X3N-H0404

Specifications

Introduction

X3N-H0404 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. It supports recordings in formats of 1080p, 720p, WD1, WHD1, WCIF, D1, HD1, and CIF. Moreover, it allows recording vehicle driving information and uploading videos remotely. It can also be used with the center software to support alarm linkage by providing central remote video surveillance, intelligent vehicle dispatching management, and playback analysis based on the central database.

It is characterized by good anti-vibration performance, prevention of electromagnetic

Strengths

- 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, hard disk heating & hard disk power-off protection technologies
- Connection with storage units such as a fireproof box for disaster recovery backup
- HD VGA output

interference, radiation protection, simple design, flexible and easy installation, hard disk storage, SD card backup design, and high reliability, providing comprehensive functions. The product supports extended AI functions, implementing the Advanced Driver Assistance System (ADAS) alarm, Blind Spot Detection (BSD), and Driver Status Monitor (DSM), and effectively assists drivers to improve traffic safety and reduce pedestrian-motor vehicle accidents.

Specifications

Model		
	X3N-H0404	
Function Overview		
	Preview, video recording, playback, network transmission, and positioning	
System		
	Operating System	Linux 4.9
	Control Mode	CP4, mouse, EasyCheck, and network (3G/4G/Wi-Fi)
Video		
	Input	4-channel AHD + 4-channel IPC
	Output	1-channel CVBS + 1-channel VGA
	Total Resource	AHD: 4 × 720p @ 25 FPS (PAL) or 4 × 1080p @ 12 FPS (PAL) or 4 × 720p @ 30 FPS (NTSC) or

		4 × 1080p @12 FPS (NTSC) IPC: 4 × 1080p @ 30 FPS
	Video Signal Standard	Level: 1 Vpp; impedance: 75 ohm NTSC/PAL (optional)
Audio		
	Input	4-channel AHD + 4-channel IPC
	Output	1 channel
	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 Compression Format	Video H.264/H.265 Audio ADPCM,G.711U,G.711A
	Storage Temperature	-40°C - +70°C
	Image Resolution	AHD: PAL:

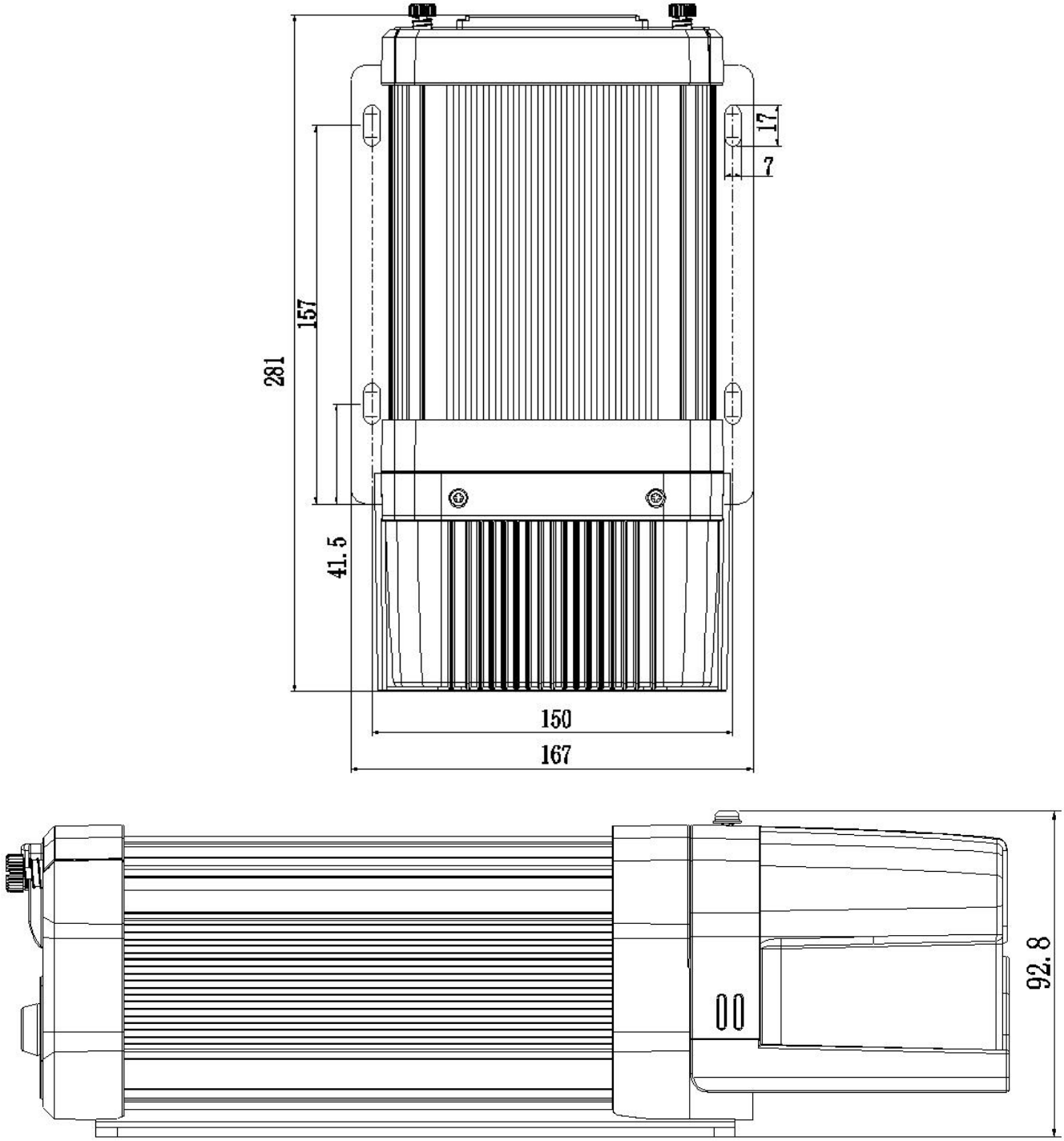
		1080p (1920 × 1080), 720p (1280 × 720), WD1 (928 × 576), WHD1 (928 × 288), WCIF (464 × 288), D1 (704 × 576), HD1 (704 × 288), CIF (352 × 288); NTSC: 1080p (1920 × 1080), 720p (1280 × 720), WD1 (928 × 480), WHD1 (928 × 240), WCIF (464 × 240), D1 (704 × 480), HD1 (704 × 240), CIF (352 × 240); IPC: 1080p (1920 × 1080), 720p (1280 × 720);
	Image Quality	Levels 1–8 adjustable (preferably Level 1)
	Recording Mode	Startup/Scheduled/Alarm event recording
	Alarm Prerecording	0-60 min
	Alarm Recording Delay	0-30 min
Playback		
	Playback Channel	Local 1/4-channel playback and web-based 1/4/8-channel 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

	Ethernet	Supported frequency band: 2.4/5.0 GHz 4 × IPC 6-pin aviation plug (100 Mbit/s, PON-powered) + 1 × RJ45 (100 Mbit/s)
Positioning		
	GPS/BD	Positioning, speed detection, and time synchronization
Sensor		
	G-Sensor	Built-in 6-axis inertial sensor
Storage		
	HDD/SSD	1 × 2.5" SATA HDD or SSD, 7/9.5/15 mm thick, supporting hard disk heating
	SD	Hot-swapping 32/64/128/256 GB SDXC
Port		
	USB	1 × USB2.0(Type A)+ 1 × USB2.0(Type B)
	SD	1 × SD card slot
	SIM	1 × SIM card slot
	Serial Port	2 × RS232,2 × RS485(1 × R-WATCH)
	CAN	1 × CAN
	IO	8-channel input and 2-channel output
	Pulse Speed Detection	1 channel
	Control Panel	CP4\CP5
	Intercom	1 × MIC port (CP4)
Power Supply		

