Radome

Size: 0.45m

PSUB-45

Critical Communication Link

The PSUB-45 is a 0.45-meter, multi-band satellite communication terminal engineered specifically for submarines and Autonomous Underwater Vehicles (AUVs). It serves as the vital, secure, and long-range link between these submerged platforms during covert or data-gathering missions. By enabling real-time data transmission, it ensures operational success in the most remote environments.

Advanced Stabilized Antenna

The terminal's core features the most advanced, extensively tested three-axes stabilized antenna system. This technology is crucial for maintaining a stable and uninterrupted satellite link despite the constant pitch and roll of the sea. It guarantees trustful and continous communications.

Pivotal Naval SATCOM System

As an integral part of modern military naval SATCOM architectures, the PSUB-45 is pivotal for providing the indispensable communication backbone by solidifying submarines and AUVs roles in the modern military naval communication.

Key Features

- X, Ku, Ka Bands are available
- Automatic pointing with or without GPS
- Web interface for integrated control
- Compliant with military standards
- Supports various modems
- Supports encryption devices integration
- Continuous overhead satellite tracking
- 3-Axes for stability, 4-Axes for tracking

PALS® | Communications & Technology

Military SATCOM
Beneath the Surface

TECHNICAL SPECIFICATIONS / PSUB-45

Scan the QR code for more information.

GENERAL SPECIFICATIONS	PSUB-45
Reflector Diameter	0.45m
Antenna Form	Circle against symmetrical reflector and cap feed
Antenna Material	Carbon-Fiber
Stabilization Platform	3-Axes for stability, 4-axes for tracking
Power Input	DC18-32V
Power Consumption	≤250W

RF CHARACTERISTIC	X-Band	Ku-Band	Ka-Band
Frequency (GHz) Tx	7.90~8.40	12.75 ~13.75	29.00~30.00
Frequency (GHz) Rx	7.25~7.75	10.70~11.70	18.70~20.20
Antenna Gain (±0.2 dBi) Tx	29.8+20lg (f/8.15) GHz	34.5+20lg(f/14.0) GHz	41.20+20lg(f/29.4) GHz
Antenna Gain (±0.2 dBi) Rx	29.1 +20lg(f/7.5) GHz	33.4+20lg(f/12.25) GHz	37.4+20lg(f/19.6) GHz
Polarization	LHCP/RHCP	Horizontal/Vertical	LHCP/RHCP
Cross Polarization (dB)	-	30 (Axis)	-
G/T (dB/K)	1	8.2	12.0
EIRP (dBw)	35.8 (10W BUC)	45.5 (16W BUC))	50.0 (10W BUC)
Axial Ratio (dB)	1.5	-	1.5
Pointing Accurasy	≤0.2° (R.M.S)		
Initial Acquisition Time	≤2min		
Radiation Pattern Compliancy	Compliant with MIL-STD-188-164A, ITU - RS-580 and ITU-RS-465-6		
Blockage Recovery Time	≤5s (Cover for 5min)		

MECHANICAL SPECIFICATIONS	Azimuth	Elevation	Polarization	Roll
Drive Rates Slow	360° continuous	-5°-95°	±110° (Ku), 90° (Ka&X)	±20°
Antenna Revolution	100°/S	100°/S		100°/S
Antenna Travels	4.5° / sec	3.0° / sec	3.42°/ sec	
Weight	≤7.8Kg (excluding Radome)			

ENVIRONMENTAL SPECIFICATIONS	PSUB-45
Temperature Operational	-40 ~ +55°C
Temperature Survival	-55 ~ +70°C
Vibrations	MIL-STD-167
Pressure	>60 bars

Specifications are subject to change.