

# FS2



## AI-powered dual-lens dashcam

The FS2 is a compact, cost-effective, AI-enabled dashcam designed for drivers and fleet managers, delivering HD recording, real-time alerts, and efficient event management.

### KEY FEATURES



#### Wide 106° DFOV road-facing lens

Captures up to 1080P video for clear and detailed footage.



#### Up to 2 x 512GB dual Micro SD card storage

Ensures simultaneous storage of both main and sub-stream videos.



#### Ultra-wide 170° DFOV driver-facing lens

Captures up to 1080P video for clear and detailed footage.



#### Built-in Wi-Fi and 4G communication module

Seamlessly integrates with fleet management systems.



#### Support for up to 2-channel video recording

Expands monitoring capabilities with an additional video channel.



#### AES256 data encryption for secure storage

Protects video and audio data with top-level security standards.

## KEY BENEFITS

### ✓ Advanced Safety Monitoring

Real-time alerts for road risks and unsafe driving behaviors.

### ✓ Efficient Fleet Management

Seamlessly uploads driving events to the cloud for monitoring and training.

### ✓ High-Quality Video & Audio

Provides ultra-wide, high-definition video and crystal-clear audio.

### ✓ Secure & Reliable Data Storage

Up to 2 x 512GB micro SD cards with encrypted video and audio storage enabling dual recording modes – SD & HD.

### ✓ Compact and Versatile Design

Streamlined design that doesn't obstruct the driver's view.

### ✓ Easy Installation & Integration

Optional OBD connector for simple plug-and-play setup.

## ADAS & DSM FUNCTIONS

### ADAS FUNCTIONS



Lane Departure



Tailgating Detection



Forward Collision

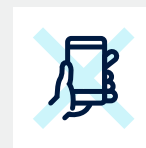


Pedestrian Collision

### DSM FUNCTIONS



Driver Fatigue



Mobile Phone Usage



Smoking



Driver Distraction



No Driver Present



No Seat Belt Detection

## SPECIFICATIONS TABLE

### General:

Feature	Specification
<b>System</b>	Embedded Linux
<b>Languages</b>	Chinese, English, Spanish, Portuguese, French, Russian, Japanese (default: English) <i>Languages include interface and voice prompts. TTS supports only Chinese and English.</i>
<b>Recording</b>	2 video channels (default), 1 audio channel
<b>Maximum Resources (with 2 AI channels)</b>	1080P @ 25 fps (ADAS) + 1080P @ 20 fps (DSC) Recommended Configuration: 1080P @ 20 fps + 1080P @ 15 fps
<b>Video Encoding</b>	H.264 / H.265 optional (default: H.265)
<b>Audio Compression Standard</b>	ADPCM / G.711 / G.726 optional (default: ADPCM)
<b>CBR / VBR</b>	VBR / CBR optional (default: VBR)
<b>Audio</b>	Built-in microphone
<b>Speaker</b>	Built-in speaker, 3 W power, sound level not less than 70 dB at 3.3 ft (1 m) distance, adjustable volume

### Road-Facing Lens:



Feature	Specification
<b>Sensor Type</b>	1/2.9" 2 MP CMOS sensor
<b>Shutter Speed</b>	1/30 s to 1/100,000 s
<b>Lens</b>	4 mm focal length; HFOV: 89°, VFOV: 46°, DFOV: 106°, Tolerance: ±5°
<b>Minimum Illumination</b>	Color: 0.05 Lux / F1.2
<b>Lens Interface Type</b>	Built-in lens
<b>Wide Dynamic Range</b>	Digital WDR





<b>Backlight Compensation</b>	Supported.
<b>Signal-to-Noise Ratio</b>	≥48 dB.

