

X3NPro-PTH0404



Specifications



Preface

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Read the Specifications before using the product, to ensure that you will use the product correctly and all necessary functions will work properly.



Warning: conditions that may involve the safety of the device user or injure the device user



Important: conditions that may damage data integrity or firmware or hardware of the device



Note: additional descriptions, explanations of terms, etc.

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1. Product Introduction

X3NPro-PTH0404 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/Wi-Fi network transmission technologies, and GPS positioning technologies in the IT industry. It adopts the latest processor solution and supports recordings in formats of 1080p, 720p, WD1, WHD1, WCIF, D1, HD1, and CIF. Moreover, it allows real-time local recording and wireless uploading of vehicle status data and monitoring data. It can also be used in conjunction with the center software to implement professional functions such as alarm linkage, evidence center, remote management, video playback, track analysis, etc., embodying features of high reliability, installation flexibility, and maintenance convenience.

2. Product Features

- Embedded Linux operating system
- 4G/5G network technology, GPS positioning technology, WIFI/BT technology.
- Support recording with 1080P/720P resolution.
- H.265/H.264 encoding and decoding to improve the memory space utilization
- 3.5-inch hard disk storage, hard disk heating & hard disk power-off protection technologies
- Optional support for 2 sets of 2.5 inch solid state drives.
- Supports IO wake-up.
- Supports 4 channels of AHD and 4 channels of IPC.
- Supports bus dispatch and announcement functions, and has a built-in interface for high-power amplifiers.
- SD card backup
- Outstanding anti-vibration performance and high reliability, providing comprehensive functions
- Connection with storage units such as a fireproof box for disaster recovery backup

3. Specifications

Product Model: X3NPro-PTH0404	
Function Overview	Preview, video recording, playback, data transfer, and positioning
Operation System	Linux
Control Mode	CP4 Tablet, Mouse, EasyCheck App, and Network (3G/4G/Wi-Fi)
Video	
Input	4-channel AHD + 4-channel IPC (PON power supply)
Output	1-channel CVBS + 1-channel VGA
Total Capacity	PAL:4*1080P@25fps AHD +4*1080P@30fps IPC NTSC:4*1080P@30fps AHD +4*1080P@30fps IPC
Audio	
Input	4-channel AHD + 4-channel IPC
Output	1 Channel
Display	
Display Split	1/4/9-Screens co-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
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:

