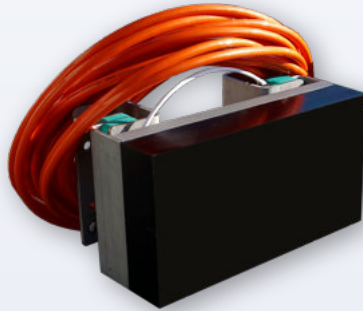


A **NORBIT** Company



### ► General & Applications

- First / latest product generation: 2019 / 2026
- Most versatile SBP providing full ocean depth and seabed penetration of up to 200 metres
- The narrow sound beam and high vertical resolution provide unsurpassed data quality
- Based on 30+ years of experience in parametric sub-bottom profiling
- Ideal for deep-water offshore surveys and ocean science

### ► Performance

- Water depth range: 10–11,000+ m
- Seabed penetration: up to 200 m (depending on seabed type and noise)
- Range resolution: up to 15 cm (depending on pulse settings)
- Depth accuracy: 15 cm + 0.08% water depth
- Motion compensation: Heave, Roll and Pitch (beam forming at transmit and receive; external sensor required)

### ► Transmitter

- Principle: parametric (nonlinear) acoustics
- Frequencies: 15 kHz (HF) / 0.8–3.8 kHz (LF); total LF frequency band 0.5–6 kHz
- HF Source Level: c. 240 dB rms / 246 dB peak
- Beam width: c. 4.6° (±2.3°) for all frequencies
- Pulse type: CW, Ricker, FM Chirp, Barker
- Pulse width: 0.25–5 ms (CW), 20 ms (chirp)
- Pulse rate: up to 30 Hz, multi-ping mode
- Additional linear transmit modes (CW, Chirp), Frequencies 12–18 kHz

### ► Data Acquisition

- Digital, 2 channels (LF and HF, "SES3" format)
- Sample rate 96 kHz @ 24 bit; resolution <1 cm
- LF sub-bottom data: raw (full-waveform)
- HF data: processed (envelope)

### ► System Components

- Deck unit (transceiver electronics, IP20):  
Housing 19 inch / 13 U, weight c. 65 kg  
W 52 cm × D 50 cm × H 63 cm
- Transducer (8 sections w/o cables):  
W 123 cm × D 135 cm × H 34 cm / c. 825 kg
- Cables (moulded to transducer sections):  
length 30 m / total weight c. 175 kg
- Transducer mounting frame:  
W 126 cm × D 172 cm × H 46 cm / c. 100 kg
- System control & data acquisition PC:  
MS Windows® based

### ► Optional Features

- Transducer cables detachable at transducer
- Different cable length (20–50 m)
- SESWIN extended remote control
- KVM extender
- Transducer ice protection (acoustic window)