	Input	DC 8~36 V
	Output	5 V @ 500 mA & 12V@500 mA
	Maximum Typical Power Consumption	50 W
	Standby Power Consumption	≈ 0 W
Physical Characteristics		
	Dimensions (mm)	281 × 167 × 92.8 (with the bracket and rear shield)
	Weight (kg)	2.4 kg (without hard disks)
Environment		
	Operating Temperature	–40°C to +70°C (heated, without hard disks)
	Operating Humidity	8% to 95% (non-condensing)
AI		
	MDVR AI	Streamax AHD camera CA29M (DSM) and CA20S3.0 (ADAS)

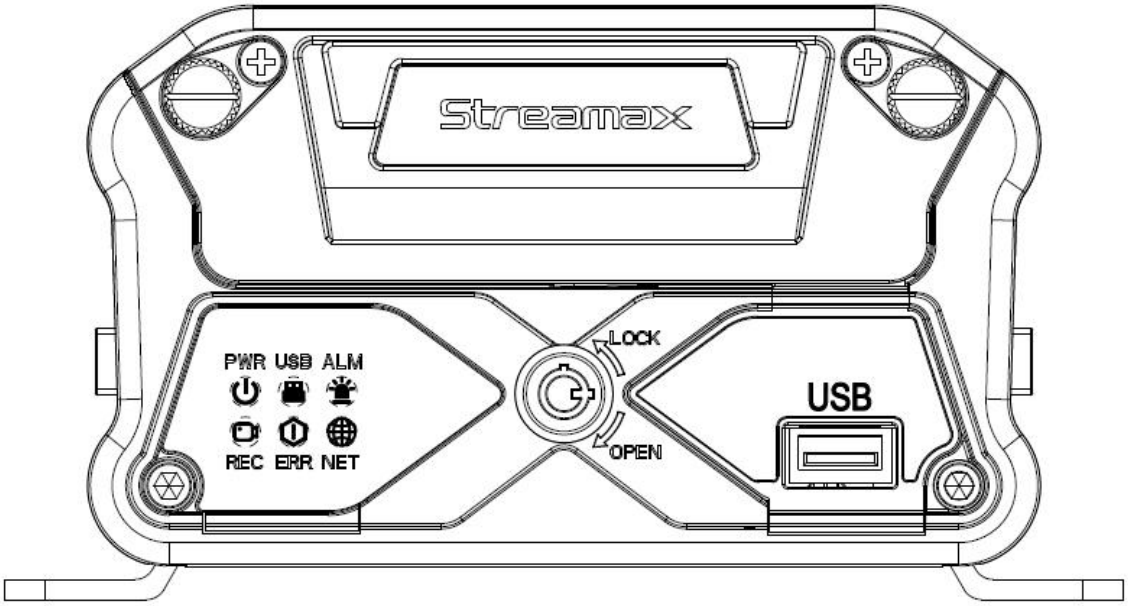
Dimensions

(unit: mm)