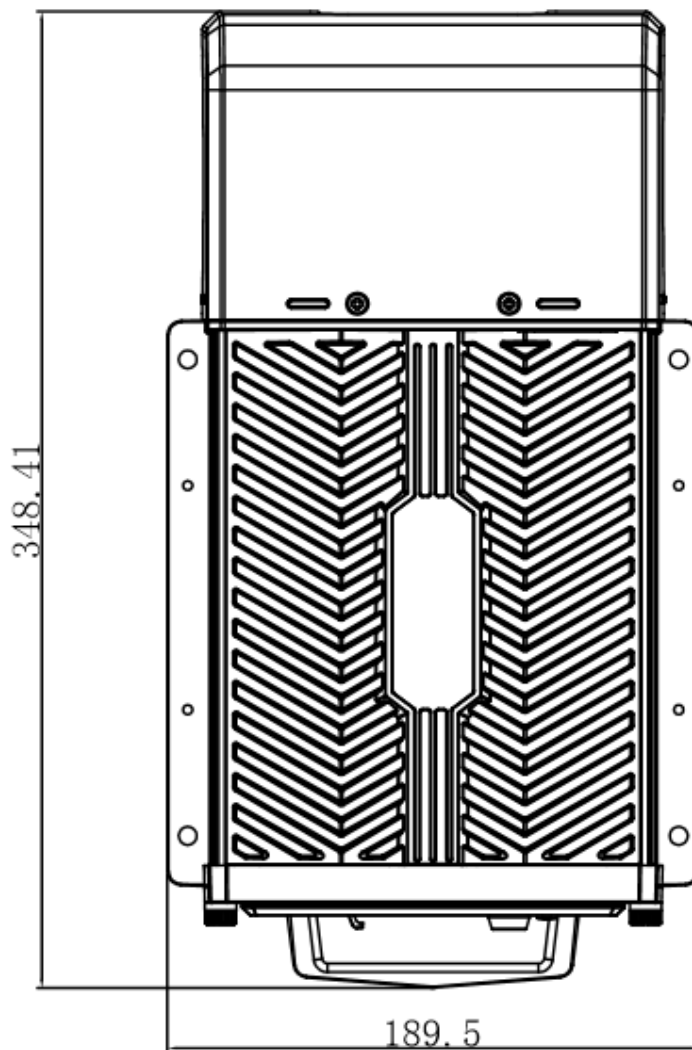
	<p>1080p (1920 × 1080), 720p (1280 × 720), WD1 (928 × 480), WHD1 (928 × 240), WCIF (464 × 240), D1 (704 × 480), HD1 (704 × 240), CIF (352 × 240);</p> <p>IPC: 1080p (1920 × 1080), 720p (1280 × 720);</p>
Image Quality	Levels 1–8 adjustable (preferably Level 1)
Recording Trigger Mode	Startup/Scheduled/Alarm event recording
Alarm Recording Delay Time	0-30 min
Video Playback	
Playback Channel	1-channel local playback
Search Mode	By date/time, channel, or event
Network	
3G/4G	<ul style="list-style-type: none"> ● For Europe and Asia: LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8 GSM: B3/B8 ● For Latin America: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28 LTE TDD: B40 WCDMA: B1/B2/B5/B8 GSM: B2/B3/B5/B8
WIFI	Supported protocol: 802.11a/b/g/n
5G	Optional support
Ethernet	1 × RJ45 (10/100 M)
Positioning	
GPS	Supported G-mouse

Sensor	
G-Sensor	Built-in 6-axis inertial sensor
Storage	
HDD	1 × 3.5" SATA HDD + 1 × M.2 SSD, hard disk heating supported 2*2.5"SATA SSD (Optional)
SD	Hot-swapping 32/64/128/256 GB SDXC
Port	
USB	1 × USB2.0 (5pin circular connector) + 1 × USB2.0 (Type A)
SD	1 × SD card slot
SIM	1 × SIM card slot
Serial Port	2 × RS232 + 2 × RS485
CAN	1 × CAN
IO	8-channel input and 2-channel output
Pulse Speed Detection	1 channel
Control Panel	CP4 (Tablet)
Intercom	1 × MIC port (CP4)
VGA	1 × VGA
Power Supply	
Input	DC 8-36V
Output	5 V @ 500 mA & 12 V @ 500 mA
Maximum Typical Power Consumption	45W
Standby Power Consumption	≈ 0 W
Physical Parameter	
Dimensions L×W×H	348.4mm x 189.5mm x 95.7mm (with rear shield and bracket)
Net Weight (kg)	3.0 kg (without hard disks)

