

# G5M User Manual

Name: Smart vehicle camera

Model: G5M

Manual version : V 1 . 0



## To customer

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# MENU

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## 1.1 Introduction

G5M utilizes the latest Hisilicon solution, professional image processing chipset and Linux operation system. G5M supports 2 channels ADAS and DSM algorithm camera and also 2 channels 1080P / 720P / D1 Video with audio. G5M can diagnose device errors in real-time, which makes remote trouble-shooting and maintenance much easier. G5M also utilizes the latest high accuracy GPS tracking technology.

## 1.2 Features

- Hisilicon latest solution/H.264 encrypt /Super image processor/Clear image
- Supports 2CH 720P ADAS and DSM camera
- Supports 2CH 1080p / 720p / D1 AHD Camera with audio input
- Supports 1 x SD card max to 256GB
- Supports 1CH CVBS AV output
- 4G connective, High sensitive GPS tracking
- Real-time self-diagnostic report, Remote ADAS settings, Remote parameter settings query

## 1.3 Packing list

Form 1 Standard packing

Item	Name	Unit	Remark
01	Host	1	G5M Host
02	ADAS Camera	1	6PIN, 2m cable
03	DSM Camera	1	5PIN, 2M cable
04	Power cable	1	7PIN, 2M cable
05	GPS antenna	1	4PIN, 3M Cable
06	4G antenna	1	Screw hold, 2.5M cable
07	24PIN 8PIN COM cable	1	24PIN socket, 1M cable, 8 signal lines
08	Speaker	1	2PIN socket, 1.5M cable
09	Key	1	SD Card and SIM card lock
10	Install tools	1	Level meter / Screw drivers / Scre
11	Maintenance card, quality card	1	
12	Packing box	1	(L) 36 * (W) 19 * (H)14.2cm Total W 1.8KG

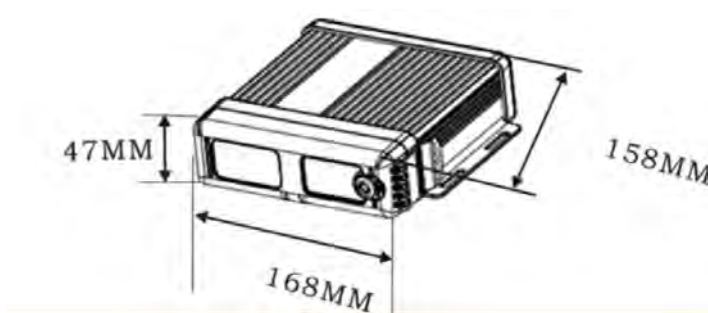
Form 2 Optional accessory list

Item	Name	Unit	Remark
01	(Inside) 1080P AV AHD Camera	1	0.5M 1080P
02	(Outside) 1080P AV AHD Camera	1	3M 1080P Waterproof
03	(Inside) 720P AV AHD Camera	1	0.5M 720P with audio
04	(Outside) 720P AV AHD Camera	1	3M 720P
05	AHD camera extension cable	1	4PIN 3M
06	AHD camera extension cable	1	4PIN 6M
07	AHD camera extension cable	1	4PIN 8M
08	ADAS Camera extension cable	1	6PIN 1M
09	24PIN COM port	1	1M, For connect external sensors
10	GT1 high accuracy GPS antenna	1	4PIN, 2M
11	SD Card	1	64GB

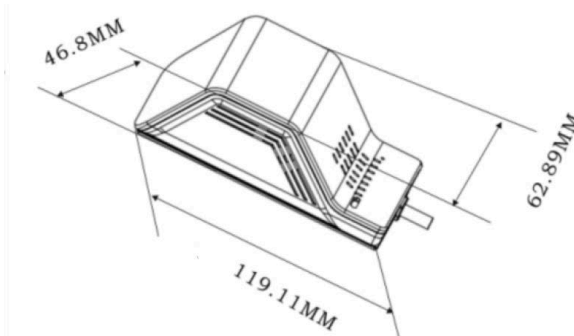
# Chapter 2 Parameters

## 2.1 Dimension

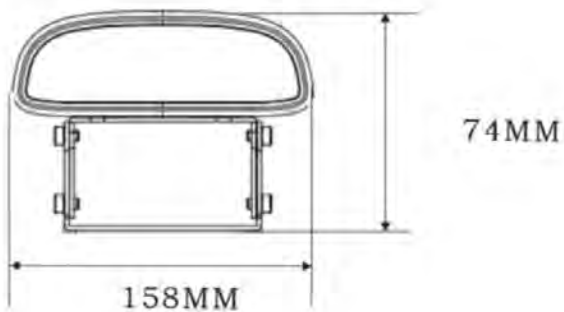
Name	Size
Host	158mm*168mm*47mm
ADAS Camera	119mm*63mm*47mm
DSM Camera	100mm*58mm*74mm



