

SPECIFICATIONS - M25M Series Gen4

	Edition	Platinum Edition		Silver Edition		Research Edition
	Configuration	Standalone	Embedded	Standalone	Embedded	Standalone
	Model number	WNC-M25MPS3	WNC-M25MPE3	WNC-M25MSS4	WNC-M25MSE4	WNC-M25MRS4
Performance	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)				
	Carrier frequency	24 kHz				
	Bandwidth	12 kHz (20 - 32 kHz)				
Software	Software framework	UnetStack4 ( <a href="http://www.unetstack.net">www.unetstack.net</a> )				
	Software interface	UnetStack4 (Java, Groovy, Python, C, Javascript, Julia, Matlab), interactive web UI, JSON/TCP				
	Arbitrary waveform transmission	Passband & baseband				
	Arbitrary waveform recording	Passband & baseband				
	JANUS compatibility	Yes, subject to operating frequency band				
Electrical	Hardware interface	Ethernet (10/100 Mbps), RS232 (up to 115200 bps), power		Ethernet (10/100 Mbps), power		
	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) < 45 W (transmit mode, avg.) < 80 W (transmit mode, max.) < 1 mW (deep sleep mode)		< 4 W (receive mode, nominal) < 25 W (transmit mode, avg.)
	Power source	External power: 22 – 28 V DC (24 V DC recommended)				
	Onboard storage	Not available		32 GB		32 GB
	Wake up support	Included (acoustic, Ethernet, RS232)		Included (Scheduled, External/GPIO)		Not available
	Underwater connector	13-pin	n/a	13-pin	n/a	8-pin
Mechanical	Operating depth	300 m (Aluminium hull)	2000 m (Transducer)	300 m (Aluminium hull)	2000 m (Transducer)	100 m
	Dimensions	ø 127 × 400 mm	90 × 90 × 180 mm	ø 127 × 270 mm	ø 105 × 150 mm	ø 127 × 270 mm
	Weight (in air / water)	6.0 / 2.5 kg	1.0 / n/a kg	5.0 / 1.5 kg	1.5 / n/a kg	4.0 / 1.0 kg
	Operating 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
	Qualification testing	MIL-STD-810G, MIL-STD-810E, MIL-STD-461E		Not applicable		
Optional Accessories and Upgrades*						
Options	Additional channels	Not available		Up to 3		Not available
	Coprocessor	Not available		nVidia Jetson TX2 based SBC		Not available
	Sensors	Not available		GPS, compass		Not available
	Storage	Not available		256 GB, 1 TB		Not available
	External interfaces	Not available		RS232 (up to 115200 bps)		Not available
	Software Upgrades	Unity** (Distributed spatial diversity framework for improved communication performance)				Not available
	Hull options	Not available	n/a	2000 m (Stainless steel), 4000 m (Titanium)	n/a	Not available
	Data & power cable	25 m underwater cable	1 m Ethernet, power & transducer	25 m underwater cable	1 m Ethernet, power, 5 m transducer	25 m underwater cable
	Mounting clamps	Optional	n/a	Optional	n/a	Optional
	Customer support	Phone/Email		Email/Online forums		Online forums

\* Contact us for details  
\*\* Patent pending