








# DSi13 Ku Pro

Maritime VSAT antenna with 130 cm dish size and 3-axis motion system for Ku-Band services



	 Reflector diameter 130 cm	 Tracking speed up to 35°/s	 Max. BUC power 60 W
 SIM LTE available			

EPAK's latest innovation in maritime satellite communication is the VSAT DSi13 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 EPAK's 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 make the antenna free to move and point to whichever direction the satellite is. The DSi13 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 for a strong and reliable but yet easy to install satellite system for Internet at sea.

The DSi13 Ku PRO reaches excellent tracking performance under the hardest maritime motion profile «Class A», defined by Global VSAT Forum and Fraunhofer Institute.

## Remote Management Access

Access, monitor and control the DSi13 Ku Pro from any location in the world or set up an automated system diagnostics including event logging.

## Web Interface

EPAK VSAT antennas feature an embedded webserver to provide a web user interface for making configurations and accessing live data from the antenna for simplified troubleshooting and monitoring performance.

## SIM LTE

You can insert two local SIM cards into the antenna's control unit to access low-cost, high-speed Internet when a 3G/4G network is available.

## Diversity Kit Compatibility

No more blind spots by combining the free line of sight ranges of two antennas in one bundle. That will prevent nearly any loss of satellite signals through blockades.

## Automatic Satellite Acquisition

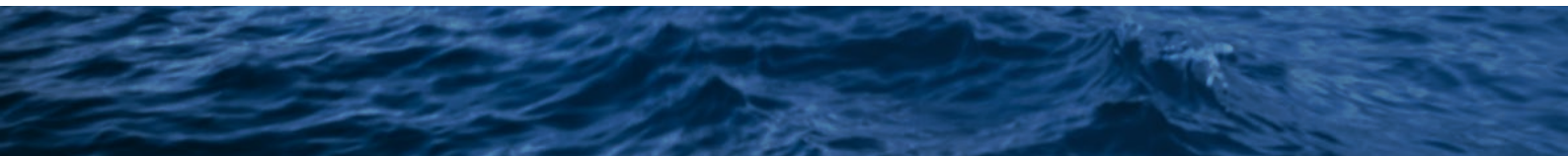
The acquisition of the satellite is completely automated by DVB-S2-Receiver and Modem confirmation.

## Solid Hardware

Improved hardware reliability against sea conditions.

## 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



Feed Subsystem	
Reflector diameter	130 cm (51.18")
Minimum E.I.R.P.	40 dBW
LNB	Universal (LOF 10.6/9.75 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 / Clonass / Galileo / Beidou / QZSS)
Tracking receiver	Internal, 2150 - 950 MHz; BW 50 - 0.5 MHz
Frequency Band	
RX frequency	12.75 - 10.7 GHz
TX frequency	14.5 - 13.75 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"> <li>Roll 9 @ °30± sec</li> <li>Pitch 9 @ °20± sec</li> <li>Yaw 12 @ °8± sec</li> </ul>
Ship motion (for stabilization accuracy tests)	<ul style="list-style-type: none"> <li>Roll 12-10 @ °30± sec</li> <li>Pitch 10-8 @ °20± sec</li> <li>Yaw 15 @ °8± sec</li> </ul>
Motion system	-3axis plus auto skew
Miscellaneous	
Lock on time	Typ. 30 sec (Time to online depends on modem)
Satellite acquisition	Completely automated by DVB-S-2 Receiver and/or modem confirmation (according to ETSI 340 302)
EPAK® Diversity-Kit compatible	✓
Modem approval	Standard type approval CE & EPAK type approval
Operating temperature	°30-C to °55C
Storage temperature	°30-C to °85C
Humidity	According to IEC %100, 60945 condensing
Vibration	According to IEC 60945; MIL-STD1-167-
Shock	According to IEC 6-4-6072; MIL-STD810-F
Rain	IP56
Wind	<ul style="list-style-type: none"> <li>Operational: &lt; 150 km/h</li> <li>Survival: &lt; 200 km/h</li> </ul>
Compass safe distance	≥ 2.00 m (according to IEC 60945)
Compliance	<ul style="list-style-type: none"> <li>CE (Maritime), ETSI</li> <li>Complies with the specifications of EC directive 53/2014/EU Radio &amp; Telecommunications Terminal Equipment (R&amp;TTE); compliance with EC directive 35/2014/EU, EMC directive 30/2014/EU and IEC 427-301</li> </ul>
Power Specifications	
Power supply antenna (ODU)	48 V DC ( supplied by ACU)
Antenna input voltage TX (BUC)	25 W BUC and less; 48, 24 V DC / 250 VA (supplied by ACU) 40 W BUC; 48 V / 350 VA (supplied by additional power supply)
Power consumption (ODU excI. 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 (W xHxD)	48.2 cm x 4.4 cm x 38 cm (19" x 1.7" x 19") (14.9" Rack 1HU size)
Weight	5.1 kg (11.24 lbs)
Gyro interface	NMEA0183 / NMEA2000 (via RS422 or RS485 or RS232) / SJMRAD RGCI
Input voltage, frequency	264~90 V AC, 63~47 Hz
Interfaces	<ul style="list-style-type: none"> <li>1x RS232/RS422 (RJ45)</li> <li>4x Ethernet + 1x open BMIP (RJ45)</li> <li>2x USB</li> <li>1x GPIO</li> </ul>
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 °55C
Storage temperature	°40-C to °85C
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"> <li>iDirect iFINITI, Evolution, Velocity</li> <li>Hughes HX200</li> <li>ViaSat SBT-M</li> <li>Comtech CDM840/250-</li> <li>Gilat Skyedge II C4</li> <li>Paradise PD25L, Datacom Q-Flex</li> <li>Advantech VR700, VR7400</li> <li>STM SatLink 1910</li> <li>Romantis / Eastar UHP1000 / UHP 2000</li> <li>others on request</li> </ul>
Modem type	
Cables and Connectors	
ACU to Antenna	<ul style="list-style-type: none"> <li>2x Double shielded coax cable (ECOFLEX10) with N-plugs</li> </ul>
ACU to Modem	<ul style="list-style-type: none"> <li>2x Double shielded coax cable (RG6) with F and TNC-plugs</li> <li>1x Ethernet with RJ45 plugs</li> </ul>

