EPAK®

Automatic Satellite Tracking Systems

TVRO Systems

VSAT Systems

Made in Germany

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EPAK®

The reliable choice.

All products are engineered and manufactured in Germany, so they have to fullfil German industry standards, which guarantee highest quality levels.

In order to keep these top-grade standards, we extremely take care in using only high-end materials and components. Choose EPAK and get the highest approach in quality and performance.

As designer and manufacturer we own all the essential competences to provide you with one hand solutions in the best and easiest way.

We have long-term experiences in developing customized solutions and provide a high quality state of art. That's why we are in the position to offer flexible products and solutions matching individual needs.

Be sure to get a product which meets your expectations and a company in the back to support you the way you need it...

With the vision of worldwide mobile communication on land, at sea and in the air, EPAK was founded in 2000. Today the scope of our work is developing, manufacturing and distributing fully automatic satellite tracking antennas. Core competence of EPAK's activities is to provide perfectly matching solutions for TV and Internet via satellite, especially in the maritime sector.

EPAK's approach of high innovative products is ensured by controlling all essential processes by itself: from researching and prototyping right up to series production and customer support, all these key competences are available in house. As a reliable R&D partner, EPAK's expertise was chosen for several satellite communication technology projects.

In all phases of manufacturing, EPAK products have to pass highly demanding test scenarios: using our 3-axis motion simulator, each antenna is verified according to EPAK's quality standards before shipment.

Beyond hardware supply, also maritime satellite broadband services for coverage areas worldwide are offered, in order to provide one-stop solutions . Topped off with a professional 24/7 support, EPAK emphasizes its strong commitment to the challenges of the maritime market.

The big variety of customers, who already trust in EPAK's solutions, can be found along yacht owners, inland cruise ships, oil and gas offshore industries, offshore research platforms and international navy fleets.

EPAK is based in the „Leipziger Baumwollspinnerei", a former industrial site in Leipzig, Germany - a place where modern art and culture meets technology, since...

Performance is Art.

TVRO SOLUTION FROM EPAK

Emotions in high-definition

R-Series

EPAK®'s R-Series TV antennas are ideally designed for calm waters and especially for cruising on inland waterways. With it's optimized tracking and re-lock performance, R-Series ensures best possible TV enjoyment even under the challenging conditions of urban areas for cruise ships, as well as for cargo ships.

- Elevation range from 5° to 85°
- Built-In GPS module for automatic elevation and polarization angle calculation
- Unlimited azimuth range (no cable unwrap)
- Tracking speed up to 12°/s per axis
- Reliable mechanics
- Light-weight

S-Series

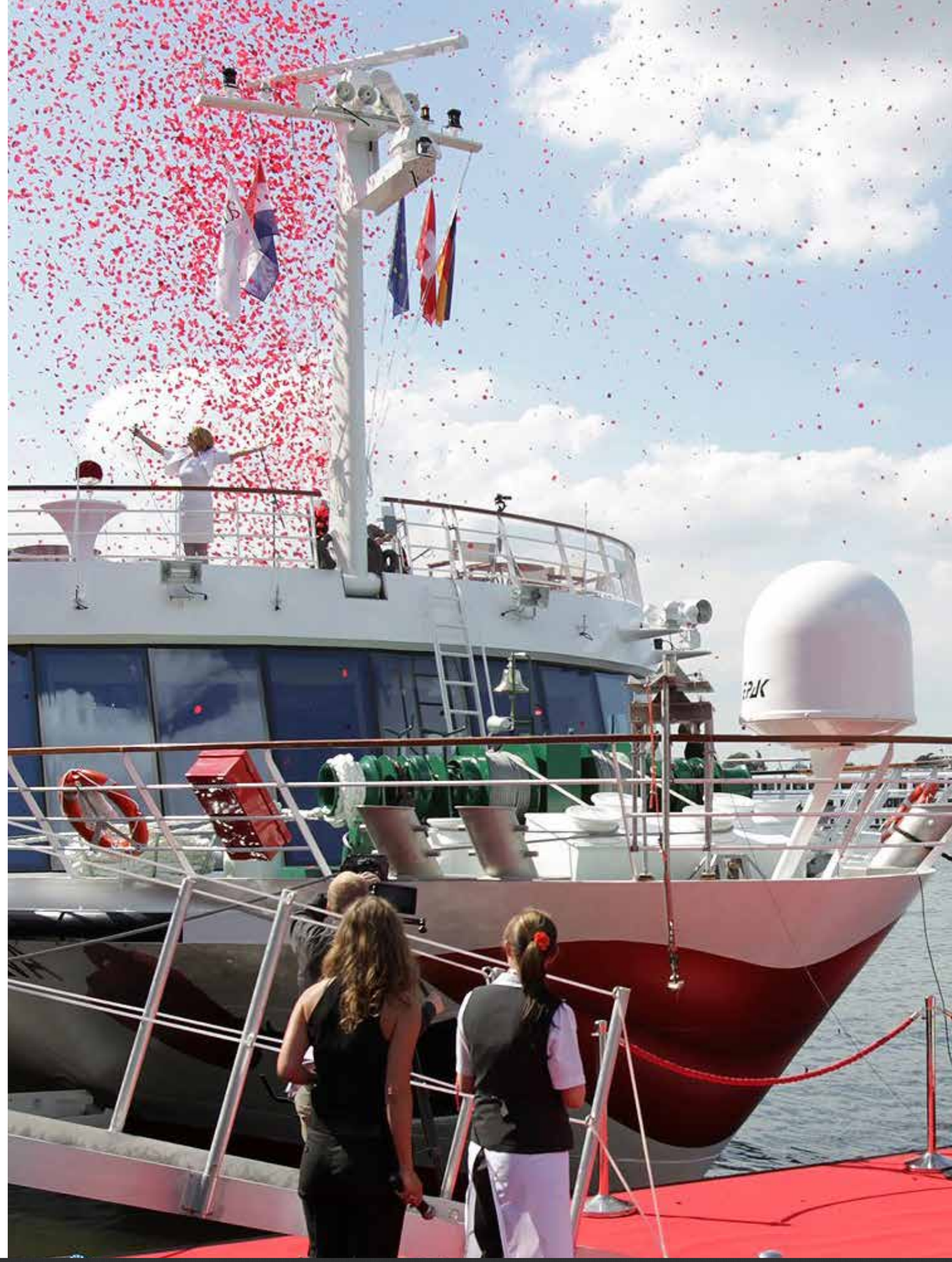
EPAK®'s fastest, reliable and popular antennas for TV reception. These antennas are designed for yachts, commercial vessels and for all other maritime vehicles, requiring a performance which is needed in open waters.