G5M host dimension



ADAS Camera dimension

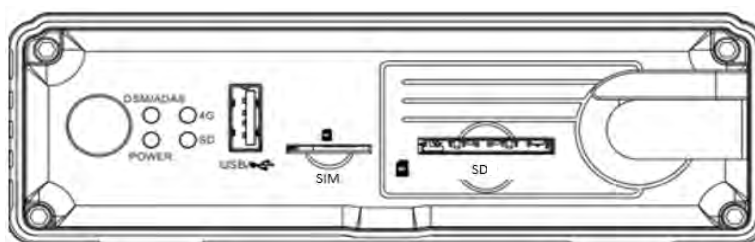


DSM Camera dimension

## 2.2 Interface

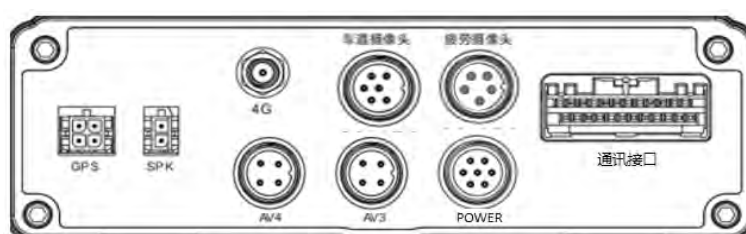
### //(1) Front panel

Item	Mark	Description	Function Description
Indicator	POWER	Working indicator	Normal: Solid
	4G	4G indicator	Normal: Blink
	SD	SD Indicator	Normal: Blink
	DSM/ADAS	Algorithm camera	Normal: Red & green blink DSM Green; ADAS Red
Slot	SIM	SIM card slot	SIM card network
	SD	SD card slot	Save local footage
	USB	USB port	Upgrade and settings



### // (2) Back panel

Item	Mark	Description
Power	POWER	Power socket
Locate	GPS	GPS antenna port
Network	4G	4G antenna port
Speaker	SPK	External speaker port
COM	Com port	RS485/RS23/MIC/Ethernet
Camera	ADAS Cam	ADAS algorithm camera
	DSM Cam	DSM algorithm camera
	AV3/AV4	AV AHD Camera

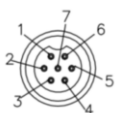


## 2.2 Interface

### //(3)Interface defination

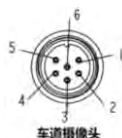
Item	Mark	Description
Power port	POWER	7PIN, Power source, AV output
ADAS camera	Road camera	6PIN ADAS algorithm camera
DSM camera	Fatigue camera	5PIN DSM algorithm camera
AHD camera	AV3, AV4	4PIN AV Camera
Communication	COM port	24PIN RS485 / RS232 / MIC / Ethernet

#### A, power cable



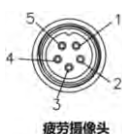
1	Power +	5	Video output
2	Power -	6	NC
3	ACC	7	NC
4	GND		

#### B, ADAS Camera



1	Video	4	TX
2	Audio	5	Power 5V
3	RX	6	GND

#### C, dsm Camera



1	Video	4	NC
2	GND	5	NC
3	Power 5V		

#### D, AHD Camera



1	Power 12V	3	Audio
2	GND	4	Video

#### E, Communication



1	MIC-	9	GND	17	GND
2	MIC+	10	IN1	18	IN5_AD2
3	RS232_TX_DBG	11	Power 12V	19	Power 5V
4	RS232_RX_DBG	12	IN2	20	Mx2-
5	485A/CANL	13	IN3	21	Power12V
6	485B/CANH	14	IN4_AD1	22	Mx2+
7	RS232_TX_RES	15	ALM_KEY	23	Mx1+
8	RS232_RX_RES	16	GND	24	Mx1-



