HS-MX6206GT User Manual

Version 1.1

(Sep2025)

HS-MX6206GT

High Performance Dual-channel AIS Receiver

Version 1.1

1. Product Overview

The HS-MX6206GT is our company's independently developed next-generation high-performance AIS receiver terminal, designed to meet the needs of various maritime applications including unmanned aerial vehicles (UAVs), unmanned surface vehicles (USVs), recreational boats, inland electric vessels, and portable AIS base stations etc. It employs a dedicated high-performance AIS signal processing chip based on a mature, low-cost software-defined radio architecture. Integrated with intelligent AI data parsing and error correction algorithms, it rapidly and accurately receives and decodes all AIS message information without requiring environmental matching.

The HS-MX6206GT complies with CCS, CE and FCC approvals, and meet various national maritime standards. It maintains exceptional reception performance even in strong electromagnetic interference environments, while featuring low power consumption and high reliability. It effectively meets the AIS navigation and communication perception needs and requirements of diverse application scenarios, installation environments, and different users.

The HS-MX6206GT outputs parsed AIS message data via a standard TTL serial port (NMEA0183 format). Its compact dimensions of 104mm x 76mm x 32mm and 8-pin composite aviation standard interface facilitate integration into space-constrained systems.

Figure 1 Physical Diagram

2. Specifications

Parameter	Specification	Remarks
AIS1	161.975MHz	
AIS2	162.025MHz	
Receiver Sensitivity	<-119dBm@20% PER	
Intermodulation	≥65 dB	
Adjacent Channel Selectivity	≥70 dB	
Spurious Selectivity	≥70 dB	
Blocking	≥90 dB	
Communication Interface	8-Pin aviation composite connector, 3.3V TTL Serial Port, NMEA0183 format	
Baud Rate	38400bps	
Operating Voltage	9V~ 36V DC	
Operating Current	150mA@12V DC	
Operating Temperature	-30°C~ +70°C	

Table 1 Performance Specification

3. Product Testing and Connections

3.1 Power Supply

12V DC @ 500mA, supplied via an 8-pin aviation connector.

3.2 Communication Interface

8-pin aviation connector, 3.3V TTL (TXD, RXD, GND) serial port communication. Complies with NMEA0183 data format, baud rate 38400bps.

3.3 LED lights indicator

Power and receiving indicator lights. Green light flashes once upon power-up. Green light flashes while receiving AIS message data.

