X3N-H0404
Specification

Revision History

Date	Revision Version	Description	Author
April 9, 2021	V 1.1	Added the description of the frequency bands supported by 4G and Wi-Fi.	Wang Xiaoyong
April 14, 2021	V 1.2	Added the description of AI functions.	Wei Yiwen
March 14, 2022	V 1.3	Added description of AI capability and video resource configuration, and some text optimizations (supporting X3N, Version xx).	Zhou Hao / Wang Xiaoyong

Overview

Streamax X3N-H0404 is a cost-effective device specially developed for mobile video surveillance and remote video surveillance, 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/BD 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 interference, radiation protection, simple design, flexible and easy installation, hard disk storage, SD card backup design, and high reliability, providing comprehensive functions. It supports extended AI intelligent algorithms, provides the Advanced Driver Assistance System (ADAS) alarm, Blind Spot Detection (BSD), and Driver Status Monitor (DSM), and effectively assists drivers in improving driving safety and reducing pedestrian and vehicle accidents.

Highlights

- Embedded Linux operating system
- Extended AI intelligent algorithms
- 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
- Support high-definition VGA output

Active Safety Features

Connecting ADKit, Streamax X3N-H0404 supports two-channel AI algorithms. The DMS algorithm can detect dangerous driving behavior, and the ADAS algorithm can assist drivers in safe driving. Any detected event will trigger audible and visual reminders to warn the driver in real time, and the event video will also be uploaded to the cloud at the same time.
If additional support for the BSD functional algorithm is required, please contact Streamax Local Customer Manager for consultation.

DMS Features

Lens Covered

Fatigue

Phone Call

Smoking

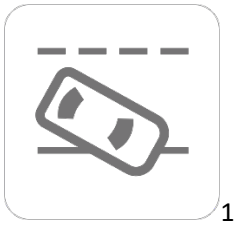
Distraction

No Driver Detected

Safety Belt Not Fastened

Yawning

ADAS Features



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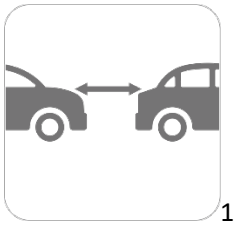
LDW



