

**SIM LTE AVAILABLE**

High speed internet via 3G / 4G network.



Remote Management Access



Web Interface



SIM LTE



Automatic Satellite Acquisition



Diversity Kit Compatibility



Solid Hardware



PMAR-90 Ka PRO

Maritime VSAT antenna with 90 cm dish size and 3-axis motion system for Ka-band services. The PMAR-90 Ka PRO is the PALS maritime VSAT tracking antenna operating in Ka-band that brings to you the fastest satellite internet connection. Due to the Ka-band technology, the PMAR-90 Ka PRO can reach breath-taking speeds both in download and in upload - via satellite connection. PMAR-90 Ka PRO is the perfect solution for high data-volume demands on board: its impressive speed both in download and in the upload is ideal for Internet services and applications such as video phone calls, music and video streaming.

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Key Features

- ▶ 3-axis motion system
- ▶ Range movement from -15° to $+120^{\circ}$
- ▶ Tracking speed up to $50^{\circ}/s$
- ▶ LTE Plug & Go SIM cards
- ▶ LEO, MEO, GEO tracking supported
- ▶ Easy to install
- ▶ 90 cm dish for high-quality signal reception and transmission
- ▶ Electronically switchable in x-pol and co-pol operation
- ▶ Compatible with most modems
- ▶ Ku-Band / Ka-Band convertible
- ▶ VoIP optional
- ▶ RF optimized dome

TECHNICAL SPECIFICATION

Feed Subsystem	
Reflector diameter	90 cm (35.43")
Converter/Transceiver	Skyware XGX35F85CD (other transceivers optional)
LNB*	Integrated in transceiver
BUC*	Integrated in transceiver
Available BUC power	5 W for XGX35F85CD, (other wattages optional)
RX antenna gain	43.0 dBi @ 20.2 GHz
TX antenna gain	46.7 dBi @ 29.5 GHz
RX / TX polarization	Circular (X-pol)
G/T	>18.5 dB/K (clear sky, 30° elevation)
Position acquisition	Internal GNSS (GPS / Glonass / Galileo / Beidou / QZSS)
Tracking receiver	Internal, 950 - 2150 MHz; BW 0.5 - 50 MHz
Frequency Band *	
RX frequency	19.7 - 20.2 GHz
TX frequency	29.5 - 30.0 GHz
Convertible	From Ku- to Ka-Band via separate kit
Drive Subsystem	
Tracking technology	Twin RF tracking receiver + 6D inertial + GNSS (NMEA input optional)
Maximum tracking speed	50°/s (each axis)
Azimuth range	Unlimited
Elevation range	-15° to +120°
Cross level range	-45° to +45°
Maximum ship motion	<ul style="list-style-type: none"> Roll ±35° @ 6 sec Pitch ±25° @ 6 sec Yaw ±15° @ 6 sec
Ship motion (for stabilization accuracy tests)	<ul style="list-style-type: none"> Roll ±30° @ 10-12 sec Pitch ±20° @ 8-10 sec Yaw ±8° @ 15 sec
Motion system	3-axis
Miscellaneous	
Lock on time	Typ. 30 sec (Time to Online depends on modem)
Satellite acquisition	Completely automated by DVB-S2-Receiver and/or modem confirmation (according to ETSI 302 340)
EPAK® Diversity-Kit compatible	✓
Modem approval	Telenor type approval; Standard type approval; CE & EPAK type approval;
Operating temperature	-30°C to 55°C
Storage temperature	-30°C to 85°C
Humidity	According to IEC 60945, 100% condensing
Vibration	According to IEC 60945; MIL-STD-167-1
Shock	According to IEC 60721-4-6; MIL-STD-810F
Rain	IP56
Wind	<ul style="list-style-type: none"> Operational: < 150 km/h Survival: < 200 km/h
Compass safe distance	≥ 2.00 m (according to IEC 60945)
Compliance	<ul style="list-style-type: none"> CE (Maritime), ETSI Complies with the specifications of EC directive 2014/53/EU Radio & Telecommunications Terminal Equipment (R&TTE); compliance with EC directive 2014/35/EU, EMC directive 2014/30/EU and IEC 301-427
Power Specifications	
Power supply antenna (ODU)	48 V DC (supplied by ACU)
Antenna input voltage TX (BUC)	24, 48 V DC / 250 VA (supplied by ACU)
Power consumption (ODU excl. BUC)	Up to 150 VA (supplied by ACU)
Dimensions and Weight	
Radome (D x H)	111 cm x 114 cm (43.7" x 44.9")
Weight (incl. radome)	75 kg (165.35 lbs)

Antenna Control Unit	
Dimensions (WxHxD)	48.2 cm x 4.4 cm x 38 cm (18.9" x 1.7" x 14.9") (19" Rack 1HU size)
Weight	5.1 kg (11.24 lbs)
Gyro interface	NMEA0183 / NMEA2000 (via RS422 or RS485 or RS232) / SIMRAD RGC11
Input voltage, frequency	90~264 V AC, 47~63 Hz
Interfaces	<ul style="list-style-type: none"> 1x RS232/RS422 (RJ45) 4x Ethernet + 1x open BMIP (RJ45) 2x USB 1x GPIO
Local user interface	256x64px OLED-Display, 3 Status-LEDs, 6 Push-Buttons
Modem interface	Ethernet port + GPIO
Modem protocols	openAMIP / SNMP / Telnet / open BMIP
Remote access	TCP / IP
Position acquisition	Supplied by ODU
Operating temperature	-20°C to 55°C
Storage temperature	-40°C to 85°C
Humidity	According to IEC 60945
IP class	IP 30
Compass safe distance	0.5 m according to IEC 60945
Supported modems	
	<ul style="list-style-type: none"> iDirect iFINITI, Evolution, Velocity Hughes HX200 ViaSat SBT-M Comtech CDM-250/840 Gilat Skyedge II C4 Paradise PD25L, Datacom Q-Flex Advantech VR700, VR7400 STM Satlink 1910 Romantis / Eastar UHP 1000 / UHP 2000 others on request
Modem type	
	<ul style="list-style-type: none"> 2x Double shielded coax cable (ECOFLEX 10) with N-plugs
Cables and Connectors	
ACU to Antenna	<ul style="list-style-type: none"> 2x Double shielded coax cable (ECOFLEX 10) with N-plugs
ACU to Modem	<ul style="list-style-type: none"> 2x Double shielded coax cable (RG6) with F and TNC-plugs 1x Ethernet with RJ45 plugs

Radome and ACU Dimensions