- Elevation range from 5° to 85°
- Built-In GPS module for automatic elevation and polarization angle calculation
- Unlimited azimuth range (no cable unwrap)
- Tracking speed up to 40°/s per axis
- Reliable mechanics
- Light-weight

DS-Series

EPAK®`s most powerful and most reliable satellite TV antennas are specifically designed to meet even the hardest requirements in harsh seas. With their automated polarization tracking they guarantee best signal quality even during extreme tilted positions.

- Extended elevation range from -10° to +90°
- Automatic polarization (skew-Angle) control
- Unlimited azimuth range (no cable unwrap)
- Tracking speed up to 30°/s per axis
- Solid, rugged and robust mechanics



EPAK® TVRO Series - Maritime Satellite Tracking Antennas for Seamless TV Enjoyment

For more information visit **www.epak.de**

VSAT SOLUTION FROM EPAK

No compromises.

Benefit from EPAK®'s long-term expertise for VSAT antennas supply and airtime provision. Using the patented EBF-Gyro, EPAK® VSAT systems guarantee highest network availabilities for broadband services even under hardest conditions. Combined with EPAK®s optimized airtime a one-hand solution, called connectivity, is brought to every vessel.

EPAK's VSAT series comply with ETSI 302 340 and are compatible with various modems such as STM, iDirect, Satnet, Hughes, Paradise Datacom, Romantis...
To put it consisely - EPAK® is the best choice for a high-quality maritime VSAT communication solution.

Ri-Series

EPAK®`s answer to the needs of the inland waterways. With its optimized tracking and re-lock performance, Ri-Series ensures best possible online-availability, even under the challenging conditions of urban areas. The automated polarization tracking guarantees best link quality where ever the vessel cruises.

- Elevation range from -10° to +90°
- Simple 3-wire-coax cable connection between ODU and IDU
- Integrated remote management
- Automatic polarization (skew-angle) control
- Unlimited azimuth range (no cable unwrap)
- Tracking speed up to 30°/s per axis
- Solid, rugged and robust mechanics

DSi-Series

EPAK®`s most powerful satellite VSAT antennas are specifically designed to meet even the hardest requirements in harsh seas. With their automated polarization tracking they guarantee excellent network availabilities even under the most challenging conditions.

- Elevation range from -10° to +90°
- Simple 3-wire-coax cable connection between ODU and IDU
- Integrated remote management
- Automatic polarization (skew-angle) control
- Unlimited azimuth range (no cable unwrap)
- Tracking speed up to 30°/s per axis
- Solid, rugged and robust mechanics

Keep in Touch.

Quality Made in Germany.

High Speed Internet.

Everytime.

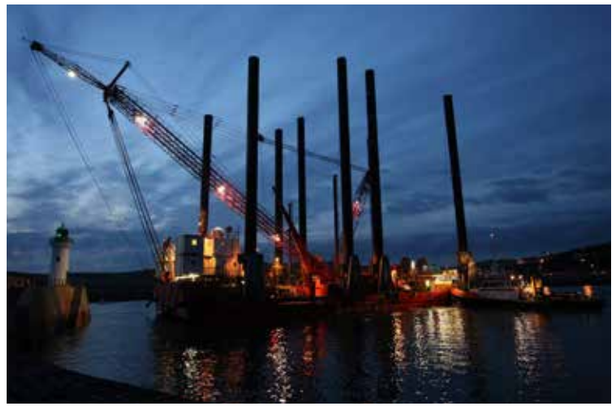
Everywhere.