## 2.3 Parameters

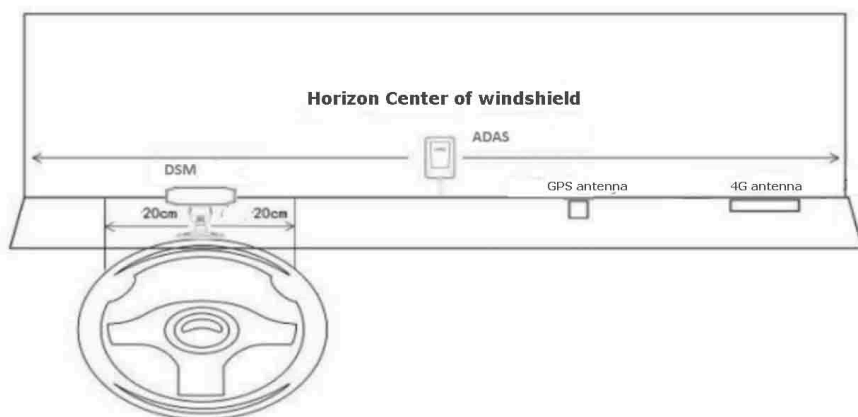
Specifications		
System	Processor	Hi3520DV400
	System	Linux
	Language	Chinese / English
	UI	GUI
	Password	User password, admin password, double protection
AV	Format	PAL/NTSC
	Compress	H.264
	Resolution	1080P/720P/D1/HD1/CIF
	compound	Auto match 1080P / 720P / D1
	Video Quality	Level 1 to 8, Level 1 is highest, level 8 is lowest
	Display	Support 1, 4 camera display
	Audio compress	G711A, G726-32K, G726-40K
	Audio record	Audio sync with video
Recording	Video rate	Max 4096Mbps, 8 levels quality optional
	Audio rate	8KB/s
	Storage	SD card
	Video query	Can be queried by channel or types
	Local playback	Playback by doc.
Interface	AV input	2CH ADAS and DSM camera
		2CH DVR camera
	Video output	1CH CVBS output
	Alarm input	4 x alarm input
	COM port	1xRS485, 1xRS232, 1xCAN, 1xethernet
	Antenna	1xGPS antenna
		1x4G antenna
	USB port	1xUSB 2.0
	SPK port	1xSPK
	MIC port	1x audio talk MIC port
	Indicator	POWER, 4G, SD, ADAS/DSM
SIM Card	1	
SD Card	1	
Others	Power input	DC: 9V~36V
	Power output	12V/1A, 5V/1A
	Consumption	15W, 12V/1.25A, 24V/0.6A
	Work Temp.	-20 ~ 70°C
	Storage Cap.	D1: 500M/hour/CH, 720P: 1GB/hour/CH, 1080P:2GB/hour/CH
Upgrade	Upgrade	Manual upgrade, FOTA, Auto upgrade
	Upgrade method	USB, SD Card, Wireless network

# Chapter 3 Operation

## 3.1 Installation

Item	Essential
Host	Fix G5M to dashboard or other place,fasten screws and lock slot cover.
ADAS Cam	Below front windshield, horizon center,road and sky 50/50
DSM Cam	Above wheel, 80CM to driver head, face in the center of camera vision, wheel cannot be shot;
GPS antenna	Front side towards sky, avoid electronic interfere
4G antenna	Front side towards sky, avoid electronic interfere

Position:



ADAS Camera install position example



DSM Camera install position example



## 3.2 Wiring

Item	Mark	Essential
Power cable	Power	Thick cable connects battery power source
	GND	Thick cable connects battery negative or vehicle metal
	ACC	Connect with vehicle ACC line
COM port	Turn left	Connect with vehicle left-turn light signal line
	Turn right	Connect with vehicle right-turn light signal line

### 3.3 Get online

Item	Essential
IP	Platform server IP or domain
Port	Platform server port
Protocol	Select platform server matched protocol
Phone No	According to platform registered phone No.
Plate No.	Vehicle plate No.
Terminal ID	According to platform registered terminal ID
Vehicle color and others	Vehicle color and other platform required info
Two ways settings	Optional: (1) through wechat mini program; (2) through screen and remote control

## Chapter 4 Common troubles

Trouble	Analysis	Solution
Power indicator OFF	No power source, ACC no power	Check power and ACC wiring
	Fuse burned	Check short circuit problem and change fuse
	Terminal broken	Send back for factory repair
Terminal offline	SIM card no data	Top up data
	Online param wrong	Check param settings
	SIM card not well installed	Reinstall SIM card
	4G antenna problem	Reinstall or change antenna
	Vehicle is underground, weak signal	Move vehicle to good signal area
Cannot open video	SIM card data limited	Top up data credit
	ACC OFF	Check ACC line
	Vehicle is underground, weak signal	Move vehicle to good signal area
Cannot locate	Vehicle is underground, in tunnel	Move vehicle to good signal area
	Antenna is too close to G5M host	Antenna need be over 50CM from G5M host
	Antenna is covered by metal or other s	Remove metal or other kind obstacle
	Antenna not well installed	Fasten antenna screws and check wiring
	Antenna problem	Change antenna
	Antenna line mixed with other cable	Make antenna line single

## — Chapter 5 Notice —

### 01

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Antenna lines cannot be mixed together with other cables like power cable or camera cables. Antenna line need be placed singly. Antenna cannot be covered by metal and need be over 50CM from G5M host.

### 02

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When change SD card or SIM card, terminal need be powered off.

### 03

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ADAS Camera: sky and road need be 50/50 in camera vision, need install in the center of front windshield, and need ensure horizon by gradienter

### 04

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DSM Camera: driver head need be in the center of camera vision, need install in the center front of driver face.

### 05

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Wiring: power cables need be thick to ensure good working. (Better to be thick as vehicle power cable). All cables need be wired firmly and wrapped with tape.

## CONTACT



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