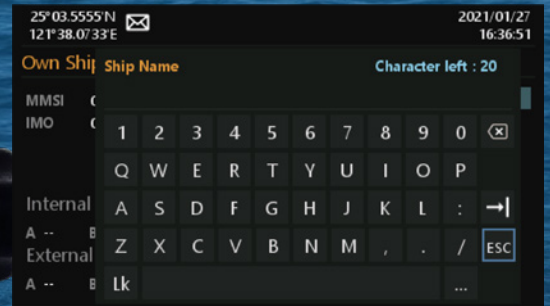




# SmartFind M6 AIS Class A

## McMurdo SmartFind M6 AIS Class A, Shipborne Automatic Identification System Transponder



The SmartFind M6 is a next generation AIS Class A transponder from McMurdo. IMO SOLAS and EU Inland Waterway Certified, the SmartFind M6 is a compact solution, easy to install and operate and suitable for SOLAS vessels, commercial ships, professional vessels, and non-SOLAS applications.

McMurdo is a leading manufacturer of AIS systems. We recognise that each client is different, so we have developed a range of solutions for vessels of all sizes. Our products are supported through a global network of service centres.

## Technology and know-how

The SmartFind M6 AIS Class A Transponder gives mariners the ability to view at a glance the AIS status of vessels all around them and provides access to a host of detailed vessel navigation information.

Building on our strength as a market leader and world class manufacturer of marine safety equipment, the McMurdo M6 Automatic Identification System ably fulfils the demanding requirements of seagoing vessels. Ease of use is foremost and has resulted in a truly cutting-edge product that benefits from the very best AIS technology, presented in a way only a company of McMurdo's wide experience can.

The SmartFind M6 Class A provides automated AIS communication from 'ship-to-ship' and 'ship to-shore', transmitting and receiving vessel, voyage and safety related information. Own vessel voyage, position and course information is automatically transmitted, and the AIS information provided by other ships in the vicinity, shore-based stations and AIS equipped aids to navigation are clearly displayed.

The complete AIS solution, comprehensive interface capabilities support interface connection to the vessel's existing navigation sensors; connection of Electronic Chart Display and Information System (ECDIS), or Electronic Chart System (ECS) using NMEA, NMEA2000, USB and Ethernet connectivity interfaces.

SmartFind M6 is suitable for all vessels that are required by legislation to fit AIS equipment, both high seas and for vessels required to transit along the network of EU Inland waterways. A "blue sign" switch may optionally be connected to assist with signalling approaching inland waterway vessels.

## Key Features

- Compact AIS Class A transponder, easy to install and operate.
- Fully compliant with IMO, IEC, and ITU international standards
- Colour 4.3" high contrast display
- Waterproof to IPx6 and IP54
- Detailed AIS target list and Radar like overview
- Multi GNSS system sources
- Integrated forward facing Pilot Plug
- Automatic backlight dimmer
- Backlit Keypad, intuitive user interface
- IMO Deepsea and Inland waterways AIS mode selectable
- Multiple sensor input ports, ECDIS and ECS bi-directional data ports
- USB, NMEA2000, IEC 61162-1/2 with Ethernet connectivity
- SD card slot supports NMEA logging and software upgrade
- IMO BAM compliant, also with analogue alarm interface
- Cable Junction box, GNSS antenna included as standard
- Flush panel and trunion mount included



## Ease of use

Intuitive and easy to operate, SmartFind M6 has a 4.3 inch (110mm), high contrast, backlit LCD graphic display. AIS targets can be displayed as an ordered list or viewed as a geographic plot.

Powerful graphics capabilities can plot all surrounding AIS targets to give the officer of the watch a clear overview and best visual understanding of any developing hazard to navigation situation. The AIS target list has a split screen view to quickly bring a selected targets detailed static and dynamic information into view. The intuitive user interface provides easy access to all aspects of system operation. Entry of alphanumeric text information is both easy and straightforward using an on-screen keyboard together with a four-way navigation pad key. Drop down menu boxes give quick and easy access to standard text phrases that can be edited and saved for re-use when updating own vessel voyage, route, and destination details.

With pioneering Safety features, the SmartFind M6 is a flexible, user-friendly and cost-effective AIS Class A transponder, incorporating comprehensive AIS MOB, AIS SART alarm features in support of search and rescue. The AIS SART MOB alarm feature is compatible with the McMurdo S10, S20 and Crew1 AIS MOB devices and other similar AIS SART type device.

