SRT

Product Data Sheet

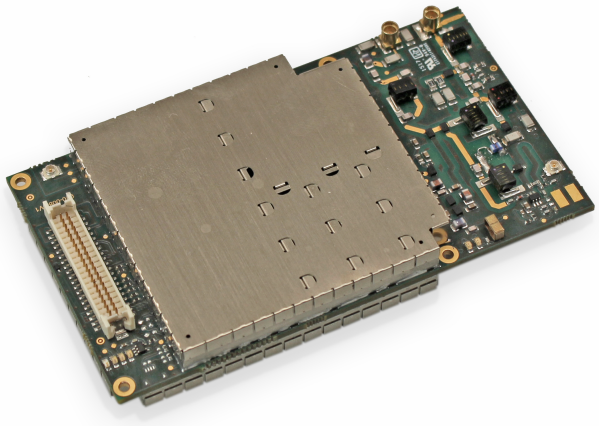
Product Code: 428-0005 (CSTDMA) 428-0014 (SOTDMA)

MERCURY

AIS Class B transceiver with integrated VHF antenna splitter

Product Type: PCA Module

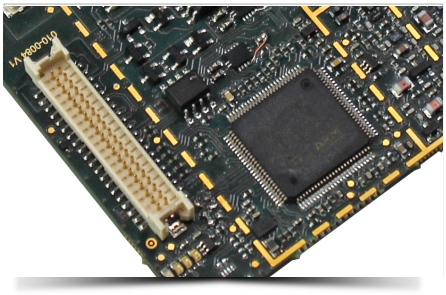
Mercury is a miniature AIS Class B transceiver module with an integrated high performance VHF antenna splitter which allows a single VHF antenna to be shared by the AIS transceiver and VHF DSC Radio. Mercury is available in either standard (2W CSTDMA) or high powered (5W SOTDMA) configuration and delivers exceptional performance due to integrated HF-AIS technology and quality engineering. Mercury is supported by a complete developer integration kit.



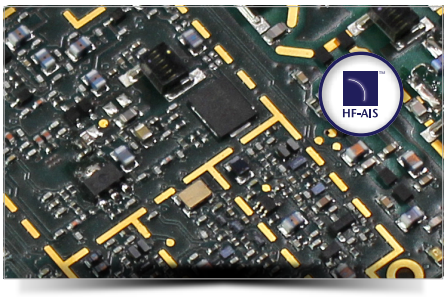
- Globally certifed to IEC & ITU Class B standards - 2W-CS and 5W-SO
- Integrated high performance antenna splitter
- Fully integrated miniature PCA
- Enhanced RF interference protection
- Dual NMEA0183 & NMEA2000 data out puts
- HF-AIS core rechnology for enhanced performance
- Integrated dual performance enhanced GPS and GLONASS
- Exceptionally low power consumption
- Multiple configuration options, including SAT-Trak & Encryption
- Full developer integration support kit and test reports for certification

Confguration options

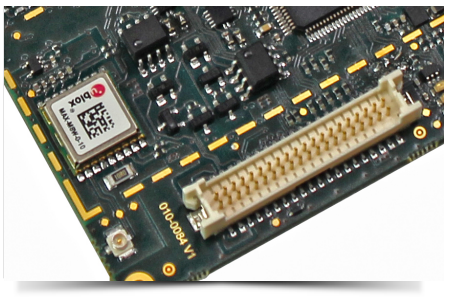
Product Code	Transmit Power	AIS Access Scheme	IEC Standard
428-0005	2W	CSTDMA	IEC62287-1
428-0014	5W	SOTDMA	IEC62287-2



Integrated high performance antenna splitter



Integrated HF-AIS core technology delivers exceptional operational performance



Dual NMEA2000 and 0183 connectivity

Integration

This module is specifically designed for easy, quick and low risk integration into any enclosure.

A full integration kit is available for developers, which provides detailed information and support on all physical, electrical and software interfaces.