### Driver-Facing Lens:

Feature	Specification
<b>Sensor Type</b>	1/2.9" 2-megapixel CMOS sensor.
<b>Shutter Speed</b>	1/30 s to 1/100,000 s
<b>Lens</b>	Focal length: 2.2mm; HFOV: 151°, VFOV: 84°, DFOV: 170° ±5°.
<b>Lens Mount</b>	Built-in lens.
<b>Wide Dynamic Range</b>	Digital Wide Dynamic Range (WDR).
<b>Backlight Compensation</b>	Supported.
<b>Signal-to-Noise Ratio</b>	≥45 dB.
<b>Infrared Light</b>	Supported, with built-in ambient light sensor for automatic on/off. <i>Day-to-night threshold: 4 lux; night-to-day threshold: 8 lux. Measurements may vary.</i>

### LED Indicator Status:

Feature	Specification
 <b>Power Status Light</b>	Off/Green Off: The device is not powered on Steady green: The device is powered normally
 <b>Alarm Indicator Light</b>	Off/Red Off: The device has not generated an alarm Flashing red (three times): The device has generated an alarm.

 <b>GPS Signal Indicator Light</b>	Off/Red Off: The device positioning runs normally Steady red: The device positioning runs abnormally (not positioned, or module not connected or damaged) Flashing red (once per second): The device positioning is poor
 <b>Network Status Indicator Light</b>	Off/Red Off: The device is connected to the server normally Steady red: The device is connected to the server abnormally Red flash (once per second): The device is in airplane mode
 <b>Wi-Fi Status Indicator Light</b>	Off/Red/Green Off: The device is in Disable or Client mode Steady green: The device is in AP mode Steady red: The device Wi-Fi runs abnormally
 <b>Recording Status Indicator Light</b>	Off/Red Off: The built-in or extended camera runs normally Steady red: The built-in or extended camera recording has stopped (including privacy mode) or has a fault. <i>* When the video recording function is enabled (main stream and sub stream), the prompt will be given if no recording is detected. If the video recording function is disabled (main stream and sub stream), it will be regarded as normal recording status.</i>

## Storage:

Feature	Specification
<b>MicroSD Cards</b>	Dual Micro SD slots (supports 32GB/64GB/128GB/256GB/512GB each).
<b>Recommended Rate</b>	Class 10 or above.

## Sensors:

Feature	Specification
<b>Six-axis Sensor</b>	Harsh acceleration/deceleration/cornering and collision detection.
<b>Ambient Light Sensor</b>	Supports day-night switching for the driver-facing camera.

## Ports:

Feature	Specification
<b>RS232</b>	1-channel <b>⚠ Warning:</b> Supports RS232 or CAN, with RS232 as the default option.
<b>I/O Port</b>	2 inputs, 1 output
<b>CAN</b>	1 channel (supports standard J1939 protocol) <b>⚠ Warning:</b> Vehicle manufacturers may customize certain data fields. The actual data available is subject to practical testing. If the required data is not supported, a protocol can be provided for integration and development. Supports RS232 or CAN, with RS232 as the default option.
<b>USB</b>	1 channel, mini USB interface
<b>Button</b>	x 1 To switch Wi-Fi to AP mode, press the button twice within 2 s. <i>* For details of other buttons, refer to the user manual of the product.</i>

## Network:

Feature	Specification
<b>Wi-Fi</b>	Support 2.4 GHz (IEEE Std.802.11a/IEEE Std.802.11b/ IEEE Std.802.11g /IEEE Std.802.11n)
<b>4G</b>	Plug-in SIM card (Nano SIM card) • 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

	<ul style="list-style-type: none"> <li>• 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</li> </ul> <p><b>⚠ Warning:</b> An industrial SIM card (MP2) is required, an ordinary SIM card (MPI) is prohibited. We are not responsible for any problem caused by the use of any ordinary SIM card.</p>
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## Positioning:

Feature	Specification
GNSS	Supports GPS L1 1575.42MHz GALILEO E1B/C1 GLONASS L1OF 1602MHz SBAS: WAAS, EGNOS, MSAS, GAGAN