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HMW

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FCW

Optional Active Safety Features

BSD Function

Left Blind Spot detection

Right Blind Spot detection

Front Blind Spot Detection

Specifications

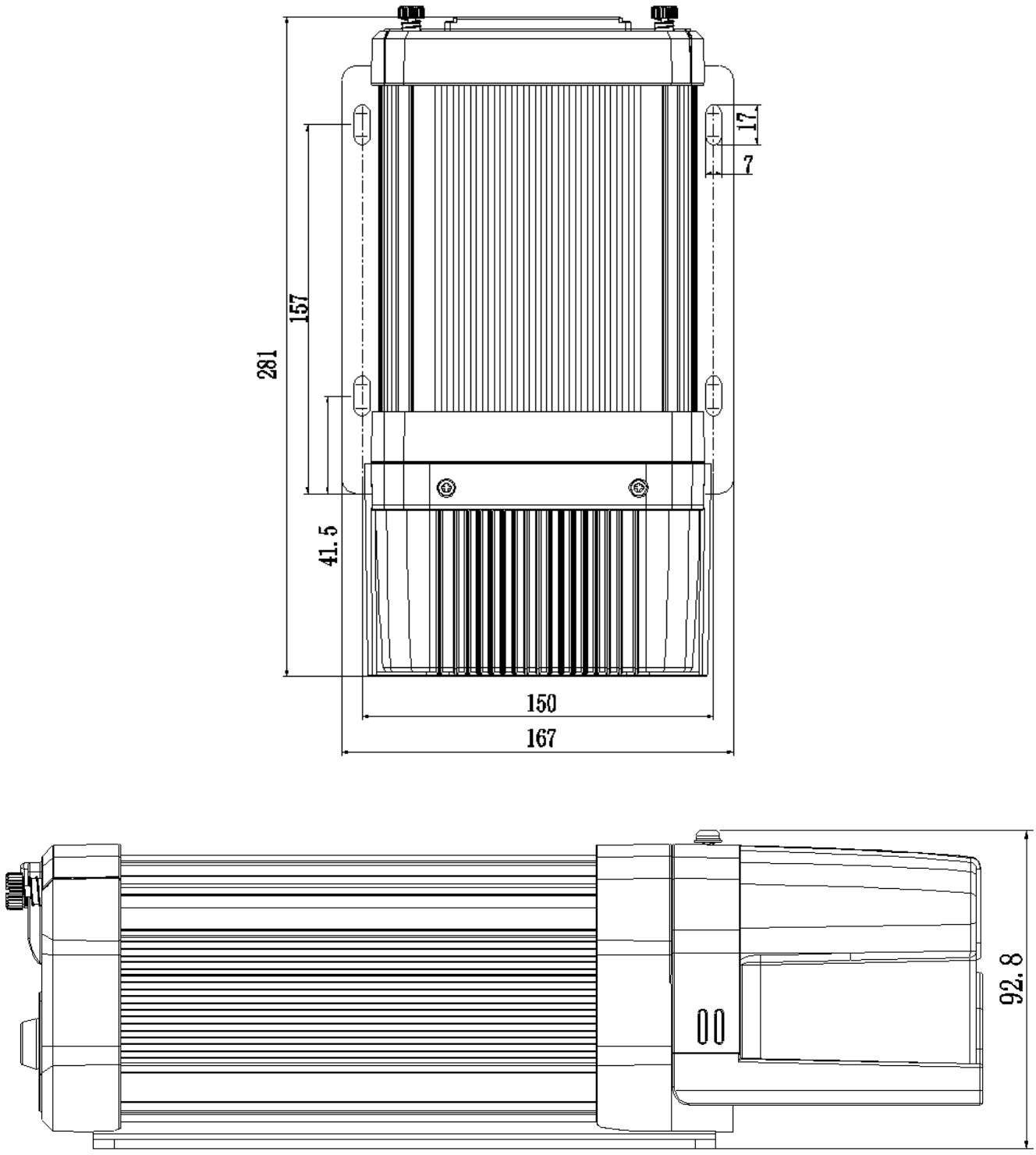
Product Model	
	X3N-H0404
Function Overview	
	Preview, video recording, playback, network transmission, and positioning
System	
Operating System	Linux 4.9
Control Mode	CP4, mouse, EasyCheck, network (3G/4G/Wi-Fi)
Video	
Input	4-channel AHD + 4-channel IPC
Output	2 channels (CVBS + VGA)
Total Resources	**AHD:** 4 X 720p @ 25 FPS (PAL) or 4 X 1080p @ 12 FPS (PAL) or 4 X 720p @ 30 FPS (NTSC) or 4 X 1080p @12 FPS (NTSC) **IPC：** 4 X 1080P@30fps
Video Signal Standards	Level: 1 Vpp; impedance: 75 ohm NTSC/PAL (optional)
Audio	
Input	8 channels (AHD*4+IPC*4)
Output	1 channel
Audio Signal Standards	Level: 2 Vpp; input impedance: 4.7 kilohm
Display	
Screen Split	1/4/9-screen display
Screen Display	Positioning information, alarms, license plate numbers, driving speed, time, etc.
Operating Interface	GUI
Recording	
Video Compression Format	H.264/H.265
Audio Compression Format	ADPCM、G.711U、G.711A
Image Resolution	AHD: PAL: 1080P(1920X1080),720P(1280X720), WD1(928X576),WHD1(928X288), WCIF(464X288),D1(704X576), HD1(704x288),CIF(352x288); NTSC: 1080P(1920X1080),720P(1280X720), WD1(928X480),WHD1(928X240), WCIF(464X240),D1(704x480), HD1(704x240),CIF(352x240); IPC: 1080P(1920X1080),720P(1280X720);
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 time, channel, or event
Network	
3G/4G	Support EVDO/TD-SCDMA/WCDMA/TDD-LTE/FDD-LTE
WIFI	W217 Model Support 802.11a/b/g/n/ac Support 2.4GHZ/5.0GHZ
Ethernet	RJ45 × 1(10/100M)
Positioning	
GPS	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, Thickness: 7/9.5/15 mm; hard disk heating: supported
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 & 12 V@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)
Support MDVR AI	Match Streamax AHD camera CA29M (DSM) and CA20S3.0 (ADAS)

