FTMD-MIN1-5CH ● MDVR
Technical Datasheet

FTMD-MIN1-5CH
MDVR - Highly Integrated Design
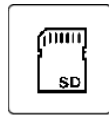
GPS Tracking

Geo Fencing

Playback Trips

Wi-Fi

SD Card

Live Tracking

Product Summary

FTMD-MIN1-5CH is a highly integrated AI MDVR for fleet video monitoring services. It has ahigh-speed processor and embedded operating system, combined with the most advanced H.265 video compression/decompression technology, GPS positioning technology. It supports video recordingin1080P, 720P, WD1, WHD1, WCIF, D1, HD1 and CIF formats. It is easy to use with simple design, multiple functions, superiority-vibration performance, flexible installation and high reliability.

Key Features:

➢ 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

Fleetly FTMD-MIN1-5CH is equipped with two AI algorithms, the DMS algorithm to detect risky driving behaviours 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 **(Lane Departure Warning)**	**HMW** **(Headway Monitoring Warning)**	**FCW** **(Forward Collision Warning)**
PCW		

BSD Features

Optional Active Safety Features

Technical Specification

Product Model

FTMD-MIN1-5CH

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 + 1-channel IPC
Output	1-channel (CVBS)
Total Resource	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 displ
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	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

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 connectors

Power Supply

	Input	DC 8-36 V
	Output	5 V @500 mA
	Maximum Typical Power Consumption	29 W
	Standby Power Consumption time	≈ 0 W

Physical Characteristics

	Dimensions (mm)	167.3 × 146.3 × 54.1
	Weight (kg)	0.83

Environment

	Operating Temperature	−40°C to +70°C
	Operating Humidity	8% to 95% (non-condensing)

S\N	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

Dimensions

(Unit: mm)