## Power:

Feature	Specification
Power Supply	12V and 24V vehicles (self-adaptive)
Power Consumption	<ul style="list-style-type: none"> <li>• In standby mode: 13.5 V @ 4 mA, 27 V @ 2 mA</li> <li>• In sleep mode (only 4G, GPS and MCU powered): 13.5 V @ 27 mA, 27 V @ 13 mA</li> <li>• Typical power consumption (with dual SD cards installed and SIM card for dialing): about 7 W</li> <li>• Full-load power consumption (with dual SD cards installed, SIM card for dialing, Wi-Fi turned on, and infrared light turned on): about 11 W</li> </ul> <p><i>*All data is tested under specific laboratory conditions and may vary due to individual product differences, usage environments, and testing methods.</i></p>

## Environmental:

Feature	Specification
Operating Temperature	-40°F to 158°F (-40°C to 70°C).
Storage Temperature	-40°F to 185°F (-40°C to 85°C).
Storage and Operating Humidity	15% to 95% non-condensing.
IP Rating	IP30 (non-waterproof).

## Dimensions & Weight:

Feature	Specification
Dimensions	4.59 × 2.67 × 4.35 in (116.5 × 67.8 × 110.42 mm)
Weight	<p>Net weight (device only): 11.04 oz (313 g)</p> <p>Gross weight (including accessories and package): 21.52 oz (610 g)</p> <p>Deviation: ±0.35 oz (±10 g)</p>

**Note:** Actual dimensions and weight may vary due to product differences, manufacturing processes, and testing methods.