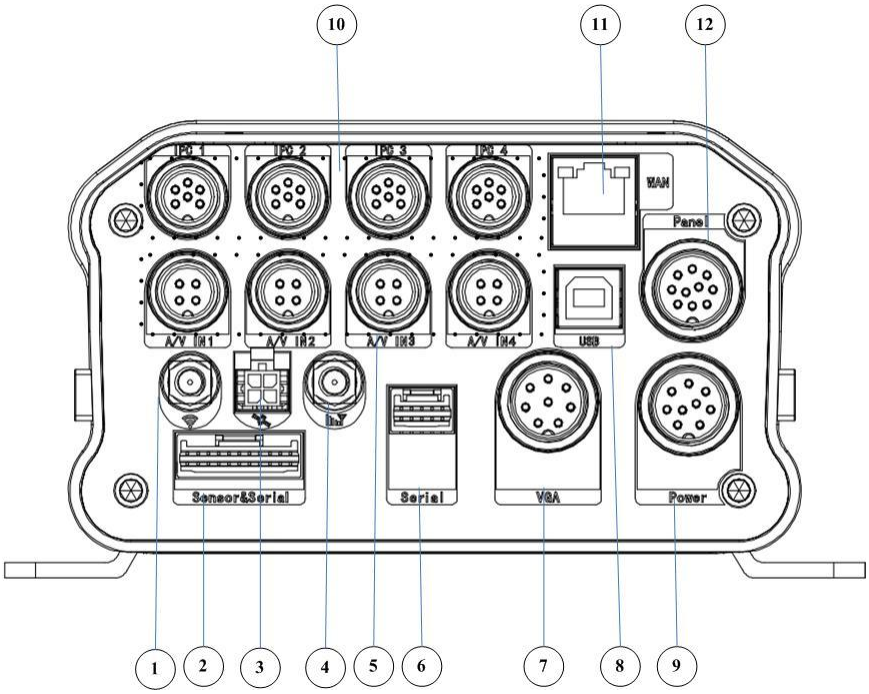


Panel Ports

Front panel



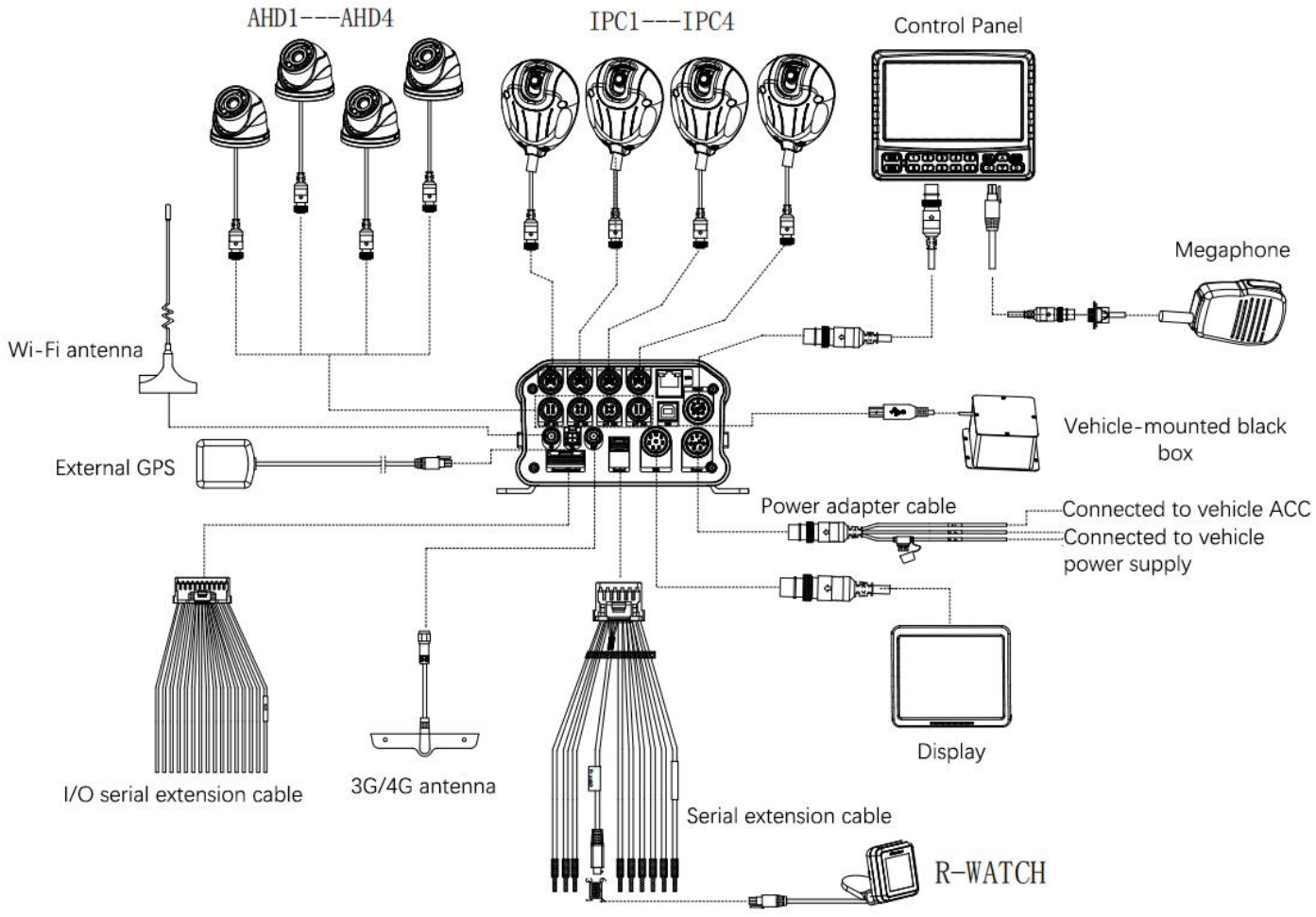
Rear panel



S/N	Silk Screen	Description
1		Wi-Fi antenna connector
2	Sensor&Serial	IO port & serial port
3		GPS/BDS antenna connector
4		3G/4G antenna connector
5	A/V IN1~4	Analog audio/video input ports 1 to 4
6	Serial	Serial port
7	VGA	VGA port
8	USB	USB 2.0 port (Type B)
9	Power	8–36 V DC power input
10	IPC1~4	IPC audio/video input ports 1 to 4
11	WAN	100 Mbit/s network port
12	Panel	CP4 port