Front View
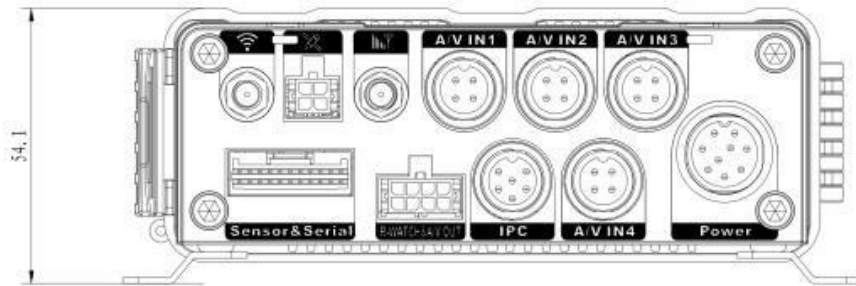
Left View

Top View

Front panel

PWR USB ALM

REC ERR NET

USB / ⌁

SD1

SIM

SD2

Rear panel

D

M

A/V IN1   A/V IN2   A/V IN3

R1   R1   R1

IPC   A/V IN4

R1   R1

Sensor&Serial   R-WATCH&A/V OUT   IPC   A/V IN4   Power
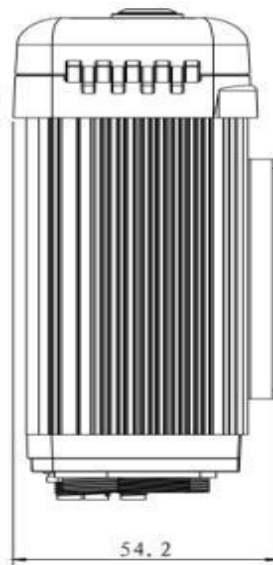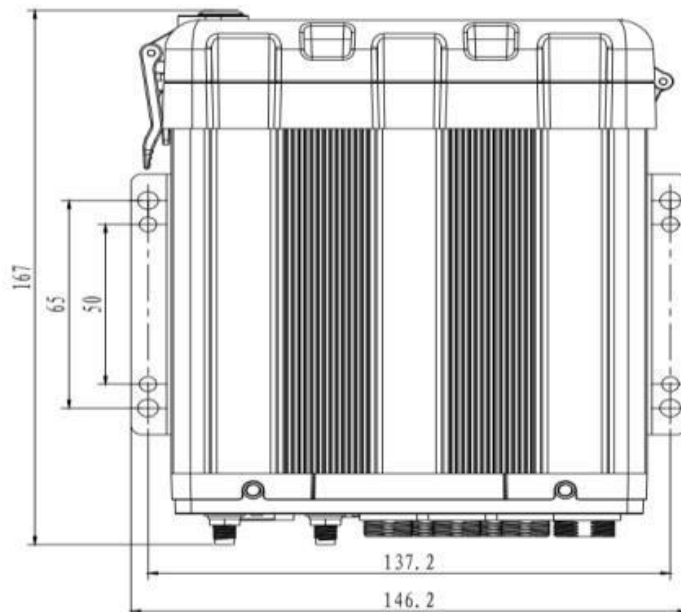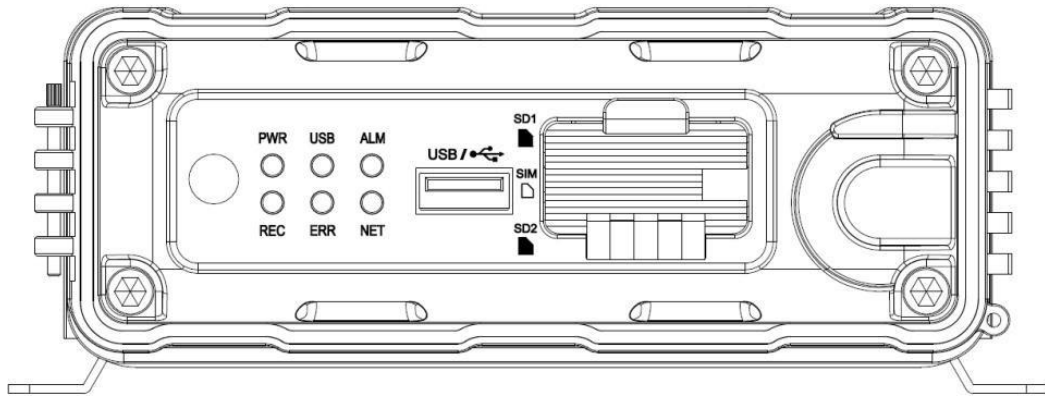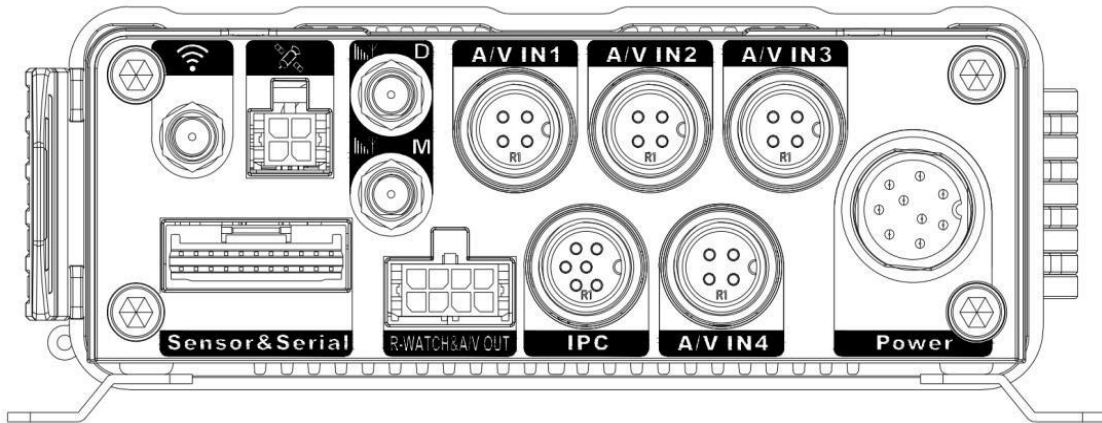
System Connection Diagram

