



FTMD-X1N-5CH • MDVR Technical Datasheet



FTMD-X1N-5CH

MDVR - Highly Integrated Design



GPS Tracking



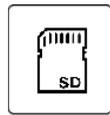
Geo Fencing



Playback Trips



Wi-Fi



SD Card



Live Tracking



Product Summary

FTMD-X1N-5CH is a cost-effective device specially developed for mobile video surveillance and remote video monitoring, featuring high functional scalability. It is equipped with a high-speed processor and an embedded operating system, integrating state-of-the-art H.265 video compression/decompression technologies, 3G/4G network technologies, GPS/BDS positioning technologies, and Wi-Fi technology in the IT industry.

Key Features:

- Embedded Linux operating system
- AI function extension
- H.265/H.264 encoding and decoding to improve the memory space utilization
- 2.5-inch hard disk storage, hard disk heating & hard disk power off protection technologies
- Good anti-vibration performance, simple design, and flexible & easy installation
- Comprehensive functions and high reliability

Technical Specification

Model

FTMD-X1N-5CH

Function Overview

Preview, video recording, playback, network transmission, and positioning

System

Operating System	Linux 4.9
Control Mode	CP4, mouse, Easy Check, and network (3G/4G/Wi-Fi)

Video

Input	4-channel AHD (1080p) + 1-channel IPC (1080p)
Output	1-channel CVBS AHD: 4 × 720p @ 25 FPS (PAL) or 4 × 1080p @ 10 FPS (PAL) or
Total Resource	4 × 720p @ 30 FPS (NTSC) or 4 × 1080p @ 12 FPS (NTSC) IPC: 1 × 1080p @ 30 FPS

Audio

Input	4-channel AHD + 1-channel IPC
Output	1-channel CP4
Audio Signal Standard	Level: 2 Vpp; input impedance: 4.7 kilohm

Display

Display Split	1/4/9-screen display
Screen Display	Positioning information, alarms, license plate numbers, driving speed, time, etc.
Operating Interface	GUI

Recording

Audio/Video	Video	H.264/H.265
Compression Format	Audio	ADPCM, G.711U, G.711A
	AHD:	
	PAL:	1080p (1920 × 1080), 720p (1280 × 720), WD1 (928 × 576), WHD1 (928 × 288), WCIF (464 × 288), D1 (704 × 576), HD1 (704 × 288), CIF (352 × 288);

Image Resolution	NTSC: 1080p (1920 × 1080), 720p (1280 × 720), WD1 (928 × 480), WHD1 (928 × 240), WCIF (464 × 240), D1 (704 × 480), HD1 (704 × 240), CIF (352 × 240); IPC: 1080p (1920 × 1080), 720p (1280 × 720);
Image Quality	Levels 1-8 adjustable (preferably Level 1)
Recording Mode	Start-up/Manual/Scheduled/Alarm event recording
Alarm Prerecording	0-60 min
Alarm Recording Delay	0-30 min

Playback

Playback Channel	1-channel local playback
Search Mode	By date/time, channel, or event

Network

3G/4G	EVDO/TD-SCDMA/WCDMA/TDD-LTE/FDD-LTE (optional)
WIFI	W217 module. Supported protocol: 802.11a/b/g/n/ac Supported frequency band: 2.4/5.0 GHz
IPC Ethernet	1 × 6-pin aviation plug (100 Mbit/s, PON powered)

Positioning

GPS/BD	Positioning, speed detection, and time synchronization
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Sensor

G-Sensor	Built-in 6-axis inertial sensor
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Storage

HDD/SSD	1 × 2.5" SATA HDD or SSD, 7 mm/9.5 mm/15 mm thick, supporting hard disk heating
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Port

SIM	1 × SIM card slot
USB	1 × USB2.0 SIM
Serial Port	1 × RS232. 1 × RS485(R WATCH)
IO	8-channel input and 2-channel output
Speed	1-channel pulse speed detection
Control Panel	CP4 (accessories optional)
Intercom	1 × MIC port
CAN	Not supported

Power Supply

Input	DC 8-36 V
Output	5 V @ 500 mA
Maximum Typical Power Consumption	35 W
Standby Power Consumption time	≈ 0 W