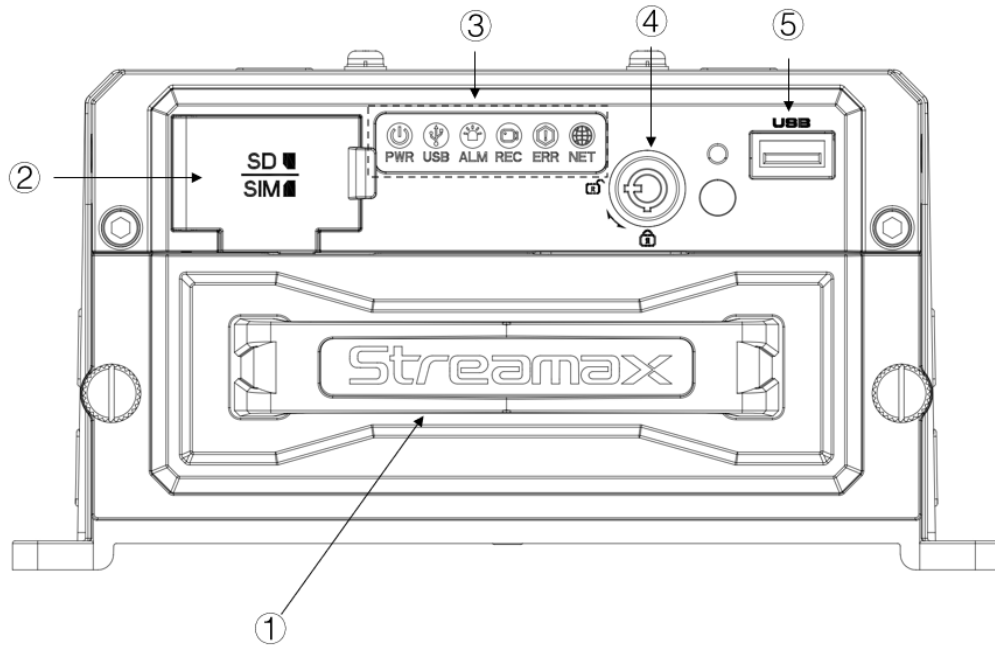
Environment	
Operating Temperature	-40°C to +70°C (heated, without hard disks)
Operating Humidity	8% to 95% (non-condensing)
Packing Content:	
X3NPro*1,GPS*1,4G Antenna*1,Wifi Antenna*1,Power Wire*1	
* The configuration may vary in different regions.	

4. Dimensional Drawings (Unit: mm)

4.1 Dimension Drawing1. (Unit: mm)

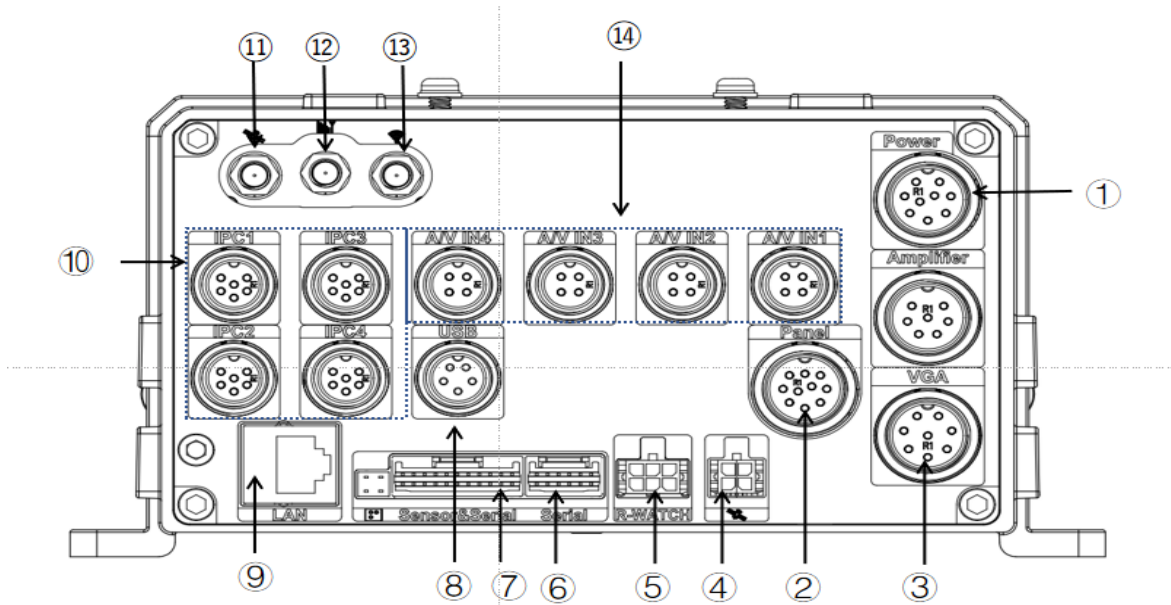





4.2 Front Panel Interface:




No.	Name
1	Hard disk case (for holding a hard disk)
2	SD/SIM card slot
3	Indicator: power (PWR), USB, alarms (ALM), recording (REC), errors (ERR), network (NET)
4	Device lock
5	USB interface

