## SPECIFICATIONS - M25M Series

| Edition | Platinum Edition | | Silver Edition | | | Research Edition |
|---|---|---|---|---|---|---|
| Configuration | Surface | Embedded | Surface | Node | Embedded | Surface |
| Model number | WNC-M25MPS3 | WNC-M25MPE3 | WNC-M25MSS3 | WNC-M25MSN3 | WNC-M25MSE3 | WNC-M25MRS3 |
| Data rate | Up to 15 kbps (depending on channel conditions and reliability requirements) | | | | | Up to 300 bps (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 | | | | | FH-BFSK |
| FEC (Forward Error Correction) | LDPC, up to 1/6th rate code | | | | | |
| Software framework | UnetStack3 (www.unetstack.net) | | | | | |
| Software interface | UnetStack3 (Java, Groovy, Python, C, Matlab, Javascript), interactive web UI, JSON/TCP | | | | | |
| Hardware interface | Ethernet, power, RS232 | | Ethernet, power | | | |
| Transducer beam pattern | Omnidirectional | | | | | |
| Carrier frequency | 24 kHz | | | | | |
| Bandwidth | 17 kHz (20 - 32 kHz) | | | | | |
| Source level | 185 dB re 1 µPa @ 1 m rms (nominal) | | | | | 175 dB re 1 µPa @ 1 m rms (nominal) |
| Power consumption | < 4 W (receive mode, nominal)<br>< 60 W (transmit mode, avg.)<br>< 80 W (transmit mode, max.)<br><1.5 W (sleep mode) | | < 4 W (receive mode, nominal)<br>< 60 W (transmit mode, avg.)<br>< 80 W (transmit mode, max.) | | | < 4 W (receive mode, nominal)<br>< 25 W (transmit mode, avg.) |
| Power source | External power: 22-28 V DC (24 V DC recommended) | | 1.5 V D size battery x 16* | | | External power: 22-28VDC (24VDC 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 x 400 mm | 90 x 90 x 180 mm | ⌀ 127 x 280 mm | ⌀ 127 x 700 mm | ⌀ 104 x 147 mm | ⌀ 135 x 400 mm |
| Weight (in air / water) | 6.0 / 2.5 kg | 1.0 / n/a kg | 4.0 / 1.0 kg | 6.0 / 0.5 kg (without batteries) | 1.0 / n/a kg | 3.0 / TBC kg |
| JANUS compatibility | Yes, subject to operating frequency band | | | | | |
| Wake up module | Included (acoustic, Ethernet, RS232) | | Included (Ethernet) | | | |
| Onboard storage | Not available | | 32 GB | | | 32 GB |
| Arbitary waveform tx & rx | Included | | | | | |
| Qualification testing | MIL-STD-810G, MIL-STD-810E, MIL-STD-461E | | Not available | | | |
| **Optional upgrades** | | | | | | |
| Low drift clock | Not available | | OCXO (25 ppb) | | | Not available |
| Hull | Stainless steel, delrin | n/a | Stainless steel, delrin | | n/a | Aluminium |
| Depth rating | up to 2000 m | | | | | Not available |
| Additional storage | Not available | | up to 1 TB | | | Not available |
| Additional coprocessor | Not available | | Available | | | Not available |
| Additional interface support | Not available | | USB, I2C (for external sensors), RS232 | | | Not available |

* Batteries not included