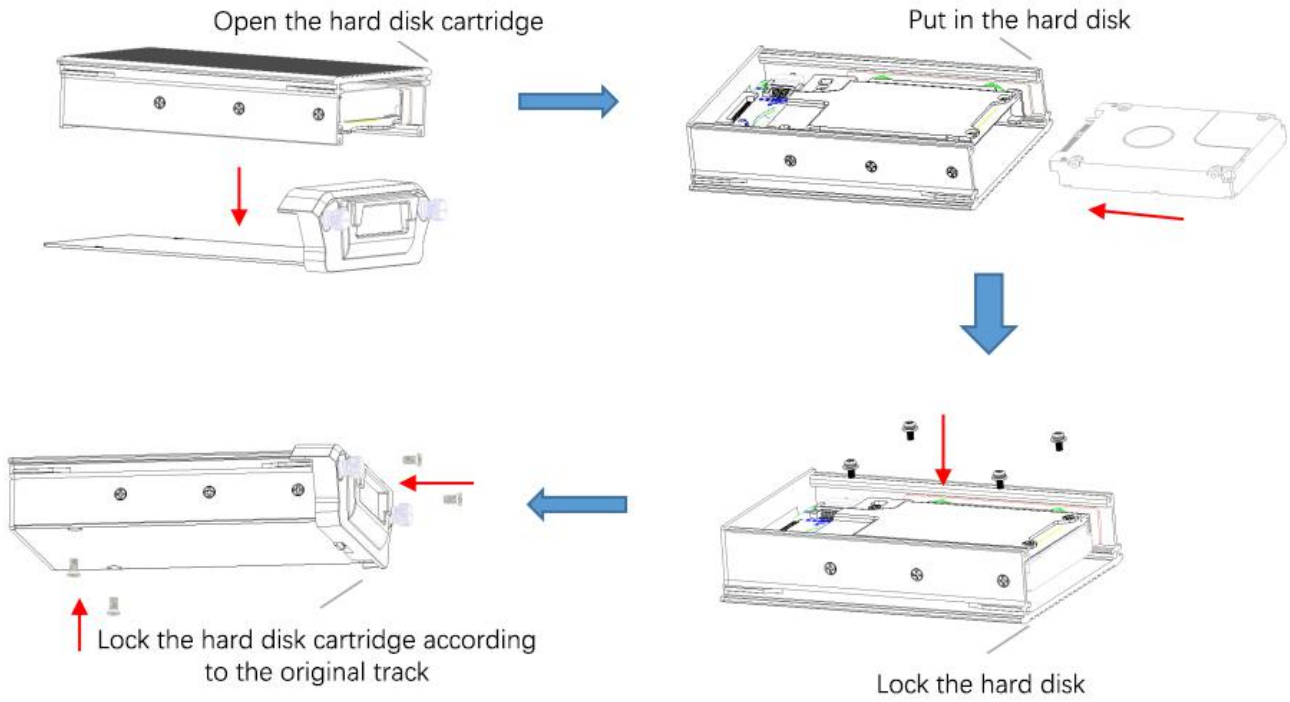
Installation

Typical Wiring Diagram



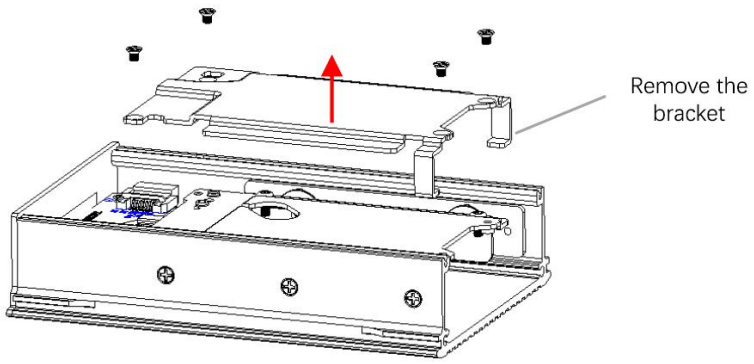
Hard Disk Installation

Installation of Hard Disks with 9.5 mm/7.0 mm Thickness



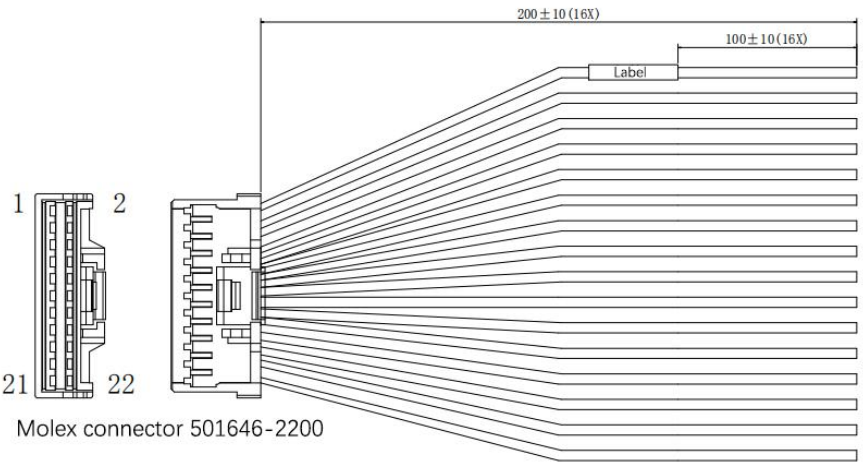
Installation of Hard Disks with 15 mm Thickness

If it is originally compatible with hard disks with 9.5 mm/7.0 mm thickness, and a hard disk with 15 mm thickness is to be installed, you need to remove the mounting bracket before installing.