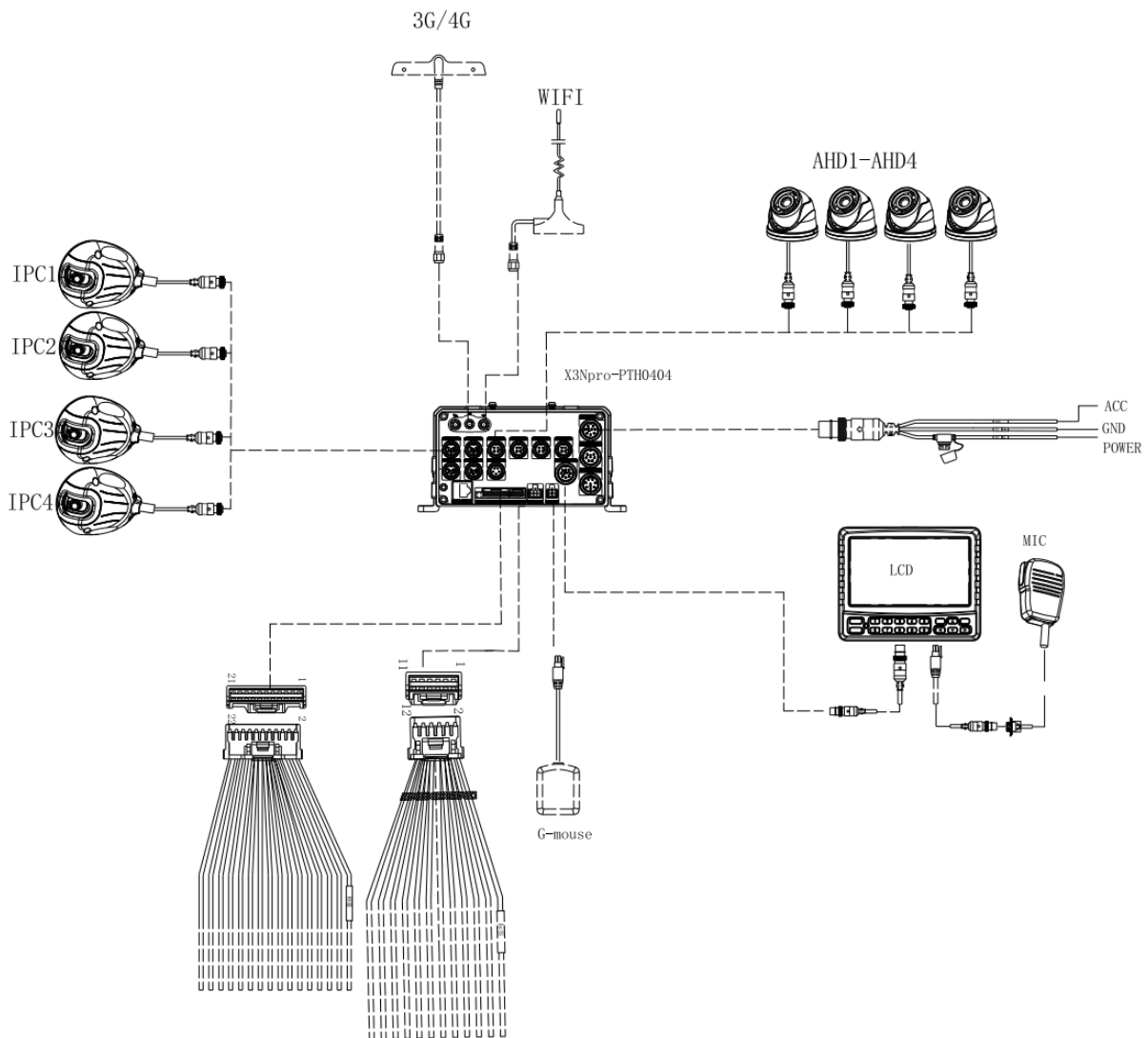
4.3 Rear Panel Interface:



