

DSi13 Ku *Pro*

Reflector
diameter



130 cm

Tracking
speed



up to 35°/s

Max.
BUC power



40 W



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

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 web-server to provide a web user interface for making configurations and accessing live data from the antenna for simplified troubleshooting and monitoring performance.

Automatic Satellite Acquisition

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

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.

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
- 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

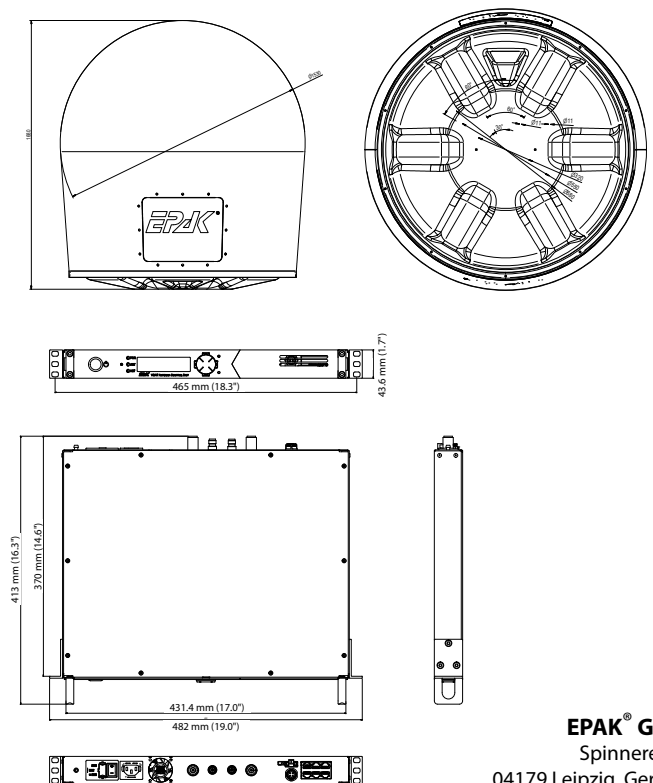
Feed Subsystem	
Reflector diameter	130 cm (51.18")
Minimum E.I.R.P.	40 dBW
LNB	Universal (LOF 9.75/10.6 GHz, PLL stabilized, internal ref.)
BUC	Super extended Ku (LOF 12.80 GHz, PLL stabilized, external ref.)
Available BUC power	8 W / 16 W / 25 W / 40 W
RX antenna gain	43.1 dBi @ 12.5 GHz
TX antenna 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 / Beido 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) <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
Compliance	
Power Specifications	
Power supply antenna (ODU)	48 V DC (supplied by ACU)
Antenna input voltage TX (BUC)	25 W BUC and less: 24, 30, 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	48 cm x 4.45 cm x 47.8 cm (18.9" x 1.75" x 18.82") (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
External I/O	RS232, RS422, Ethernet, USB, GPIO
Local user interface	OLED, directional pad, 2 push keys
Modem interface	Ethernet port + GPIO
Modem protocols	openAMIP / SNMP / Telnet / openBMIP
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	

- 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 types	
Cables and Connectors	
ACU to Antenna	<ul style="list-style-type: none"> • 3x Double shielded coax cable (ECO-FLEX 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 crosslink with RJ45 plugs
ACU to Network	<ul style="list-style-type: none"> • Ethernet patch with RJ45 plugs • RS422/RS232 (9 Pin Sub-D)

Radome and ACU Dimensions



EPAK® GmbH
 Spinnereistr. 7
 04179 Leipzig, Germany
 Phone +49 (0) 341 2 12 02 60
 Fax +49 (0) 341 2 12 02 66

For more information visit www.epak.de