M1N-TKH0401

Specification

Overview

M1N-TKH0401 is a highly integrated AI MDVR for fleet video monitoring services. It has a high-speed processor and embedded operating system, combined with the most advanced H.265 video compression/decompression technology, GPS positioning technology. It supports video recording in 1080P, 720P, WD1, WHD1, WCIF, D1, HD1 and CIF formats. It is easy to use with simple design, multiple functions, superior anti-vibration performance, flexible installation and high reliability.

Highlight

- Supports 4-channel AHD (1080P) +1-channel IPC (1080P)
- Supports H.265
- Supports 2 x SD card
- Supports WIFI/BT4.0
- Supports 3G/4G
- Supports GPS
- Supports Remote Wake-up
- Supports Low Consumption Sleep Mode

Active Safety Features

The MIN is equipped with two AI algorithms, the DMS algorithm to detect risky driving behaviors and the ADAS algorithm to assist drivers in driving safety. The ADAS algorithm can be replaced with BSD as needed. Detected events will trigger an audio and visual notification by R-watch to alert the driver in real time, event recordings will be uploaded to the cloud simultaneously.

DMS Features

Yawning

Fatigue

Smoking

Phone Call

Distraction

Lens Covered

ADAS Features

LDW

HMW

FCW

PCW

Optional Active Safety Features

BSD Features

Specifications

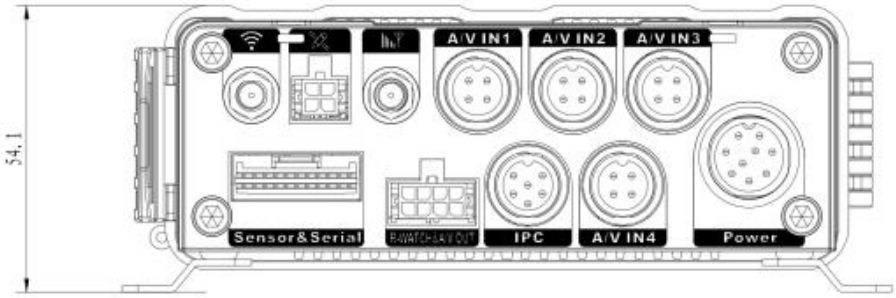
Product Model	
	M1N-TKH0401
Function Overview	
	Preview, video recording, playback, network transmission, and positioning
System	
Operating System	Linux 4.9
Control Mode	CP4, mouse, EasyCheck, network (3G/4G/Wi-Fi)
Video	
Input	4-channel AHD + 1-channel IPC
Output	1-channel (CVBS)
Total Resources	PAL: 4 × 720P@25 FPS(AHD)+1 × 1080P@30 FPS(IPC) Or 4 × 1080p @ 11 FPS (AHD) + 1 × 1080p @ 30 FPS (IPC) NTSC: 4 × 720P@30 FPS(AHD)+1 × 1080P@30 FPS(IPC) Or 4 × 1080p @ 11 FPS (AHD) + 1 × 1080p @ 30 FPS (IPC)
Video Signal Standards	Level: 1 Vpp; impedance: 75 ohm NTSC/PAL (optional)
Audio	
Input	5 channels (1-channel IPC audio)
Output	1
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
Image Resolution	Analog: 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); Digital: 1080P(1920X1080), 720P(1280X720);
Image Quality	Levels 1–8 adjustable (preferably Level 1)
Recording Mode	Startup/Manual/Scheduled/Alarm event recording
Alarm Prerecording	0 - 6 0min
Alarm Recording Delay	0 - 30 min
Playback	
Playback Channel	1-channel local playback
Search Mode	By date/time, channel, or event
Network	
IPC Ethernet	6-pin aviation plug (1 × 100M, PON power supply)
WIFI	Supported 1 × SMA female connector 802.11a/b/g/n/ac
3G/4G	Supported 2 × SMA female connectors **For North America** LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71 WCDMA: B2/B4/B5 **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
Positioning	
GPS	Positioning, speed detection, and time synchronization GPS L1 1575.42 MHz BDS B1 1561.098MH GALILEO E1B/C1 GLONASS L1OF 1602MHz SBAS: WAAS, EGNOS, MSAS, GAGAN