Physical Characteristics

Dimensions (mm)	206.0 × 190.0 × 70.5
Weight (with hard disks) (kg)	1.2

Environment

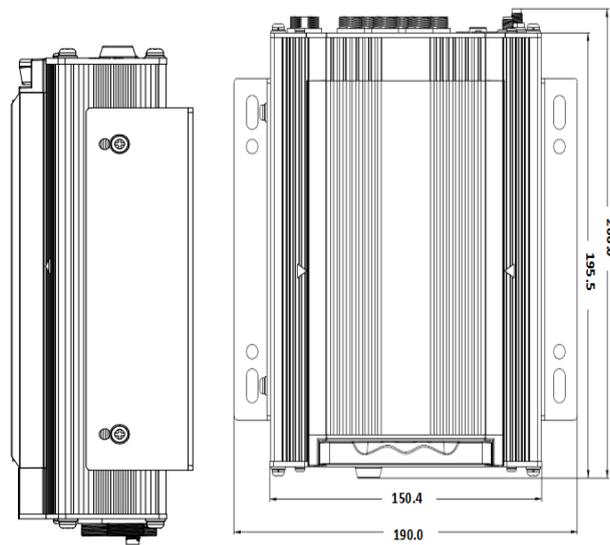
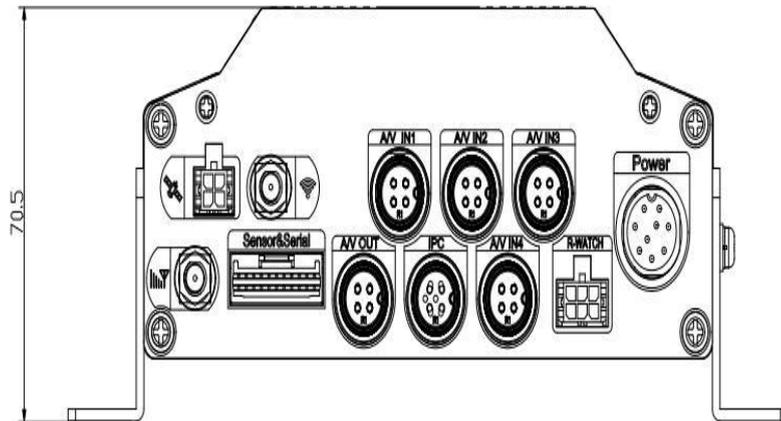
Operating Temperature	−40°C to +70°C (Heated, without hard disks)
Operating Humidity	8% to 95% (non-condensing)

AI

MDVR AI	Fleetly AHD camera CA29M (DSM) and CA20S3.0 (ADAS)
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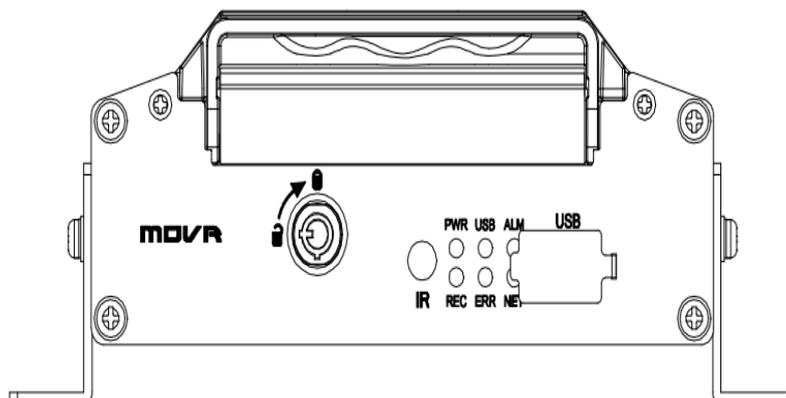
Dimensions

(Unit: mm)

