



| Model B650



| Model B650S



| Model B650W



| Model B650WS



»» Specification P3

The AMEC B650 series represents a range of 5W AIS Class B transponders, a pinnacle of cutting-edge software defined radio technology designed for superlative performance and durability. The B650 series provides 4 different variants to meet various application requirements with main features detailed below:

Features\Models	B650	B650S	B650W	B650WS
5W-SOTDMA	✓	✓	✓	✓
NMEA-2000, NMEA-0183 & USB	✓	✓	✓	✓
IP68	✓	✓	✓	✓
Wi-Fi			✓	✓
Antenna Splitter		✓		✓

Features

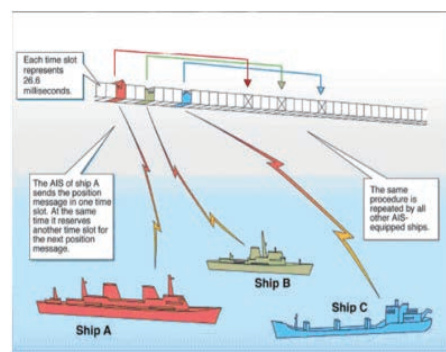
- 5W AIS class B with global certification (CE, FCC, ISED)
- AMEC's 3rd-gen AIS engine delivers unparalleled transmission performance and reliability
- Best-in-class receiving sensitivity of -111dBm
- World's lowest power consumption
- Powerful 72-channel high speed GNSS receiver supporting GPS, Galileo, Beidou or GLONASS
- Versatile connection interfaces including NMEA 2000, NMEA 0183 and USB
- IP68 waterproof for harsh marine environment
- Designed and tested for shock, vibration, extreme temperature and salt-mist robustness
- Constant self health test with intuitive LED indicators
- Compact and lightweight for easy installation



Powered by AMEC's 3rd-gen AIS engine, the B650 series ensures superlative performance in both transmission and reception.



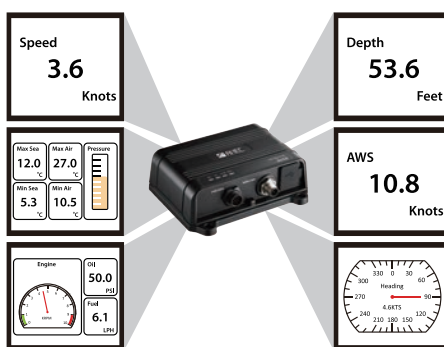
5W transmission range outperforms 2W AIS class B.



The SOTDMA scheme guarantees reservation of future transmission slots and higher transmission interval compared to 2W CSTDMA scheme.



Advanced 72-channel high speed GNSS receiver supporting GPS, Galileo, Beidou or GLONASS.



Advanced NMEA translation function to multiplex NMEA 0183 inputs to both NMEA 0183 output ports, USB and Wi-Fi (B650W/ B650WS).

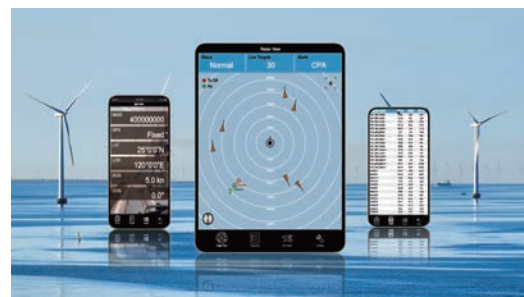


IP68 waterproof rating guarantees robust protection against water and dust, ensuring it can withstand the harshest marine conditions.

High Performance Wi-Fi (B650W and B650WS)

Reliable and powerful Wi-Fi for your smartphone, tablet or laptop:

- Support Client Mode to join an existing network
- Support Access Point Mode to connect directly between AIS and mobile devices



Advanced Splitter Built-In (B650S and B650WS)

Enable easy installation by sharing a single VHF antenna for both AIS and VHF:

- Very low loss on transmission path
- Zero insertion loss on reception path (DSC Path)
- Transparent mode guarantees priority to VHF radio operation even if the splitter is turned off



Optional Accessories



GNSS Antenna Unit
Model GA-22







GNSS Antenna Unit
Model PA-02



Tx Switch Box
Model SB-181

Technical Specifications

AIS Class B+ Transponder (SOTDMA)

	B650	B650S	B650W	B650WS
				
STANDARDS				
	IEC 62287-1 Ed. 3.0, IEC 61108-1 Ed. 2.0, IEC 61162-1 Ed. 6.0, IEC 61162-2 Ed. 2.0, IEC 60945 Ed. 4.0 incl. Cor. 1, IEC 62368-1 Ed. 4.0, EN 62311 Ed. 2.0			
VHF TRANSCEIVER				
Frequency	156.025 MHz ~ 162.025 MHz			
Tx Power Output	5 W (37 dBm +/- 1.5 dB) 1 W (30 dBm ± 1.5 dB)			
Rx Sensitivity (20%PER)	-111 dBm			
GNSS RECEIVER				
Systems supported	GPS, Galileo, GLONASS, BeiDou			
Channels	72 channels			
CONNECTION INTERFACE				
NMEA 0183	Yes	Yes	Yes	Yes
NMEA 2000	Yes	Yes	Yes	Yes
USB	Yes	Yes	Yes	Yes
Wi-Fi Connection	-	-	Yes	Yes
Ant. Splitter Integrated	-	Yes	-	Yes
EXTERNAL CONNECTORS				
VFH Antenna	SO-239			
VHF Radio	-	SO-239	-	SO-239
GNSS Antenna	TNC			
POWER SUPPLY				
Supply Voltage	12 V or 24 V DC			
Average Current (at 12V)	120 mA	120 mA	160 mA	160 mA
Peak Current (at 12V)	1.7 A	1.7 A	1.8 A	1.8 A
PHYSICAL & ENVIRONMENTAL				
Size (H x W x D)	151.22 x 128.57 x 49.87 mm			
Weight	400g			
Operating temperature	-25°C to +55°C			
Ingress protection	IP68			

DIMENSION DRAWINGS