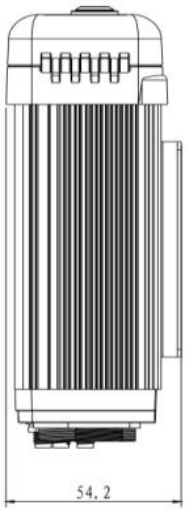
Sensor	
G-Sensor	Built-in 6-axis inertial sensor
Storage	
SD	2 × SD card slots
Port	
USB	1 × USB2.0 (Type A)
RS485	1-channel (R-WATCH)
RS232	2

IO	8-channel input and 2-channel output
Speed	1-channel pulse speed detection
Control Panel	CP4 (accessories optional)
Intercom	1 × MIC port
CAN	1
UPS	Supported (external)
UTC	Supported
G-MOUSE	Supported and connected with the 5559 connector
Power Supply	
Input	DC 8 - 36 V
Output	5V@500 mA
Maximum Typical Power Consumption	29 W
Standby Power Consumption	≈ 0 W
Physical Characteristics	
Dimensions (mm)	167.3 × 146.3 × 54.1
Weight (kg)	0.83
Environment	
Operating Temperature	-40°C - +70°C
Operating Humidity	8% to 95% (non-condensing)

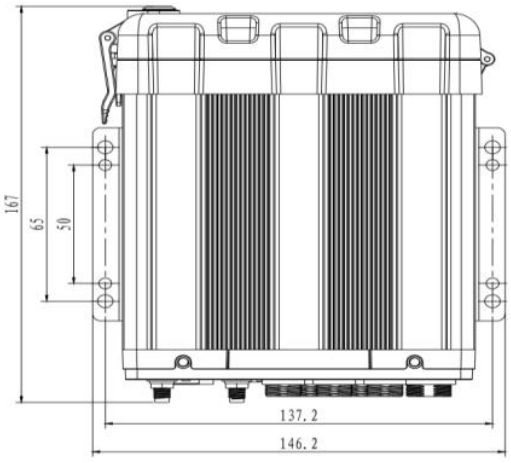
Dimensions (mm)



Front View



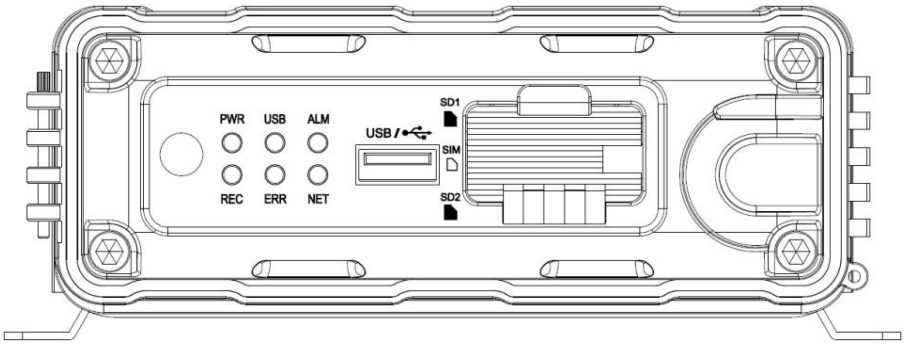
Left View



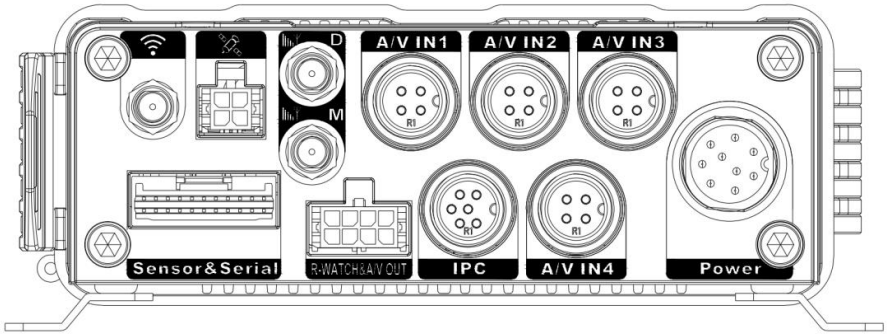
Top View

Panel Ports

Front panel:



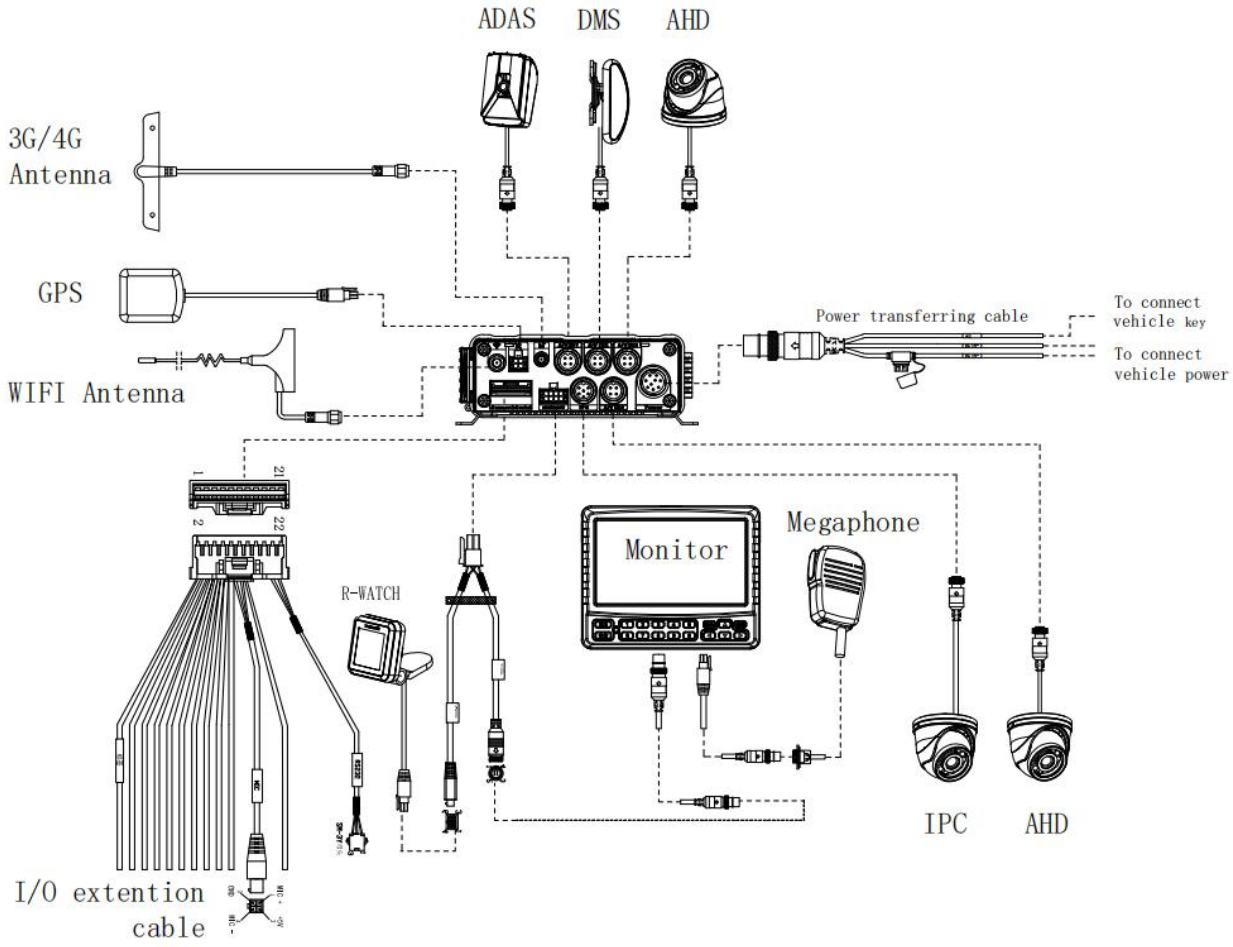
Rear panel:



No.	Silk Screen	Description
1	Power	8–36 V DC power input
2	Sensor&Serial	Serial port and IO port
3	A/VIN1 1~4	Analog audio/video input ports 1 to 4
4	R-WATCH&A/V OUT	R-WATCH and audio/video output port
5	IPC	PON-powered IPC port
6		GPS/BD antenna connector
7		Wi-Fi antenna connector
8	D/M	3G/4G antenna connector

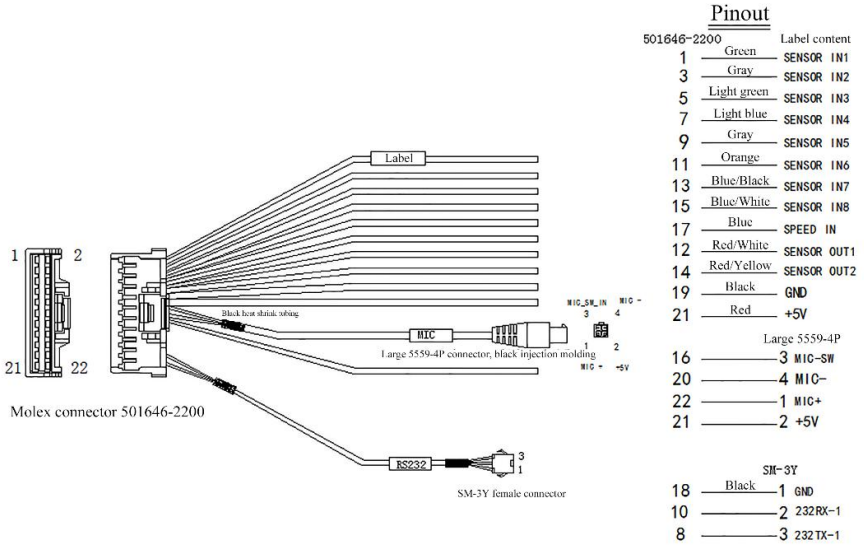
Installation

System Connection Diagram

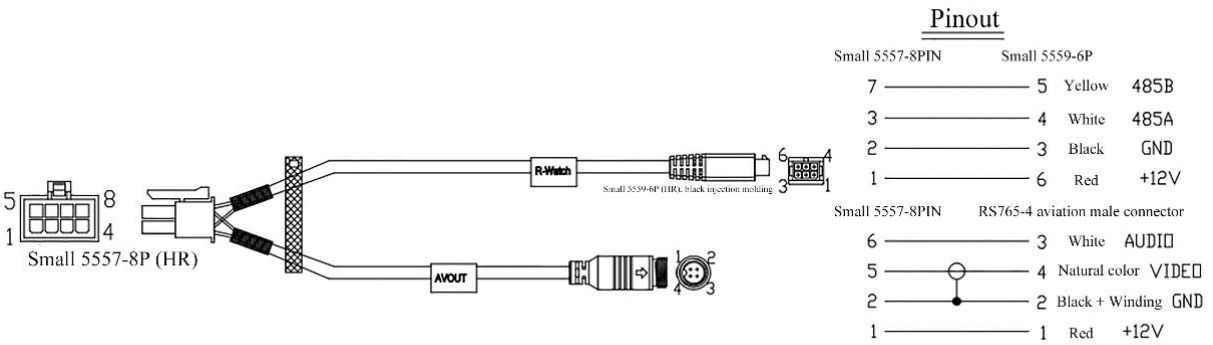


Definition of External Cable Connector Pinouts

(1) Alarm serial cable connector pinout



(2) Signal cable connector pinout



(3) Power cable connector pinout