Technical Data - TVRO

Antenna	R-Series		S-Series		DS-Series	
	R4	R6	S4	S6	DS6	DS9
Reflector Diameter	45 cm (17.73“)	60 cm (23.62“)	45 cm (17.73“)	60 cm (23.62“)	60 cm (23.62“)	90 cm (35.43“)
Minimum E.I.R.P.	49 dBW	48 dBW	49 dBW	48 dBW	47 dBW	44 dBW
LNB	Universal linear/circular					
Radome Diameter	550 mm (21.67“)	710 mm (27.97“)	550 mm (21.67“)	710 mm (27.97“)	730 mm (28.74“)	1114 mm (44.8“)
Radome Height	550 mm (21.67“)	690 mm (27.19“)	550 mm (21.67“)	690 mm (27.19“)	810 mm (31.88“)	1140 mm (55.1“)
Weight	12 kg (26.46 lbs)	16 kg (35.27 lbs)	12 kg (26.46 lbs)	16 kg (35.27 lbs)	37 kg (81.57 lbs)	62 kg (136.69 lbs)
Azimuth Range	unlimited					
Elevation Range	5° to 85°	5° to 90°	5° to 85°	5°to 90°	-10° to 90°	
Skew Range	manual				Auto. ± 120° from zero	
Drive System	2 axes servo, synchronous belt gears				3 axes servo, synchronous belt gears	
Tracking Sensor	Electronic Beamforming (EBF-Gyro) for Tracking during present sat signal / Solid State Sensor for Tracking during blocked sat signal					
Max. Tracking Speed	> 12 °/s		> 40 °/s		> 30 °/s	
Lock On Time	typ. 10 – 20 sec.					
Power Supply	12 – 36 V DC					
Power Consumption	20 – 40 VA					
Twin availability	✓	✓	✓	✓		
Quattro availability		✓		✓	only	only

Antenna Control Unit (ACU)	
Power Supply	12 – 20 VDC, 100 mA, powered by receiver
Satellite Acquisition	Completely automated by SatFingerprint Technology
Satellite Positions	Up to 4 freely programmable active positions / Preconfigured database
Satellite Selection	By control unit or by receiver (via DiSEqC™)

System	
Operation Temperature	-20 to +70 °C
Storage Temperature	-30 to +85 °C



Technical Data - VSAT

Antenna	Ri-Series	DSi-Series		
	Ri6	DSi6	DSi9 Ku	DSi9 Ka
Reflector Diameter	60 cm (23.62“)	60 cm (23.62“)	90 cm (35.43“)	90 cm (35.43“)
Minimum E.I.R.P.	47 dBW	47 dBW	44 dBW	54 dBW
LNB	Universal linear / PLL stabilized			Viasat TRIA (LOF 21.2 GHz)
BUC	PLL stabilized			Viasat TRIA (LOF 27.7 GHz)
BUC Power	1,5 W / 3 W	1,5 W / 3 W	3 W / 5 W	3 W
RX/TX Polarization	X-Pol	X-Pol	X-Pol & Co-Pol	RHCP/LHCP swappable
Radome Diameter	730 mm (28.74“)	730 mm (28.74“)	1114 mm (44.8“)	1114 mm (44.8“)
Radome Height	810 mm (31.88“)	810 mm (31.88“)	1140 mm (55.1“)	1140 mm (55.1“)
Weight (incl. radom)	37 kg (81.57 lbs)	37 kg (81.57 lbs)	65 kg (143.3 lbs)	65 kg (143.3 lbs)
Azimuth Range	unlimited			
Elevation Range	-10° to 90°			
Skew Range	Automated ± 120° from zero position			Circular polarization
Drive System	3-axes servo belt			2-axes servo belt
Tracking Sensor	Electronic Beamforming (EBF-Gyro) for Tracking during present sat signal / Solid State Sensor for Tracking during blocked sat signal			
Max. Tracking Speed	> 12 °/s	> 30 °/s		
Modem/Airtime	EPAK® Approved Services			Viasat Surfbeam 2
Lock On Time (ODU)	typ. 30 sec.			typ. 60 sec.
Power Supply	24 VDC via Antenna Control Unit (ACU)			
Power Consumption	20 – 40 VA (only ODU) BUC excluded			
Satellite Acquisition	Completely automated by DVB-S2-Receiver and Modem confirmation			

Antenna Control Unit (ACU)	
Dimension	19”; 2 HU (482,6 mm × 91 mm × 374 mm)
Power Supply	220 VAC, 50 Hz
Power Consumption	100 VA

System	
Operation Temperature	-20 to +70 °C
Storage Temperature	-30 to +85 °C