S.580-6 and ITU-R S.465-6
≤0.2° (R.M.S)
≤2min
≤5s (cover for 5 minutes)

Ka-Band

27.50 - 31.00
17.70 - 21.70
40.8 dBi @ 29.25 GHz
37.4 dBi @ 19.45 GHz
35
-
50(10W BUC)
13.8
ITU-R S.580-6 and ITU-R S.465-6
≤0.2° (R.M.S)
≤2min
≤5s (cover for 5 minutes)

MECHANICAL/ POWER SPEC.

Antenna Motion Range
Revolutions
Acceleration
Radome Size
Weight

Azimuth

360° continuous
100°/S²
200°/S²
D: 600mm H: 602mm
≤25 Kg (Including Radome)

Elevation

-15°~+105°
100°/S²
200°/S²

Polarization

±110° (Ku) ± 90° (Ka)

Roll

± 30°
100°/S²
200°/S²

ENVIRONMENTAL SPECIFICATIONS

Operation Temperature
Survival Temperature
Protection
Operational Wind Load
Survival Wind Load
Humidity

PMAR-45

-40~+55°C
-55~ +70°C
IP65
80 Knot
110 Knot
0 to 100%

Specifications are subject to change.