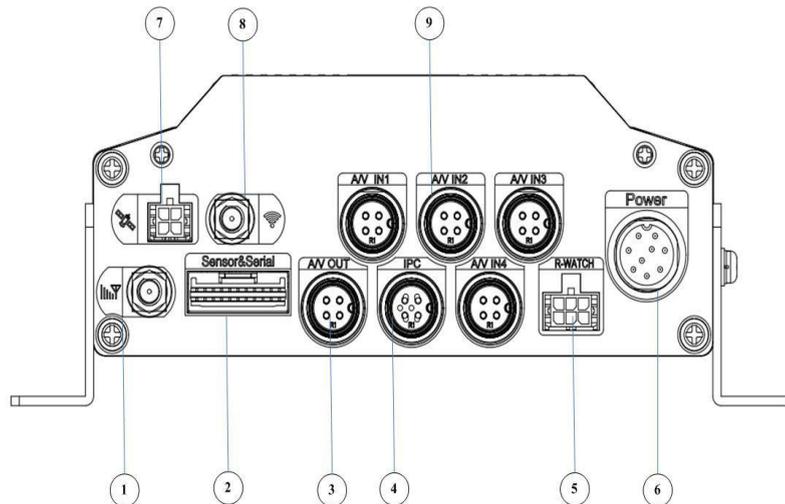


Panel Ports

Front panel



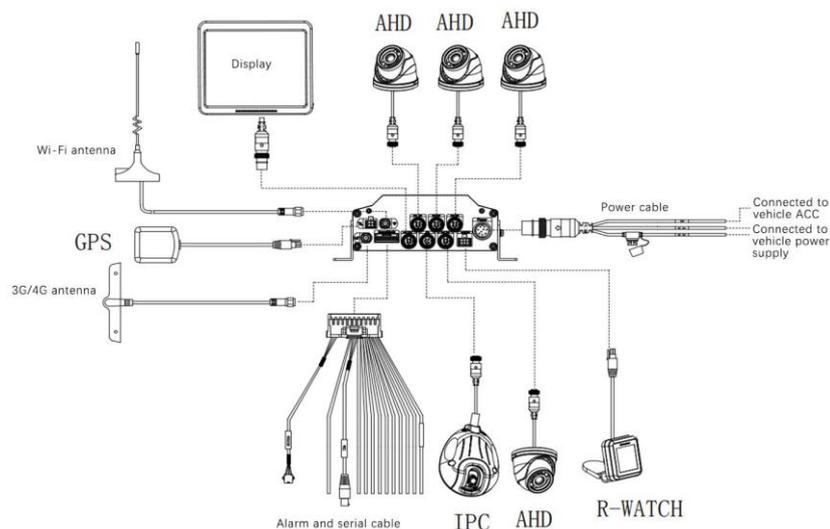
Rear panel



S/N	Silk Screen	Description
1		3G/4G antenna connector
2	Sensor & Serial	Serial port and IO port
3	A/V OUT	Analog audio/video output port
4	IPC	PON-powered IPC port
5	R-WATCH	R-WATCH port
6	Power	36 V DC power input
7		GPS/BDS antenna connector
8		Wi-Fi antenna connector
9	A/V IN 1~4	Analog audio/video input ports 1 to 4

Installation

Typical Wiring Diagram



Hard Disk Installation



Loosen the 4 screws at the bottom of the hard disk cartridge with a Phillips screwdriver, and pull out the upper cover of the hard disk cartridge, as shown in the figure above



Take out the hard disk damper assembly and open one of the dampers to a certain angle (Note: If the hard disk is 9 mm thick, tear off the two rubber pads in the bracket; if the hard disk is 7 mm, keep the rubber pads, as shown in the figure above)



Insert the hard disk cartridge obliquely into one side

Insert the hard disk into the bracket obliquely with the PCB facing outward, as shown in the figure above



Install the upper cover and tighten the 4 screws at the bottom of the hard disk cartridge, as shown in the figure above

