ObeLx-R – GNSS Empfänger

All-in-One-, Multi-Konstellation- und Dual-Antennen GNSS Empfänger

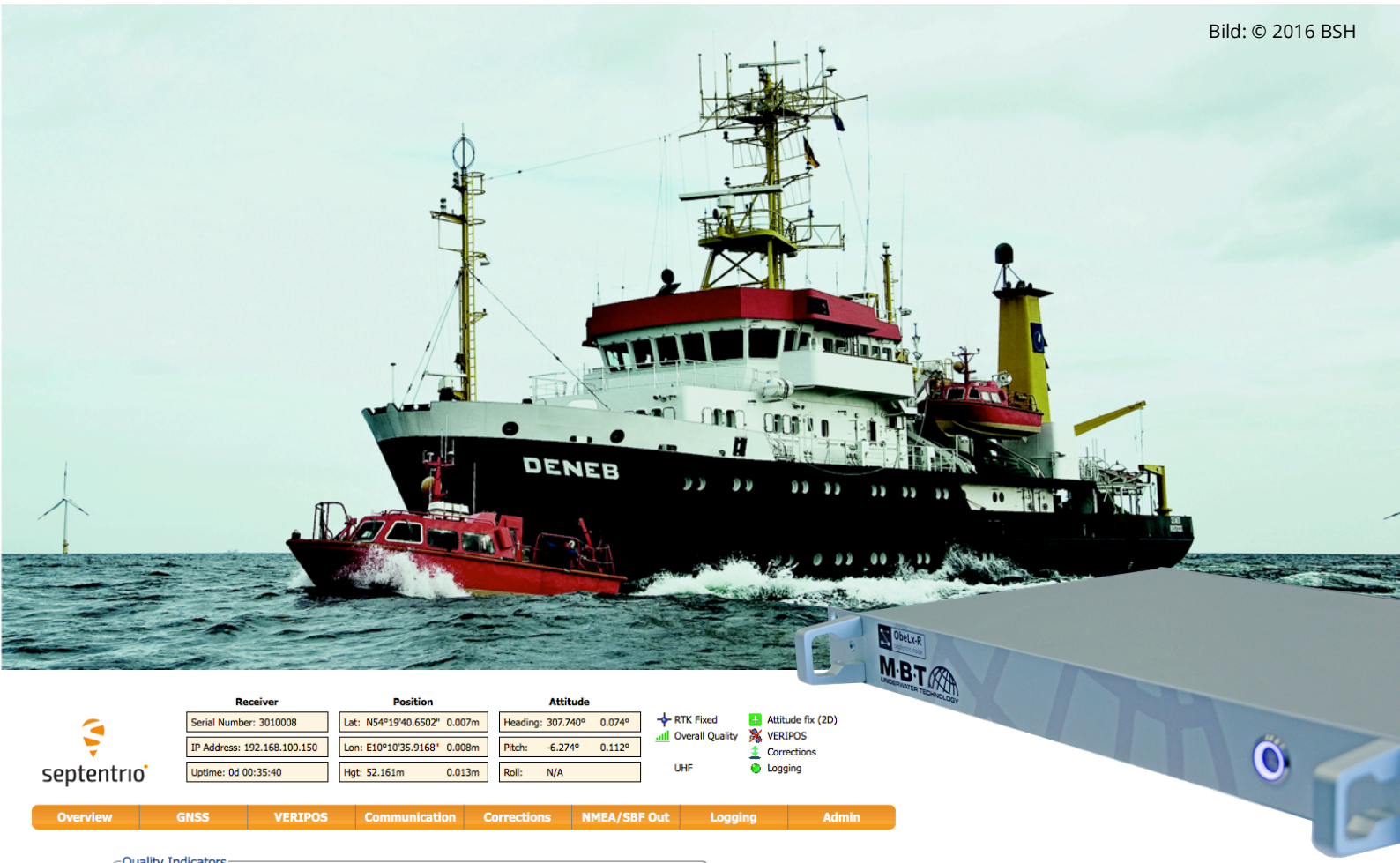
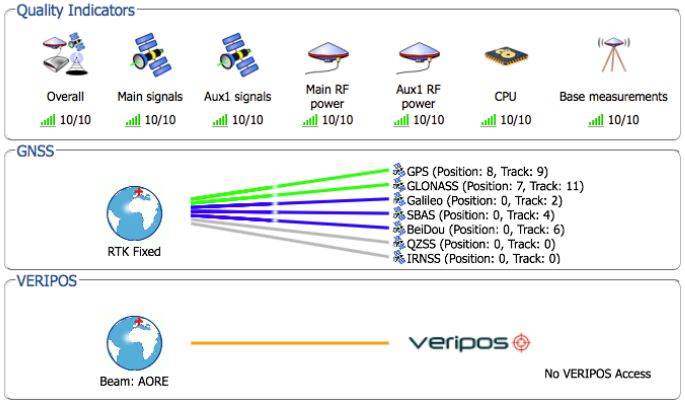