ADAS   DMS   AHD

3G/4G Antenna

GPS

WIFI Antenna

Power transferring cable

To connect vehicle key

To connect vehicle power

I/O extention cable

R-WATCH

Monitor   Megaphone

IPC   AHD
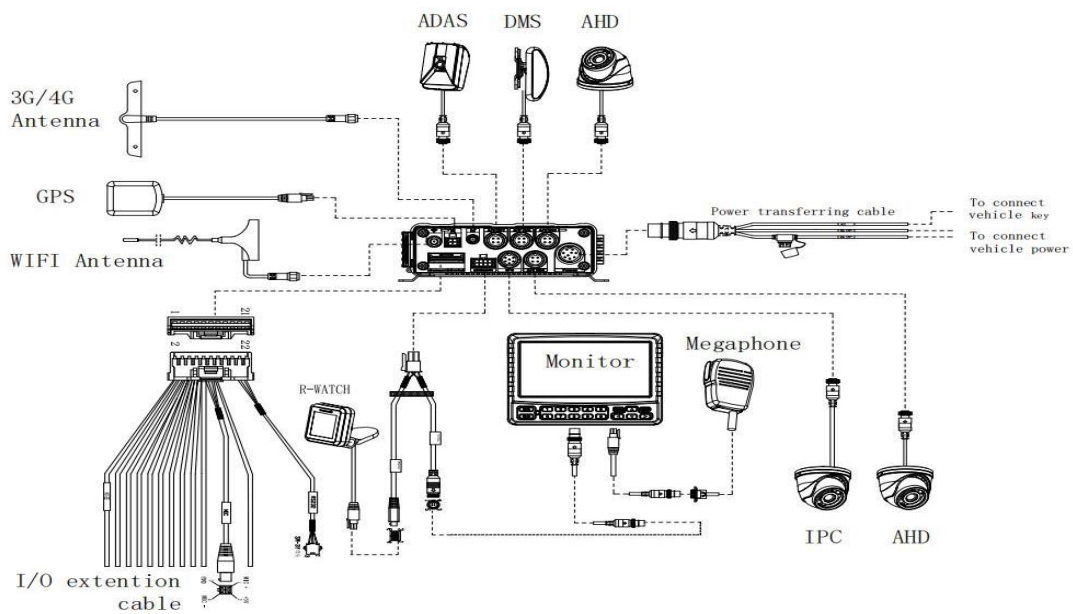
Alarm serial cable connector pinout

Label

Black heat shrink tubing

MIC

Large 5559-4P connector, black injection molding

MIC SW IN   MIC –
3   4

MIC +   +5V
1   2

RS232

SM-3Y female connector

Molex connector 501646-2200

1 2
21 22

Pinout

501646-2200		Label content
1	Green	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

Large 5559-4P

16	3	MIC-SW
20	4	MIC-
22	1	MIC+
21	2	+5V

SM-3Y

18	Black	1	GND
10		2	232RX-1
8		3	232TX-1

Signal cable connector pinout

R-Watch

Small 5559-6P (HR), black injection molding

AVOUT

5 8
1 4

Small 5557-8P (HR)

Pinout

Small 5557-8PIN	Small 5559-6P		
7	5	Yellow	485B
3	4	White	485A
2	3	Black	GND
1	6	Red	+12V

Small 5557-8PIN	RS765-4 aviation male connector		
6	3	White	AUDIO
5	4	Natural color	VIDEO
2	2	Black + Winding	GND
1	1	Red	+12V

Power cable connector pinout

300±15(3X)

80±10

80±10(3X)

DC IN+   Red
DC IN-   Black
ACC   Orange

30±10

CAN

DJ7041A-2.8-11

3 1
4 2

200±15

1 2 3
9 8 7 6 5 4

Pinout

YL16-9 aviation female connector

Suspension wire

1			
2	Red (DC IN+)	UL1015 16AWG
3	Orange (ACC)	UL1569 18AWG
6			
7	Black (DC IN-)	UL1015 16AWG

YL16-9 aviation female connector

DJ7041A-2.8-11

5	2 Shield (GND)
8	1 Green (CAN-H)
9	3 Yellow (CAN-L)

Sectional view

Conductor: 17/0.16 TC × 1P twisted pair
Insulation layer: PE, yellow wire, green wire ID: 1.4±0.1
Winding: 50/0.10 TC
Outer sheath: PVC, OD: 4.0±0.2, black
Print on the wire: -40°C to +105°C