The SmartFind M6 can be connected to the ship's sensors as required by the IALA guidelines using the included junction box to interface with external navigation and presentation systems that support IEC 61162-1 related sentences. It is also capable for connection to Long Range system like Inmarsat C.

## Items included

- Transponder unit with colour display and Pilot plug
- Flush panel and trunnion mount
- GPS antenna
- Junction box and link cable
- 1.5m power cable, USB and Ethernet patch leads

Optional Accessory, Cable remote Pilot plug



# PRODUCT SPECIFICATIONS

## Applicable Standards

IEC 61993-2 Ed.3.0, 2018	IMO Resolution A.694(17)
IEC 61108-1 Ed.2.0, 2003	IMO Resolution MSC.74(69) Annex 3
IEC 60945 Ed.4.0, 2002 incl. Corr. 1, 2008	IMO Resolution MSC.191(79)
IEC 61162-1 Ed.5.0, 2016	IMO Resolution MSC.302(87)
IEC 61162-2 Ed.1.0, 1998	ITU-R M.1371-5 (Class A), 2014
IEC 61162-450 Ed.2.0, 2018	IEC 62288 Ed.2.0, 2014
IEC 62923-1 Ed. 1.0, 2018	IEC 62923-2 Ed. 1.0, 2018

## VHF Transceiver

Frequency Range	156.025 MHz ~ 162.025 MHz
Channel Bandwidth	25 KHz
Modulation	GMSK / FM
Data Rate	9,600 bps
Number of AIS Transmitter	1
Number of AIS Receiver	2
Number of DSC Receiver	1
AIS Channel 1	CH 87B (161.975 MHz)
AIS Channel 2	CH 88B (162.025 MHz)
Tx Power Output	1/12.5 Watt (30/41 dBm ± 1.5 dB)
Rx Sensitivity	< -107 dBm @ 20% PER

## DSC Receiver

Frequency	156.525 MHz
Modulation	FSK
Channel Bandwidth	25K
Sensitivity	< -107 dBm @ BER < 10 <sup>-2</sup>
Spurious Response Rejection	≥ 70 dB for signal @ -104 dBm; BER ≤ 1%
Blocking	≥ 84 dB for signal @ -104 dBm; BER ≤ 1%

## GNSS Receiver (Internal)

Receiver type	72-channel; GPS, GLONASS, BeiDou, Galileo, SBAS: WASS, EGNOS, MSAS, GAGAN
Accuracy	Position: 2.5m CEP SBAS: 2.0m CEP
Sensitivity	Default mode: GPS & GLONASS Tracking & Navigation: -164 dBm Reacquisition: -160 dBm

## Power Supply

Supply Voltage	12V / 24V DC
Supply Voltage Range	9.6V DC ~ 31.2V DC
Peak Current Draw	3.50A @ 12V DC; 1.72A @ 24V DC

## LCD Display

Screen Size	4.3" color TFT
Pixel Number (Resolution)	480x272
Dimmer Control	Change brightness automatically when lighting changes

## Keypad

11 Keypads with Back-light	Function, ESC, Voyage/SRM, MENU, Screen Brightness, DISP, Enter, Arrow Keys
----------------------------	---

## Connection Interface

### Main Unit Front Panel:

USB	Mini type B USB interface
SD Card Slot	
Pilot Plug	Std. Sex 206486-2

### Main Unit Rear Panel:

Power Connector	Round type, 3 pins
GPS Antenna Connector	TNC (Female)
VHF Antenna Connector	SO-239 (Female)
Ethernet	10BaseT / 100Base-TX
DATA	37-pins, connect to Junction Box via extension cable

### Junction Box Connectors: [\* Baud rate support: 38400 (default), 9600, 4800.]

Sensor Interfaces 1 to 3 *	IEC 61162-1 or -2
Pilot / Auxiliary *	IEC 61162-2
External Display *	IEC 61162-2
Long Range *	IEC 61162-2
DGNSS correction input *	RTCM-SC-104
Alarm Relay	Normally open
NMEA2000	IEC61162-3
Alarm Output	Relay contact
Blue sign switch	Connect to external Blue sign switch
Silent mode	Connect to external silent switch

## Environmental

Operating Conditions	IEC 60945 "protected" category
Operating Temperature	-25°C ~ 55°C
Operating Humidity	95% RH at 40°C
Waterproof	IP54

## Physical

Width	262 mm (10.32 inch)
Height	135 mm (5.32 inch)
Depth (include connectors)	197 mm (7.76 inch)
Weight (main unit)	1.25 kg

## MECHANICAL DIMENSION