Customisation

SRT modules offer unmatched capability to be customised for specifc applications and markets.

Redundant processing power and built-in flexibility allows the implementation of a wide range of additional features, functions, interfaces and messaging.

Certification

This module meets the required IEC international standards and has been independently tested by accredited European test houses. The module is provided with a full suite of formal test reports, including RF and AIS protocol to support certifcation in any jurisdiction globally.

Technical Details

Product Code: 428-0005 (CSTDMA) 428-0014 (SOTDMA)

Physical Specifcation

Dimensions	98 x 55 x 12mm (D x W x H)

Electrical Specifcation

Power supply	12 to 24VDC Power
consumption	200mA @12VDC

Connectors

PCB header	40-way
VHF antenna port	MMCX
VHF radio RF port	MMCX
GNSS antenna port	U.FL

User Interface

LED indicators for power	✔
LED indicators for transmit timeout	✔
LED indicators for error	✔
LED indicators for silent mode	✔

Interfaces

2x NMEA0183 Serial ports (configurable baud rate)	✔
1x NMEA2000	✔
1x USB	✔
1x SPI	✔
10x user I/O	✔
Support for SD card interface	✔

RF Performance

Insertion loss	VHF receive path: 0dB VHF transmit path: <1dB
Power handling	VHF Port 25W
Operating frequency range	156.000 – 162.025MHz
Power output	2W (CSTDMA) 5W (SOTDMA)

Type Approvals*

Europe	RED
US	USCG and FCC
Canada	TC and IC

*When incorporated into a fnal product enclosure

VHF Transceiver

Transmitter	x 1
Receiver	x 2
Frequency	156.025 to 162.025MHz in 25KHz steps
Output power	2W or 5W
Receiver sensitivity	<-110dBm @20% PER

Packaging

Each module is individually packaged in an ESD bag and boxed in batches of 50 per box.

Box size	74 x 104 x 51 cm (D x W x H)
Box weight	2.8kg

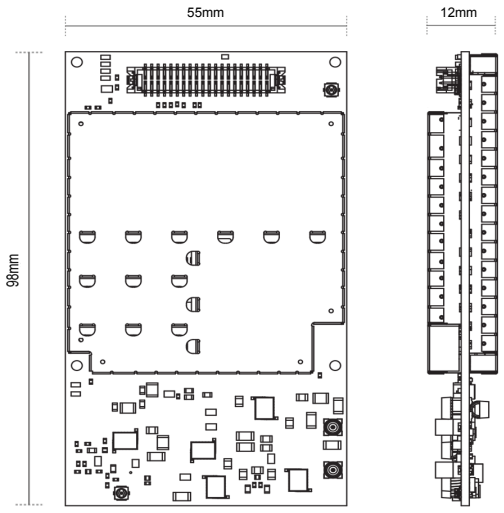
GPS Receiver

Channels	72
Compliance	IEC61108-1 Ed 2.0 IEC61108-2 GLONASS
SBAS capability	WAAS/EGNOS enabled
GPS data output	Position output to NMEA0183 and NMEA200 interfaces
Antenna	5V bias provided for GPS antenna LNA

Standards Compliance

AIS standards	IEC62287-1 Edition 3 IEC62287-2 Edition 2 ITU-R M.1371-5
Environmental standard	IEC60945 Edition 4
Serial data interface standards	IEC61162-1 Edition 5 IEC61162-2 Edition 1
GPS performance standard	IEC61108-1 (relevant sections) IEC61108-2 GLONASS
NMEA2000 interface standard	NMEA2000® Edition 2.20
Product safety	EN60950-1 2006 +A11:2009 +A1:2010 +A12:2011

Dimensions



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SRT enhances maritime domain awareness by developing and manufacturing tracking technology and system solutions for individual vessel owners, port authorities, maritime infrastructure owners, coast guards and national security agencies around the globe. Applications include the tracking of commercial and leisure vessels; sustainable fishery; anti-collision; search and rescue; waterway management, port and coast security; pollution management and environmental management.

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