Bild: © 2016 BSH



KEY FEATURE

- + All-in-One Solution
- + Multi-Konstellation – 544 Kanäle
- + Rover, Heading oder Base
- + L-Band fähig (VERIPOS/TERRASTAR)
- + RTK mit Basislinien > 40 km
- + Datenausgabe > 20 Hz
- + Septentrio inside
- + 19'' Version

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SPEZIFIKATIONEN ObeLx-R

FEATURES

GNSS Technology

544 hardware channels for simultaneous tracking of all visible satellite signals

Supported signals: GPS (L1, L2, L5), GLONASS (L1,L2,L3), GALILEO (E5ab, AltBoc, E6), BEIDOU (B1, B2, B3), IRNSS (L5), QZSS (L1,L2,L5) (Galileo, Beidou, IRNSS, E6/B3 and Altboc are optional features)

All-in-view SBAS (EGNOS, WAAS, GAGAN, MSAS, SDCM) (incl. L5 tracking)

Integrated dual channel L-band receiver

100 Hz Raw data output (code, carrier, navigation data) (optional feature)

20 Hz SBAS, DGNSS, PPP and RTK (50Hz available in future firmware upgrade)

A Posteriori Multipath Estimator Technique (APME+), including code and phase multipath mitigation

AIM+/WIMU interference mitigation unit, including chirp jammers (optional feature)

ION+ Advanced scintillation mitigation

RAIM

DGNSS (base station and rover)

RTK (base and rover) (optional features)

TerraStar and VERIPOS services (optional feature)

Moving base positioning (optional feature)

Connectivity

4 hi-speed serial ports (RS232)

Ethernet port (TCP/IP and UDP)

Full speed USB (host and device)

2 Event markers (optional feature)

xPPS output (max. 100 Hz)

Formats

Highly Compact and fully documented Septentrio Binary Format (SBF) output

NMEA v2.30 output format, up to 20 Hz

RTCM v2.2, 2.3, 3.0 or 3.1

CMR2.0 and CMR+ (CMR+ input only)

PERFORMANCE

Position accuracy[1,2,3]

	Horizontal	Vertical
Standalone	1.2 m	1.9 m
SBAS	0.6 m	0.8 m
DGPS	0.4 m	0.9 m
TERRASTAR-D[4]	6 cm	<10 cm
APEX2[5]	6 cm	<10 cm
ULTRA2[5]	6 cm	<10 cm

RTK performance[1,6]

Horizontal accuracy[3]	0.6 cm + 0.5 ppm
Vertical accuracy[3]	1 cm + 1 ppm
Average time to fix[7]	7 s

Velocity Accuracy[1,2,3]

Horizontal[3]	Vertical[3]
0.01 m/s	0.015 m/s

Heading Accuracy[1,2,3]

	Heading	Pitch/Roll
1m antenna separation	0.1°	0.2°
10m antenna separation	0.01°	0.02°

Maximum Update rate

Position	20Hz (50Hz in future firmware upgrade)
Measurements	100 Hz

Latency

< 20 ms

Time accuracy[3]

xPPS Out	10 ns
Event accuracy	< 20 ns

Time to first fix

Cold start[8]	< 45 s
Warm start[9]	< 20 s
Re-acquisition	avg. 1.2 s

Tracking performance (C/N0 threshold)

Tracking	20 dB-Hz
Acquisition	33 dB-Hz

Dynamics

Acceleration	10 g
Jerk	4 g/s

PHYSICAL AND ENVIRONMENTAL

Size	480 x 310 x 45 mm 19" H1
Weight	1.5 kg
Input voltage	9-36 VDC

Power Consumption

6.0 W (All signals, Dual antenna)

Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C
Certification	RoHS

Antenna LNA Power Output

Output voltage	5 V DC
Maximum current	200 mA

Connectors

Antennas	TNC female
Power	hollow socket 2.1 mm
Ethernet	RJ45 female
USB	USB B female
Serial 1-4	D-SUB9 female
PPS-out	BNC female

[1] 1-20 Hz measurement rate

[2] Performance in open sky conditions

[3] RMS level

[4] Requires service activation from TerraStar

[5] Requires service activation from VERIPOS

[6] RTK fixed ambiguities

[7] Baseline <20 km

[8] No information available (no almanacs, no approximate position)

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