AI Capability Configuration of X3N+ADKit (Maximum Configuration)

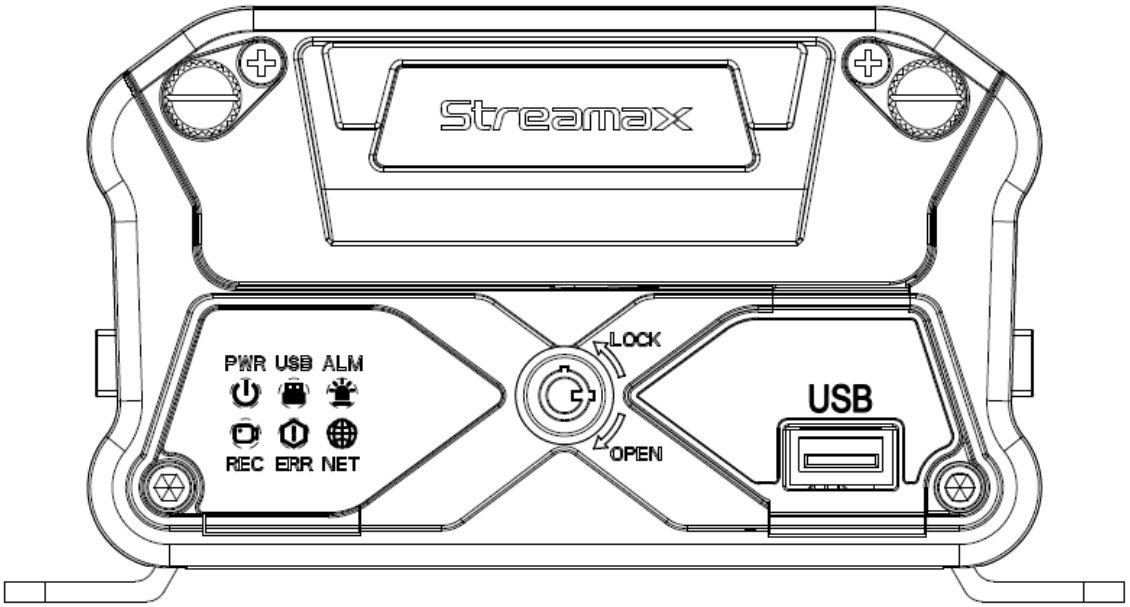
Solution configuration: X3N-GMH0404+ADKIT (ADAS+DMS. If ADAS and DMS algorithms are involved, they shall be processed in ADKIT)	
Number of Channels	Channel Resources
Channel 1 (IPC)	DMS, 960P, 25fps, image quality 1
Channel 2 (IPC)	ADAS, 1080P, 25fps, image quality 1
Channel 3 (IPC)	IPC, 960P, 30fps, image quality 1
Channel 4 (IPC)	IPC, 960P, 30fps, image quality 1
Channel 5 (AHD)	AHD, 720P, 25fps, image quality 1
Channel 6 (AHD)	AHD, 720P, 25fps, image quality 1
Channel 7 (AHD)	AHD, 720P, 25fps, image quality 1
Channel 8 (AHD)	AHD, 720P, 25fps, image quality 1

Dimensions (mm)

