SPECIFICATIONS - M25M Series

Edition	Platinum Edition		Silver Edition		Research Edition
Configuration	**Standalone**	**Embedded**	**Standalone**	**Embedded**	**Standalone**
Model number	WNC-M25MPS3	WNC-M25MPE3	WNC-M25MSS3	WNC-M25MSE3	WNC-M25MRS3
Data rate	Up to 15 kbps (depending on channel conditions and reliability requirements)				
Operating range	3-5 km (nominal, depending on channel conditions)				1 km (nominal, depending on channel conditions)
Ranging precision	0.1 m				
Doppler resilience	±4 knots or better				
Modulation (software defined)	PSK-OFDM, FH-BFSK				
FEC (Forward Error Correction)	LDPC, up to 1/6 rate code; Convolution code, 1/2 rate code (JANUS)				
Software framework	UnetStack3 (www.unetstack.net)				
Software interface	UnetStack3 (Java, Groovy, Python, C, Javascript, Julia, Matlab), interactive web UI, JSON/TCP				
Hardware interface	Ethernet (10/100 Mbps), RS232 (up to 115200 bps), power		Ethernet (10/100 Mbps), power		
Beam pattern	Omnidirectional				
Carrier frequency	24 kHz				
Bandwidth	12 kHz (20 - 32 kHz)				
Source level	185 dB re 1 µPa (rms) @ 1 m (nominal)				175 dB re 1 µPa (rms) @ 1 m (nominal)
Power consumption	< 4 W (receive mode, nominal) < 60 W (transmit mode, avg.) < 80 W (transmit mode, max.) <1.5 W (sleep mode)		< 4 W (receive mode, nominal) < 60 W (transmit mode, avg.) < 80 W (transmit mode, max.)		< 4 W (receive mode, nominal) < 25 W (transmit mode, avg.)
Power source	External power: 22 – 28 V DC (24 V DC recommended)				
Operating depth	300 m (Aluminium hull)	2000 m (Transducer depth rating)	100 m (Aluminium hull)	2000 m (Transducer depth rating)	100 m (Acrylic hull)
Dimensions	⌀ 127 × 400 mm	90 × 90 × 180 mm	⌀ 127 × 280 mm	⌀ 105 × 150 mm	⌀ 130 × 290 mm
Weight (in air / water)	6.0 / 2.5 kg	1.0 / n/a kg	4.0 / 1.0 kg	1.0 / n/a kg	3.0 / 0.5 kg
JANUS compatibility	Yes, subject to operating frequency band				
Wake up support	Included (acoustic, Ethernet, RS232)		Included (Ethernet)		
Onboard storage	Not available		32 GB		32 GB
Arbitrary waveform transmission	Included (Passband & baseband)				
Arbitrary waveform recording	Included (Passband & baseband)				
Qualification testing	MIL-STD-810G, MIL-STD-810E, MIL-STD-461E		Not available		
Operating/Storage Temperature	0 to 50 °C	0 to 70 °C (Electronics) 0 to 50 °C (Transducer)	0 to 40 °C	0 to 70 °C (Electronics) 0 to 40 °C (Transducer)	0 to 40 °C
Optional upgrades					
Hull options	n/a	n/a	Stainless steel (2000 m), Aluminum (300m)	n/a	Aluminium (100 m)
Depth rating	up to 2000 m				Not available
Additional storage	Not available		256 GB, 1 TB		Not available
Additional coprocessor	Not available		nVidia Jetson TX2 based SBC		Not available
Additional interface support	Not available		RS232 (up to 115200 bps)		Not available
Additional sensors*	Not available		GPS, compass, low drift clock (OCXO - 25 ppb)		Not available
Optional software upgrades	Unity** (Distributed spatial diversity framework for improved performance)				Not available
Accessories & Support					
Data & power cable	25 m underwater cable	1 m Ethernet, power & transducer	25 m underwater cable	1 m Ethernet, power & transducer	25 m underwater cable
Mounting clamps	Optional	n/a	Optional	n/a	Optional
Customer support	Phone/Email/Chat		Email/Chat/Online forums		Online forums

* Contact Subnero for details of listed sensors and support for additional sensors
** Patent pending