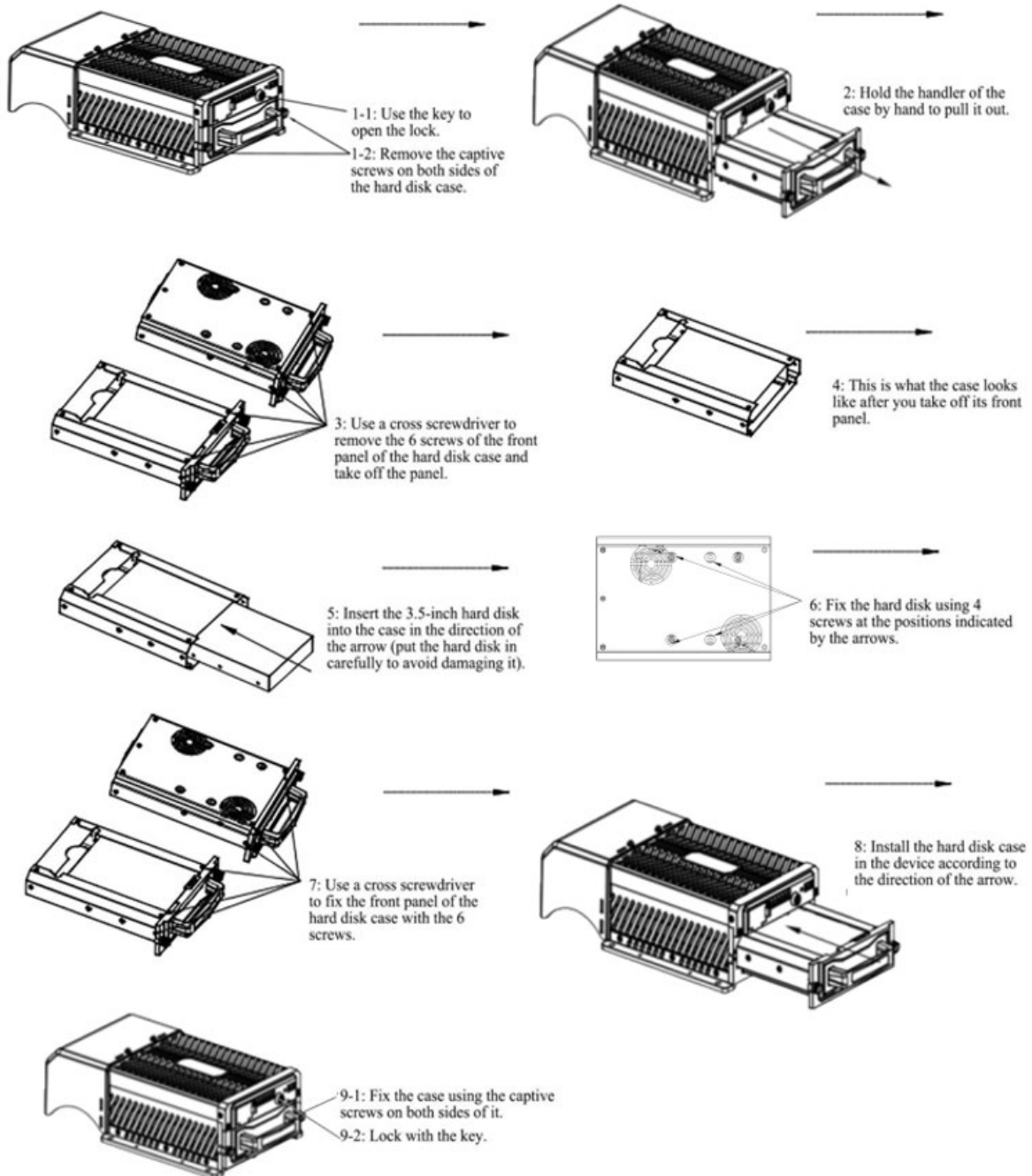
No.	Silk Screen	Description
1	Power	Power Input
2	Panel	CP4 port
3	VGA	VGA port
4		External positioning module port
5	R-WATCH	R-WATCH port
6	Serial	Serial port
7	Sensor&Serial	I/O ports& Serial port
8	USB	USB interface
9	LAN	LAN port
10	IPC1~IPC4	IPC (PON power supply) audio/video input ports 1-4
11		Internal positioning module port
12		3G/4G antenna port

