

To Explore,  
and Be in Control!

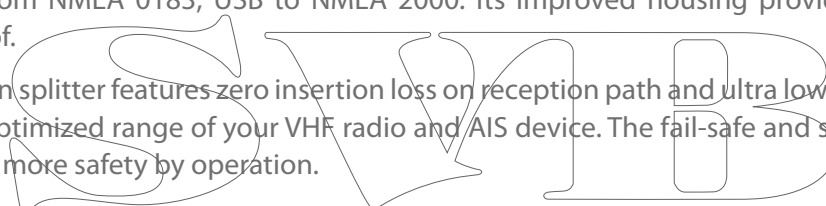


## Product Overview

CAMINO-108S is the first fully CE certified AIS Class B with integrated splitter. For an eased installation, CAMINO-108S can share a single VHF antenna with your VHF radio.

Building on the solid basis of CAMINO-108 AIS class B, CAMINO-108S supports a variety of connection options from NMEA 0183, USB to NMEA 2000. Its improved housing provides more durability and IPX5 waterproof.

The built-in splitter features zero insertion loss on reception path and ultra low insertion loss on transmission path for optimized range of your VHF radio and AIS device. The fail-safe and self-test features of the splitter give users more safety by operation.



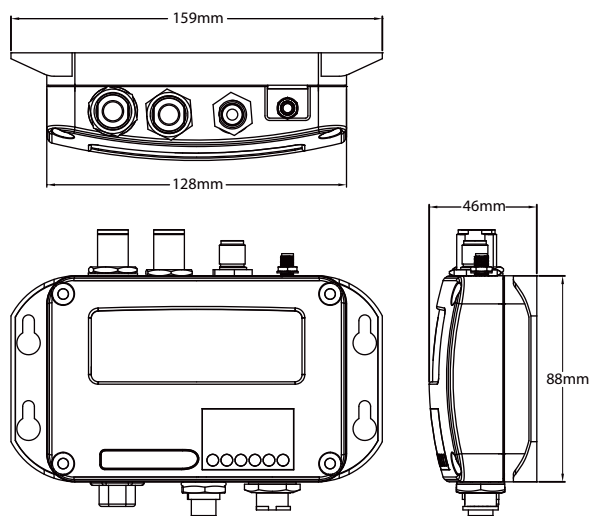
## Key Features

- ▶ Globally certified AIS Class B transponder with integrated splitter
- ▶ Built-in high-sensitivity GPS receiver
- ▶ Universal connectivity via NMEA2000, NMEA0183, and USB
- ▶ Durable housing design with IPX5 waterproof
- ▶ Optional silent mode (Tx off) operation
- ▶ High performance splitter with zero insertion loss on reception path
- ▶ Fail-safe function for uninterrupted VHF/DSC radio operation
- ▶ Self-test signaling possible antenna issue
- ▶ FM antenna interface

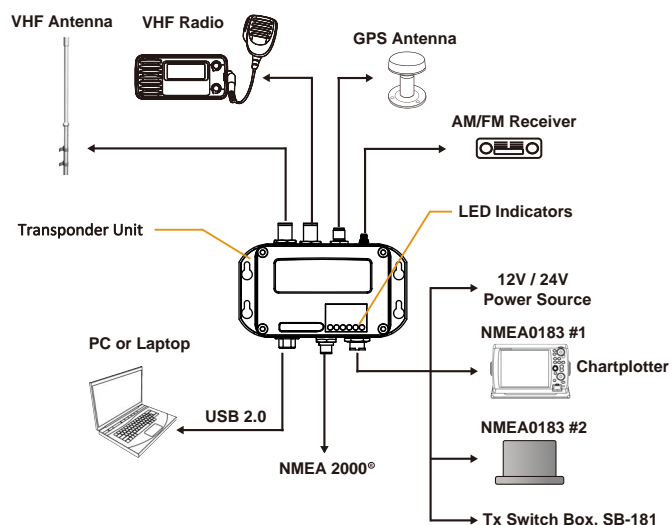
## Applications



## DIMENSIONS



## CONNECTION DIAGRAM



## SPECIFICATIONS

### ▶ APPLICABLE STANDARDS

IEC 62287-1 Ed. 2, 2010	IEC 61108-1 Ed. 1, 2003
IEC 61162-1 Ed. 3, 2007	IEC 60945 Ed. 4, 2002
IEC 61162-2 Ed. 1, 1998	ITU-R M.1371-4, 2010

### ▶ 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 (one time-shared between AIS and DSC)
Number of DSC Receiver	1 (time-shared between AIS and DSC)
AIS Channel 1	CH 87B (161.975 MHz)
AIS Channel 2	CH 88B (162.025 MHz)
Tx Power Output	2 Watt (33 dBm ± 1.5 dB)
Rx Sensitivity	< -107 dBm @ 20% PER
Rx Message Format	AIS Class A & B messages

### ▶ DSC RECEIVER

Modulation	1,300 Hz / 2,100 Hz FSK
Data Rate	1,200 bps ± 30 ppm
Spurious Response Rejection	≥ 70 dB for signal @ -104 dBm; BER ≤ 1 %
Blocking	≥ 84 dB for signal @ -104 dBm; BER ≤ 1 %

### ▶ GPS RECEIVER (integrated)

Receiving Channels	50 channels
Accuracy	IEC 61108-1 compliant
Output Rate	1 Hz

### ▶ ENVIRONMENTAL

Operating Conditions	IEC 60945 "protected" category
Operating Temperature	-15°C ~ +55°C (+5°F ~ +130°F)
Waterproof	IPX5

Note: Specifications are subject to change without prior notice.

### ▶ LED INDICATION

Power (green)	System power on / off
Error (red)	MMSI not set / BIIT error
Rx (green)	Receiving AIS data
Tx/Silent (green/orange)	Transmitting AIS data / Silent mode
VHF Tx (green)	Transmitting VHF radio
Warning (red)	Possible VHF antenna issue

### ▶ CONNECTION INTERFACE

GPS Antenna Connector	TNC (Female)
VHF Antenna Connector	SO-239 (Female)
NMEA2000	Standard connector
NMEA 0183 (RS-422)	Support two NMEA0183 interfaces
	Baud rate configurable (default 38,400 bps)
	Separate Tx/Rx baud rate
	Standard IEC 61162-1 / IEC 61162-2 sentences
Silent Mode Setting	Set by optional Tx Switch Box SB-181
USB	Mini type, waterproof
FM Radio	SMA (Female)

### ▶ RF PERFORMANCE

AIS & VHF Radio Frequency Range	156.025 MHz~162.025 MHz
Insertion loss, AIS Receive path	Typical 0dB
Insertion loss, VHF Receive path	Typical 0dB
Insertion loss, AIS Transmit path	Typical 1dB
Insertion loss, VHF Transmit path	Typical 1dB

### ▶ POWER SUPPLY

Supply Voltage	12V / 24V DC
Power Consumption	Typically less than 3W average @ 12V DC

### ▶ PHYSICAL

Dimension: 159x46x88mm (WxHxD) (exclude connector)	
Weight	360 g



The AIS Specialists

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