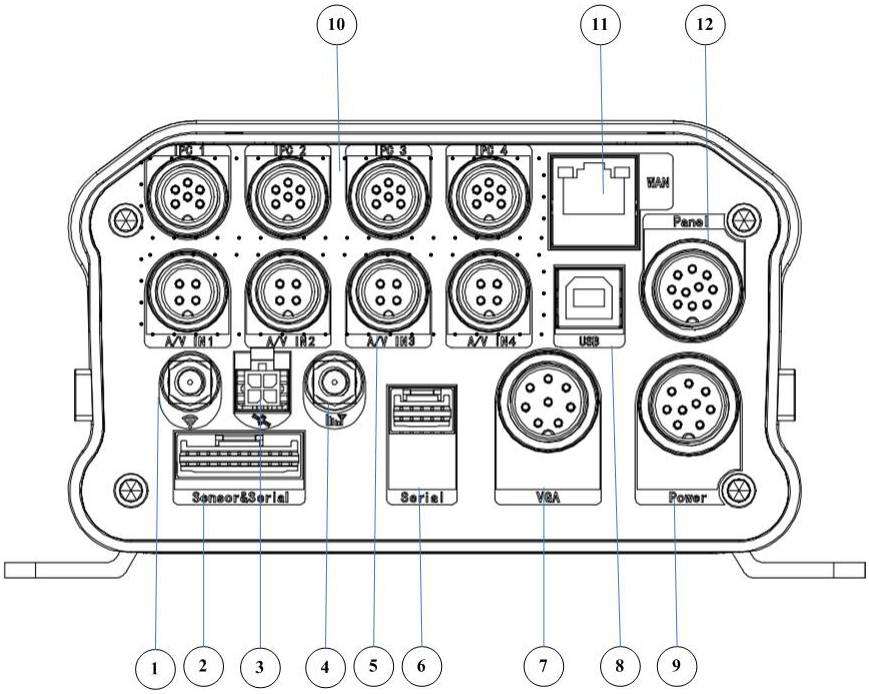


Panel Ports

Front panel:



Rear panel:

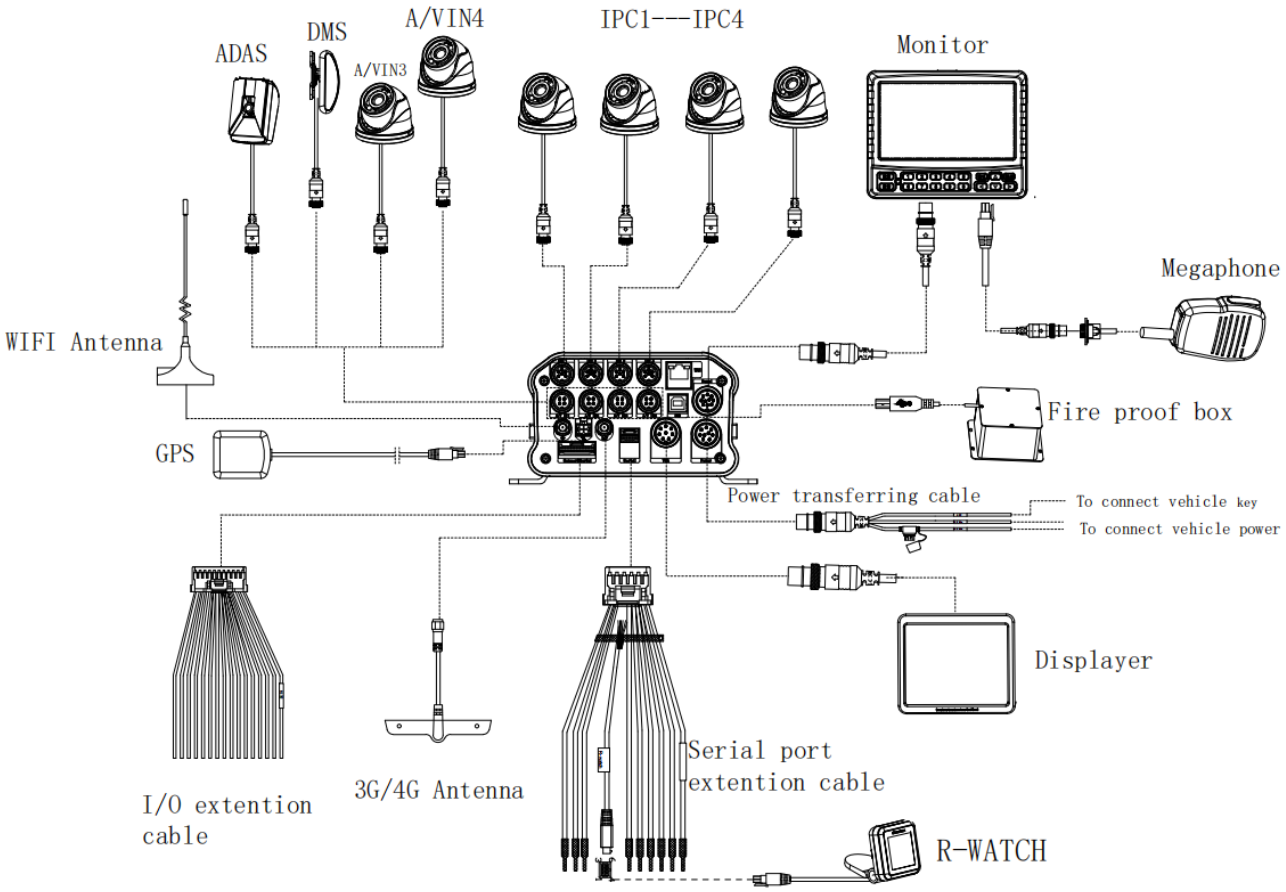


S/N	Silkscreen	Description
1		Wi-Fi antenna port
2	Sensor&Serial	IO port & serial port
3		GPS/BDS antenna connector
4		3G/4G antenna port
5	A/V IN1~4	Analog audio/video input ports 1 to 4
6	Serial	Serial port

7	VGA	VGA port
8	USB	USB 2.0 port (Type B)
9	Power	8 – 36V 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

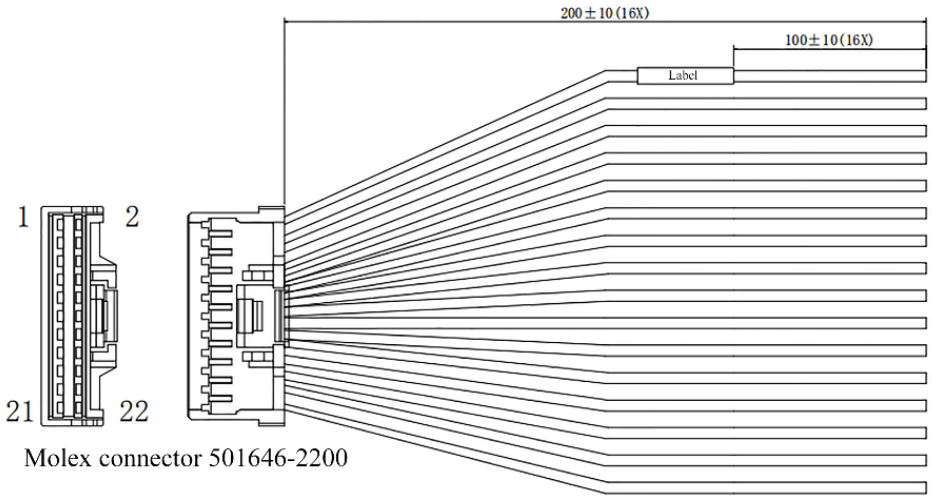
Installation

Typical Wiring Diagram



Definition of 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