External Cable Connector Pinouts

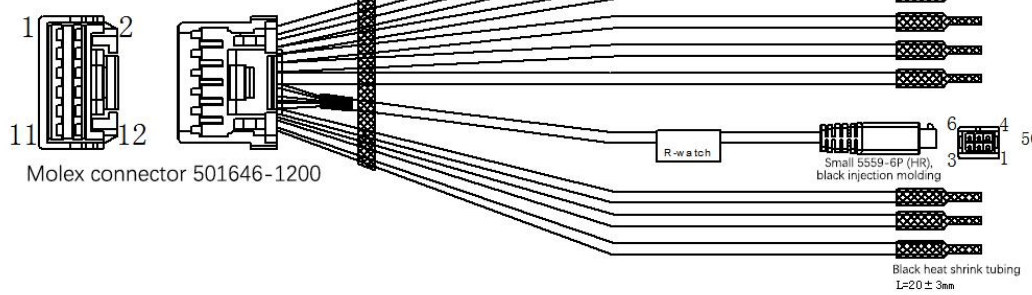
Alarm and serial cable connector pinout



Pinout

501646-2200		Label content
1	Red	SENSOR IN1
3	Gray	SENSOR IN2
5	Light green	SENSOR IN3
7	Light blue	SENSOR IN4
9	Gray	SENSOR IN5
11	Orange	SENSOR IN6
13	Blue/Black	SENSOR IN7
15	Blue/White	SENSOR IN8
17	Blue	SPEED IN
12	Red/White	SENSOR OUT1
14	Red/Yellow	SENSOR OUT2
19	Black	GND
21	Red	+5V
18	Black	GND
10	Green	232RX-1
8	White	232TX-1

Serial cable connector pinout



Pinout

501646-1200		Label content
1	White/Yellow	232TX-2
2	Green/Yellow	232RX-2
3	White/Black	CAN-H
4	Green/Black	CAN-L
5	Red	+5V
6	Black	GND
8	Red	+12V

501646-1200		Small 5559-6P
7	Black	3 GND
8	Red	6 +12V
9	White	4 485A-1
10	Yellow	5 485B-1
11	White/Blue	485A-2
12	Green/Blue	485B-2

FAQ

MDVR Fails to Start

- ✧ Check the input power supply of the device by checking whether the power cable is correctly connected, whether the ground cable is connected to the battery, and whether the fuse in the power cable is intact.
- ✧ Check whether the ACC signal cable of the power supply device has a voltage (greater than 7 V).
- ✧ Check whether the key on the device is switched off.

MDVR Keeps Restarting

- ✧ Check whether the voltage is too low to start the device, causing the device to randomly restart.
- ✧ Hard disk/SD card failures may cause device startup failure. Remove the storage unit and turn on the device again to determine whether the storage unit is faulty.

Video Recording Does Not Work

- ✧ Check whether a storage unit is installed and in good contact and whether the storage unit can read data normally when connecting to a computer.
- ✧ The storage unit is not formatted. After the storage unit is inserted into our device, it needs to be formatted to perform normal data storage.
- ✧ Check whether there is a video signal input from the camera to the MDVR and whether there is a video image shown on the live view screen.

Video Files Have No Sound

- ✧ Check whether there is an external pickup connected or whether the camera features audio

acquisition.

- ✧ Access the video channel settings and check whether the audio option is enabled.
- ✧ The channel that realizes the sound recording function must have video input and can perform video recording normally.

GPS Abnormality

- ✧ Check whether the GPS antenna is correctly installed and whether there is a GPS silk screen on the GPS antenna pedestal on the back of the MDVR.
- ✧ Check whether the antenna receiver is blocked. The antenna receiver must not be covered, or else signal reception failure may occur as a result.
- ✧ The impacts caused by surrounding environments such as tree shelters, tunnels, driving near tall buildings and overpasses, thunderstorm weather, etc. may cause GPS signal loss or GPS to receive the wrong signal.

Device Cannot Be Shut Down in the Ignition Startup & Shutdown Mode

- ✧ Check whether the ACC signal cable connection is correct and whether there is no voltage on the ACC yellow line after the key is switched off.
- ✧ If the Timing Video Record is enabled and the current time has not exceeded the limit set in the recording time task table, the device cannot be shut down.