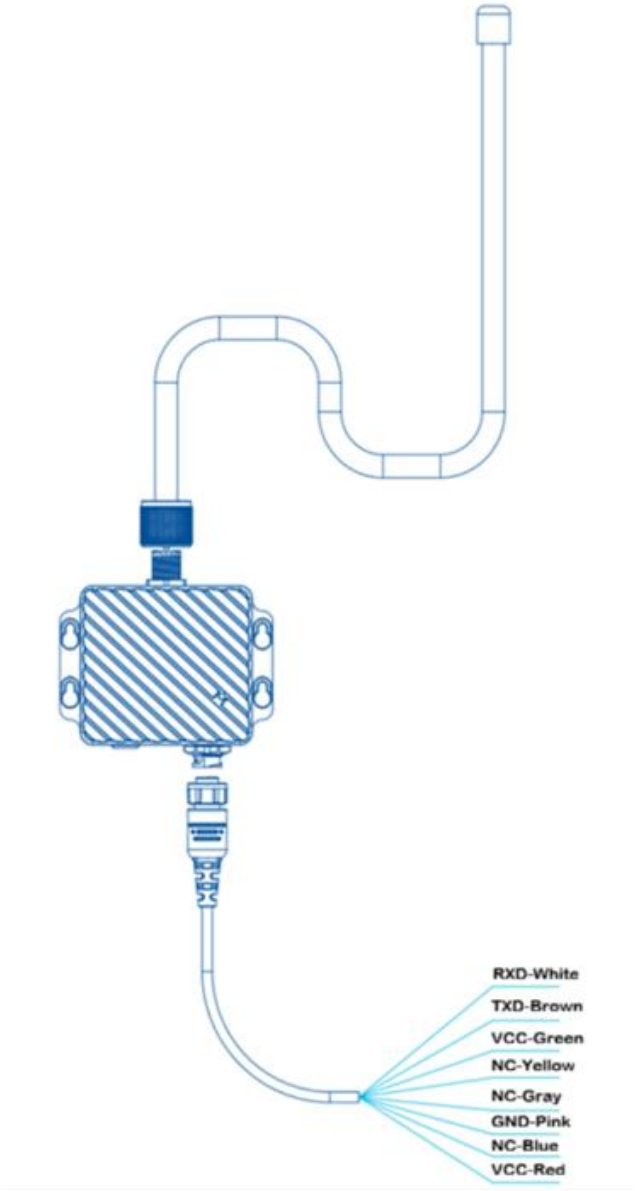

Figure 2 Product Testing and Connectivity

4. Typical Applications

The HS-MX6206GT is widely applicable in maritime UAVs, USVs, maritime situational awareness systems, electro-optical communication and navigation fusion systems for smart vessels, radar-AIS fusion terminals, shipborne AI visual perception systems with integrated AIS, standalone shipborne AIS receivers, vessel status tracking and monitoring systems, maritime IoT terminals, and various product systems requiring AIS reception and parsing capabilities.

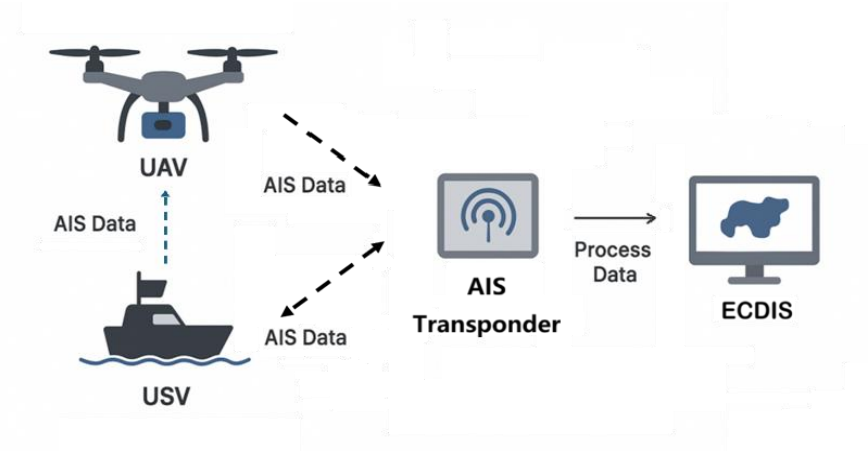

Figure 3 AIS System for Drones and Unmanned Surface Vehicles

5. Dimensions (unit: mm)

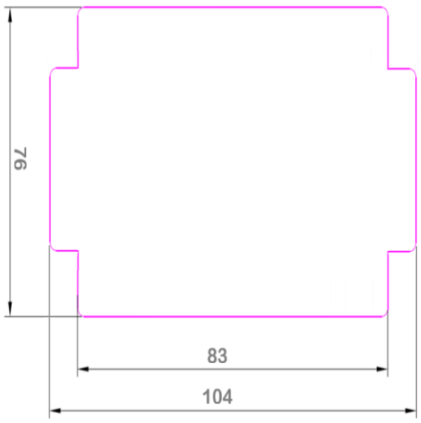

Figure 4 104mm x 76mm x 32mm(Dimensions)

4 Communication Interface(8-Pin Aviation Connector)

PIN	Function	Wire Colour	Remarks
1	RXD	White	TTL 3V3
2	TXD	Brown	TTL 3V3
3	VCC	Green	12V DC
4	NC	Yellow	Floating
5	NC	Gray gray line	Floating
6	GND	Pink	Ground
7	NC	Blue	Floating
8	VCC	Red	12V DC

Table 2 8-Pin Connectors Definition

5 Precautions for Use

7.1 The HS-MX6206GT accepts typical 12V DC power supply input. After power-up, allow one second initialization period before normal operation commences.

7.2 To external data communication is using standard 3.3V TTL serial port output with baud rate at 38400bps.

7.3 No configuration is required. It operates normally after connecting the antenna and initializing upon power-up, then outputs raw AIS message data. Users must perform AIS data parsing and display on an embedded system, PC, or network terminal.

7.4 The HS-MX6206GT does not provide positioning functionality. For positioning, a separate GNSS receiver and algorithm processing module must be added.

7.5 The power supply input noise for the HS-MX6206GT should not exceed 30mV. Excessive power supply noise can adversely affect the product's reception performance.

6 Product kits List

6.1 HS-MX6206GT terminal x1

6.2 8-pin aviation power and communication cable x1

6.3 Custom AIS antenna (customized based on actual application and installation method) x1

6.4 RF Feedline (UHF-J male pin to SMA-K female socket, 1m length) x1

Figure 5 Product Kit to Customer

8. Packaging and model

8.1 Packaging Details

Item	Description
Terminal Per Carton	
Carton Dimensions	

8.2 Model

Model	Description
HS-MX6206GT	High Performance Dual-channel AIS Receiver