

**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-130 Ku PRO

Maritime VSAT antenna with 130 cm dish size and 3-axis motion system for Ku-Band services. PALS's latest innovation in maritime satellite communication is the VSAT PMAR-13 Ku PRO, a maritime satellite antenna for Internet connection operating in Ku-band. The 130 cm diameter dish system is so far the largest antenna in PALS PMAR Series portfolio. Its high-end technical features allow reliable functionality even in regions with fading signals or under harsh weather conditions. The 3-axis motion system makes the antenna free to move and point to whichever the direction of the satellite is. The PMAR-13 Ku PRO has been designed for addressing the communication needs of superyachts, oil and gas platforms, navy boats and frigates, cruise ships and all other vessels demanding a strong and reliable yet easy-to-install satellite system for Internet at sea. The PMAR-13 Ku PRO reaches excellent tracking performance under the hardest maritime motion profile "Class A", defined by Global VSAT Forum and Fraunhofer Institute.

TURKEY**P** : +90 216 540 72 57**M** : sales@pals.com.tr**W** : www.pals.com.tr**NETHERLANDS****P** : +31 6 85 52 63 16**M** : sales@pals-comsat.com**W** : www.pals-comsat.com

Key Features

- 3-axis motion system + auto skew
- Range movement from -20° to +115°
- Tracking speed up to 35°/s
- LTE Plug & Go SIM cards
- LEO, MEO, GEO tracking supported
- Easy to install
- 130 cm dish for high-quality signal reception and transmission
- Electronically switchable in x-pol and co-pol operation
- Compatible with most modems
- Honeycomb FRP radome
- VoIP optional

TECHNICAL SPECIFICATION

Feed Subsystem	
Reflector diameter	130 cm (51.18")
Minimum E.I.R.P.	40 dBW
LNB	Universal (LOF 9.75/10.6 GHz, PLL stabilized, internal ref.)
BUC	Super extended Ku (LOF 12.80 GHz, PLL stabilized, external ref.)
Available BUC power	8 W / 16 W / 25 W / 40 W / 60 W
RX antenna gain	43.1 dBi @ 12.5 GHz
TX antenna gain	44.3 dBi @ 14.25 GHz
RX / TX polarization	Linear, Co-pol and X-pol
G/T	>20.9 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	10.7 - 12.75 GHz
TX frequency	13.75 - 14.5 GHz
Drive Subsystem	
Tracking technology	Twin RF tracking receiver + 6D inertial + GNSS (NMEA input optional)
Maximum tracking speed	35°/s (each axis)
Azimuth range	Unlimited
Elevation range	-20° to +115°
Skew range	-120° to +120°
Cross level range	-45° to +45°
Maximum ship motion	<ul style="list-style-type: none"> Roll ±30° @ 9 sec Pitch ±20° @ 9 sec Yaw ±8° @ 12 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 plus auto skew
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	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)	25 W BUC and less: 24, 48 V DC / 250 VA (supplied by ACU) 40 W BUC: 48 V / 350 VA (supplied by additional power supply)
Power consumption (ODU excl. BUC)	Up to 180 VA (supplied by ACU)
Dimensions and Weight	
Radome (D x H)	153 cm x 168 cm (60.24" x 66.14")
Weight (incl. radome)	120 kg (264 lbs)
Radome material	Honeycomb FRP

Antenna Control Unit	
Dimensions (WxHxD)	48.2 cm x 4.4 cm x 38 cm (19" 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	
Modem type	<ul style="list-style-type: none"> iDirect INFINITI, 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
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