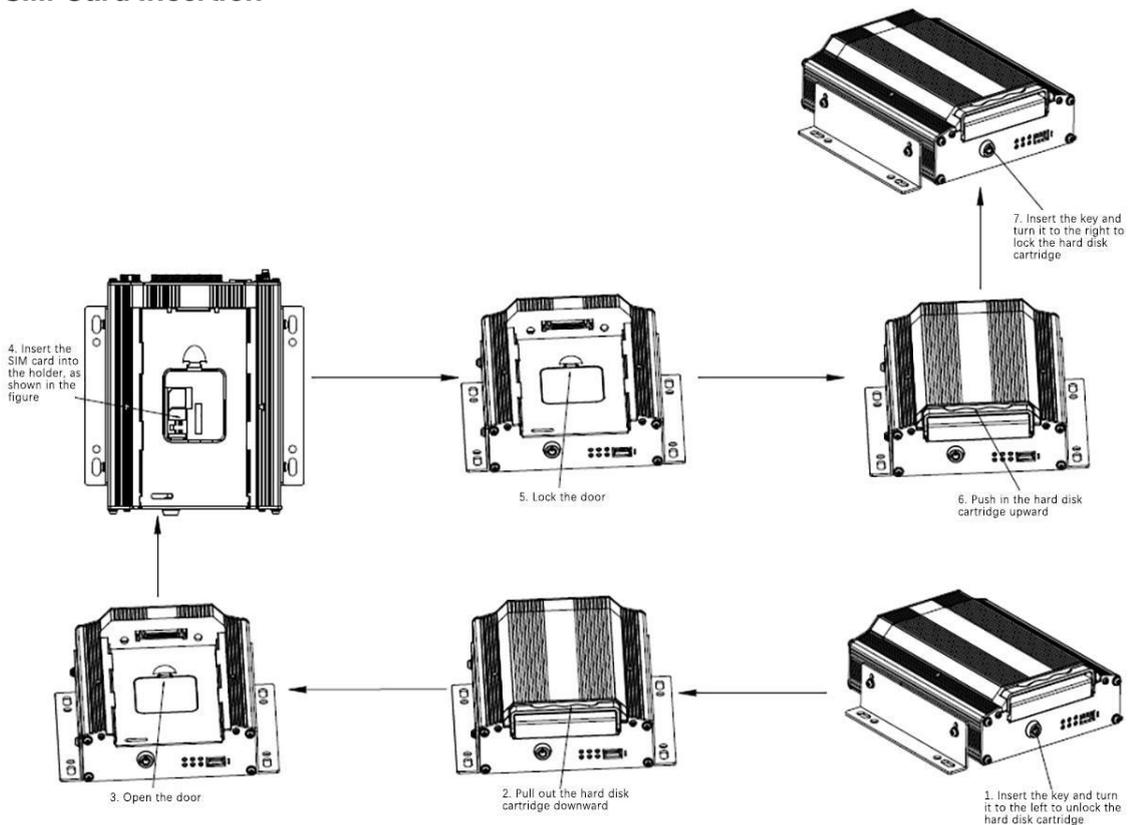


Connect the SATA cable to the hard disk, and install the hard disk assembly into the hard disk cartridge, as shown in the figure above



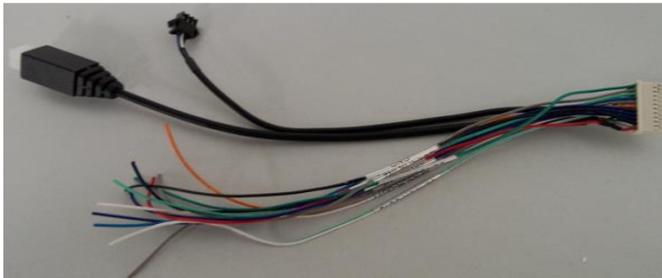
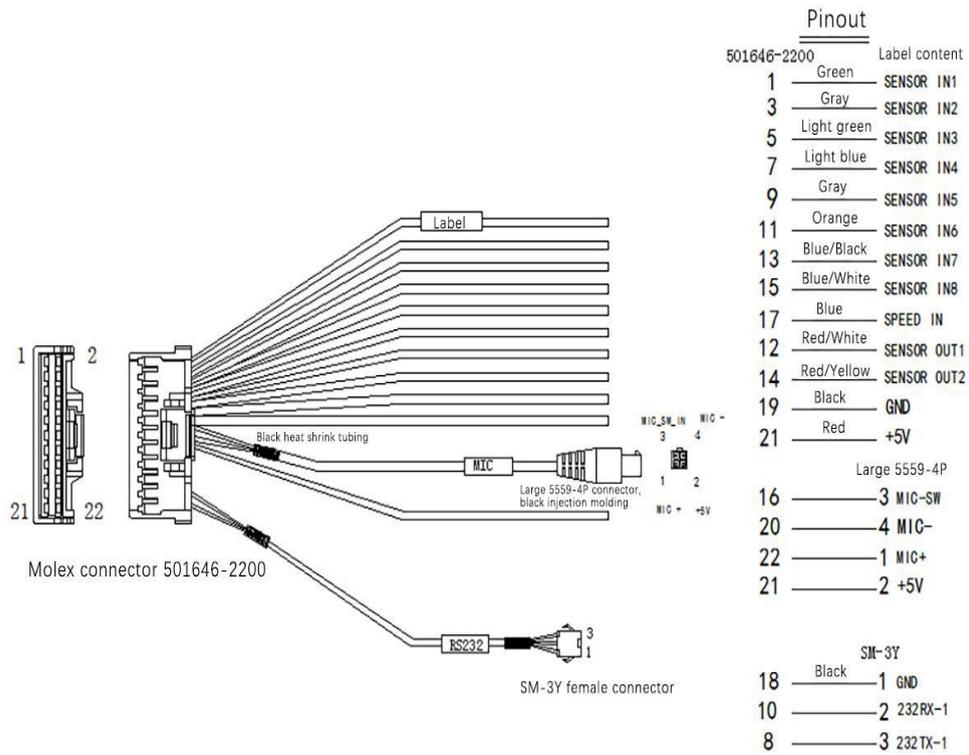
Hold the dampers at the correct location and press the four corners of the two dampers with hands to make them stick to the bracket, as shown in the figure above

SIM Card Insertion



External Cable Connector Pinouts

Alarm cable connector pinout



Alarm and serial cables



AV OUT cable