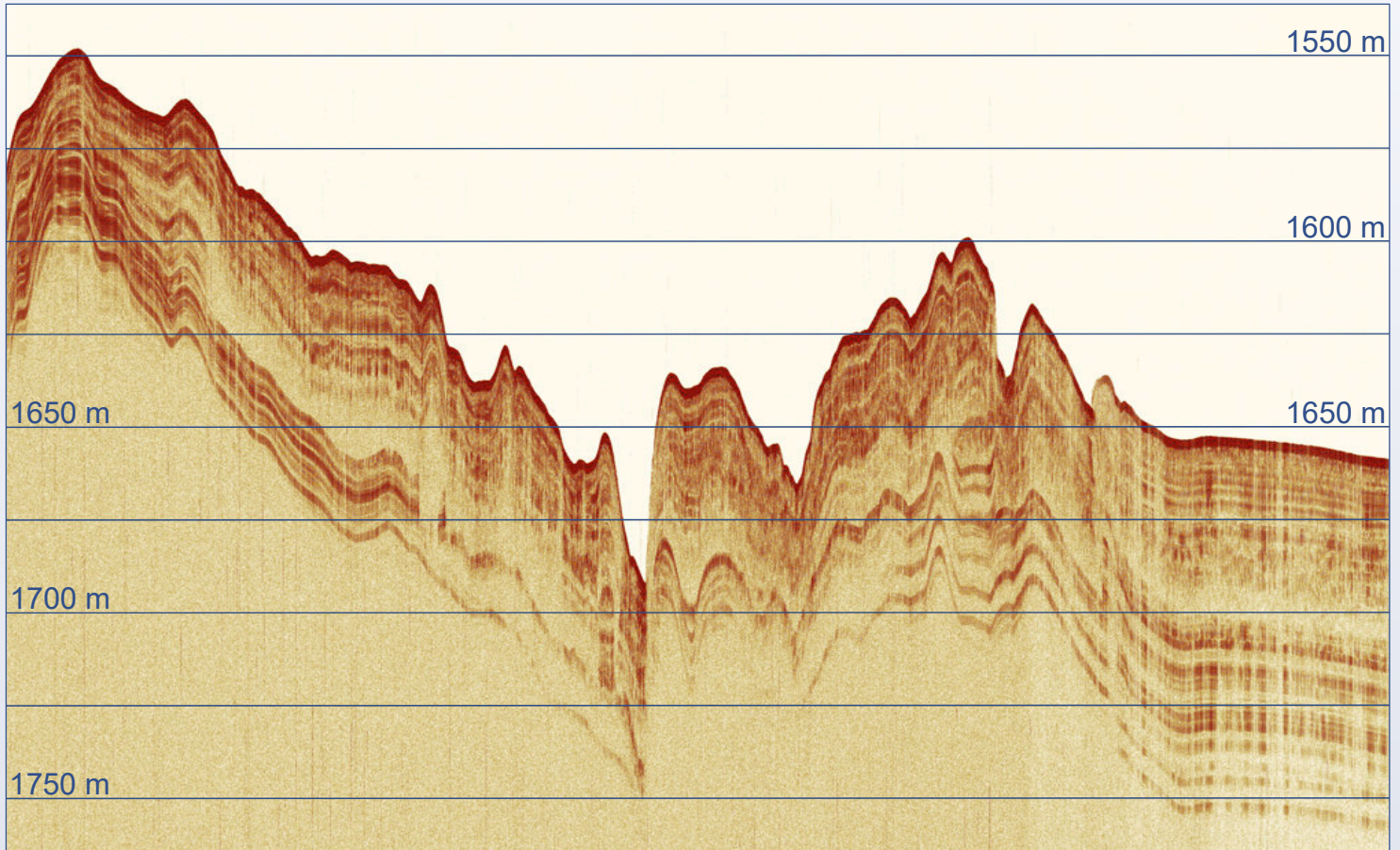
### ► Power Supply Requirements

- 100–240 V AC (fuse 16 A slow)
- Power consumption: typ. 600 W / max. 1,000 W
- Power-on inrush current: c. 25 A

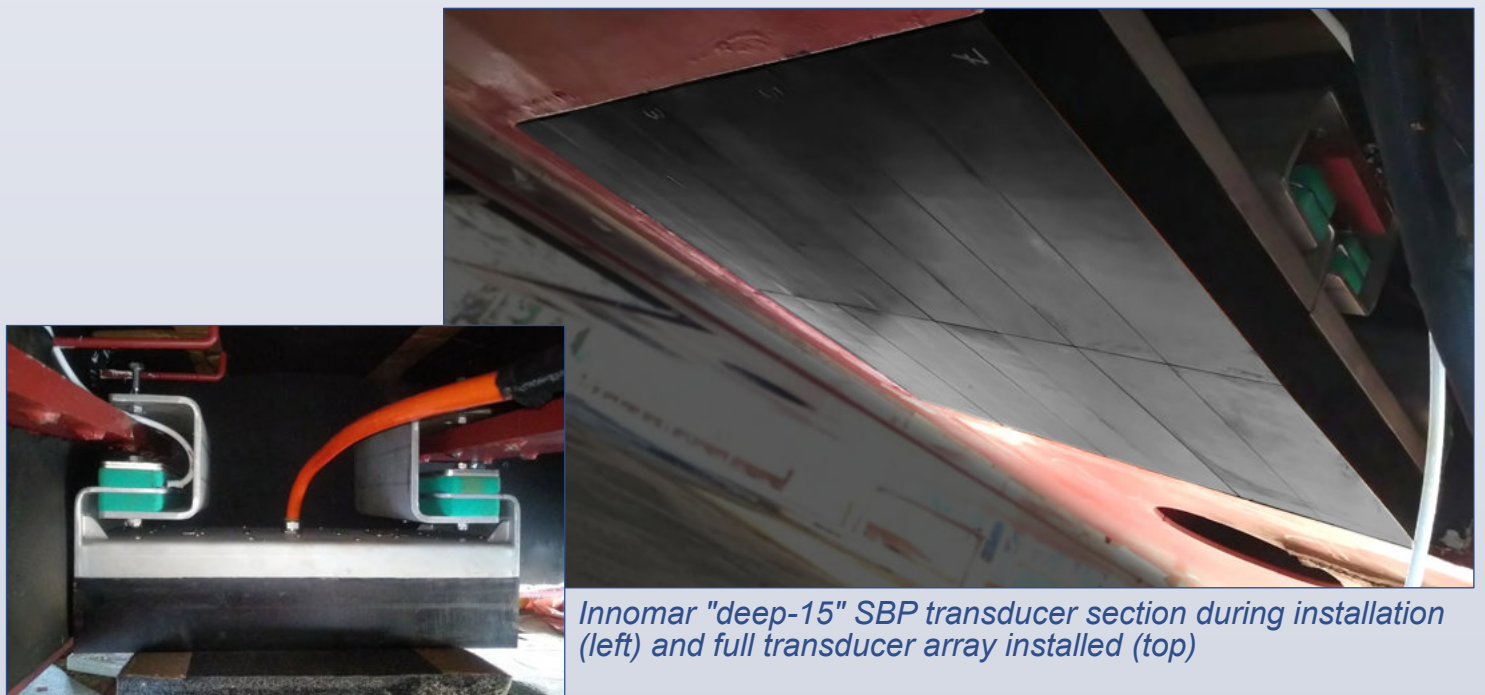
### ► Software

- SESWIN data acquisition software
- SES-Convert SEG-Y/XTF data export
- SES-NetView remote display
- ISE post-processing software (optional)





*Innomar "deep-15" SBP data example (pulse 3 kHz, water depth c. 1600 m, penetration c. 100 m)*



*Innomar "deep-15" SBP transducer section during installation (left) and full transducer array installed (top)*