13		Wi-Fi antenna port
14	A/V IN1~A/V IN4	Analog audio/video input ports 1 to 4

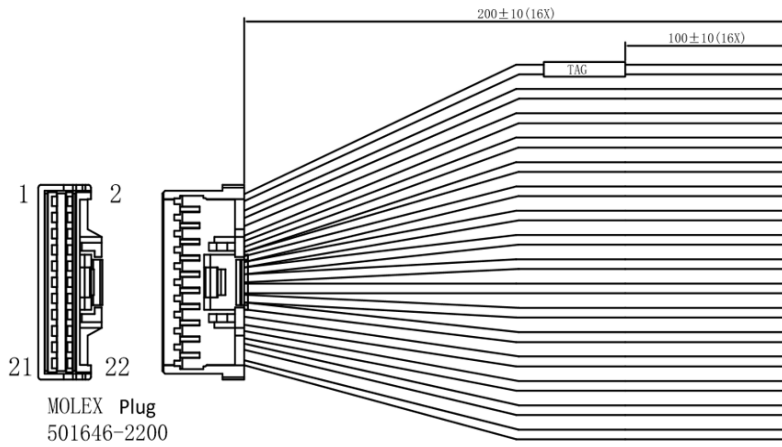
5. Product Installation



5.1 HDD Installation

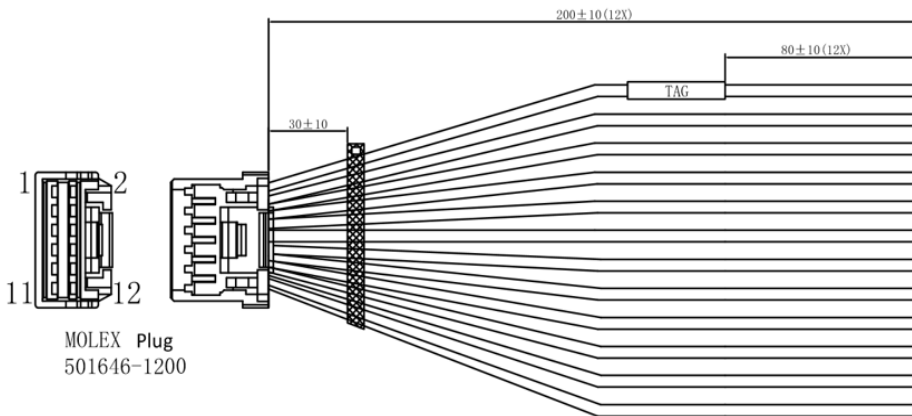


5.2 External Cable Connector Pinouts



MOLEX Plug
501646-2200

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



MOLEX Plug
501646-1200

Pin	Color	Label	Tag
1	White & Yellow	232TX-2	232TX-2
2	Green & Yellow	232RX-2	232RX-2
3	White & Black	CAN-H	CAN-H
4	Green & Black	CAN-L	CAN-L
5	Red	+5V	+5V
6	Black	GND	GND
7	Black	GND	GND
8	Red	+12V	+12V
9	White & Blue	485A-1	485A-1
10	Green & Blue	485B-1	485B-1
11	White & Blue	485A-2	485A-2
12	Green & Blue	485B-2	485B-2

6. Easy Troubleshooting

6.1 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 7.5V).
- ✧ Check whether the key on the device is switched off.

6.2 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. Take out the storage unit and turn on the device again to determine whether the storage unit is faulty.

6.3 No Video Recording

- ✧ 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.
- ✧ Check the storage unit is formatted or not. After the storage unit is inserted into MDVR 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 display screen.

6.4 Video Recorded Without Sound

- ✧ Check whether there is an external microphone 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.

6.5 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.

6.6 Device Fail to 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.



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