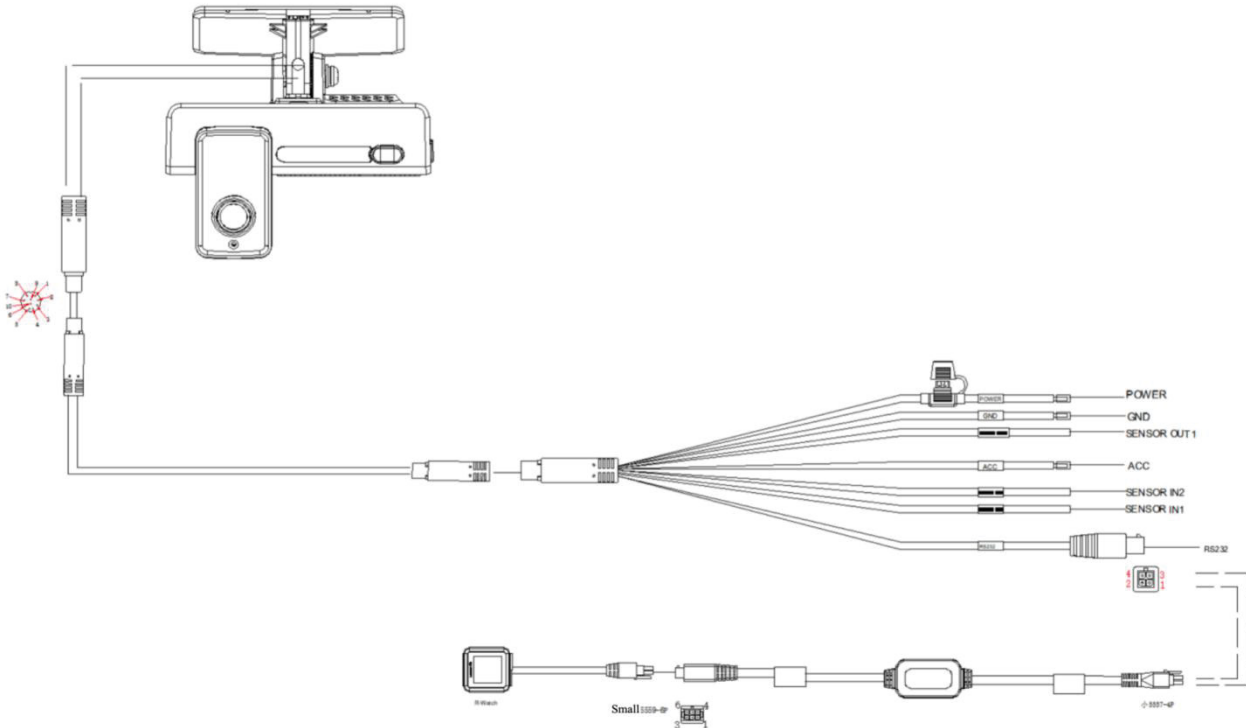
## ► PACKAGING CONTENTS

- ✓ FS2 × 1
- ✓ Standard Power Cable × 1
- ✓ Allen Key × 1
- ✓ Mounting Bracket × 1
- ✓ Bracket Bolt × 1
- ✓ Removal Tool × 1
- ✓ Alcohol Cleaning Wipe × 1

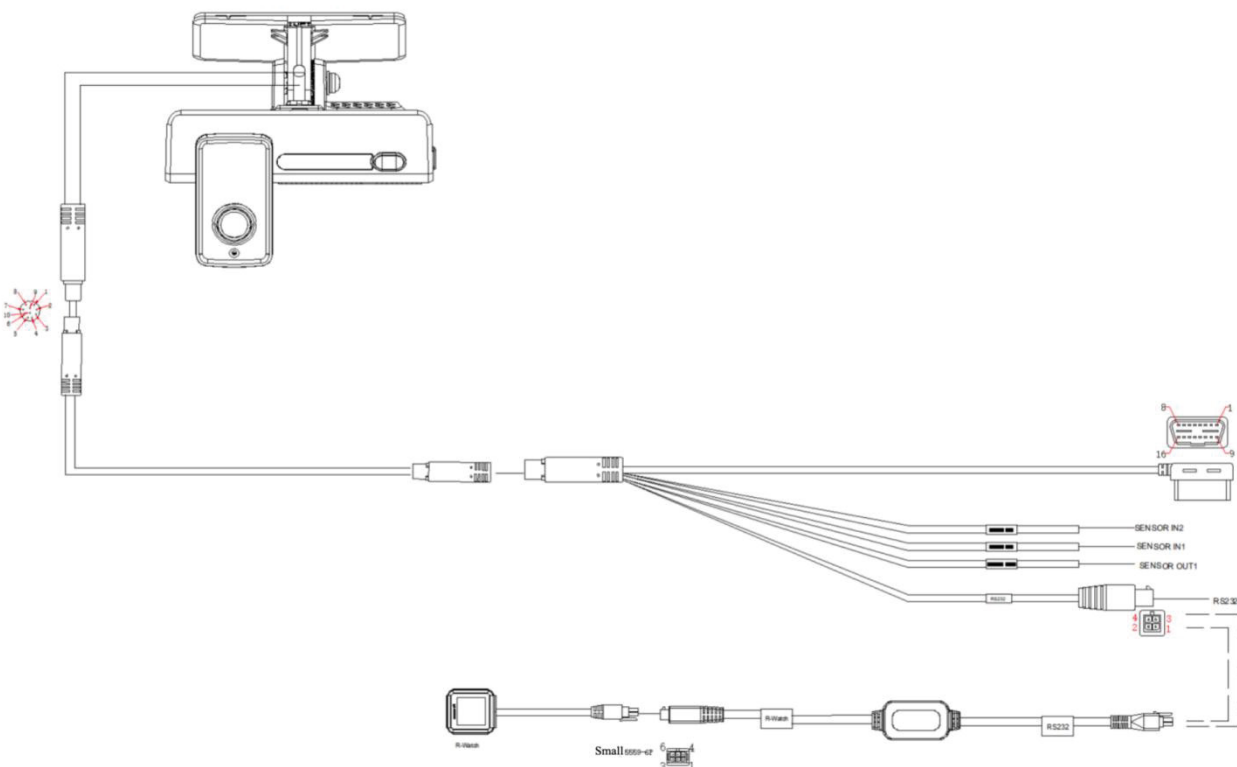
**Note:** The configuration may vary by region.



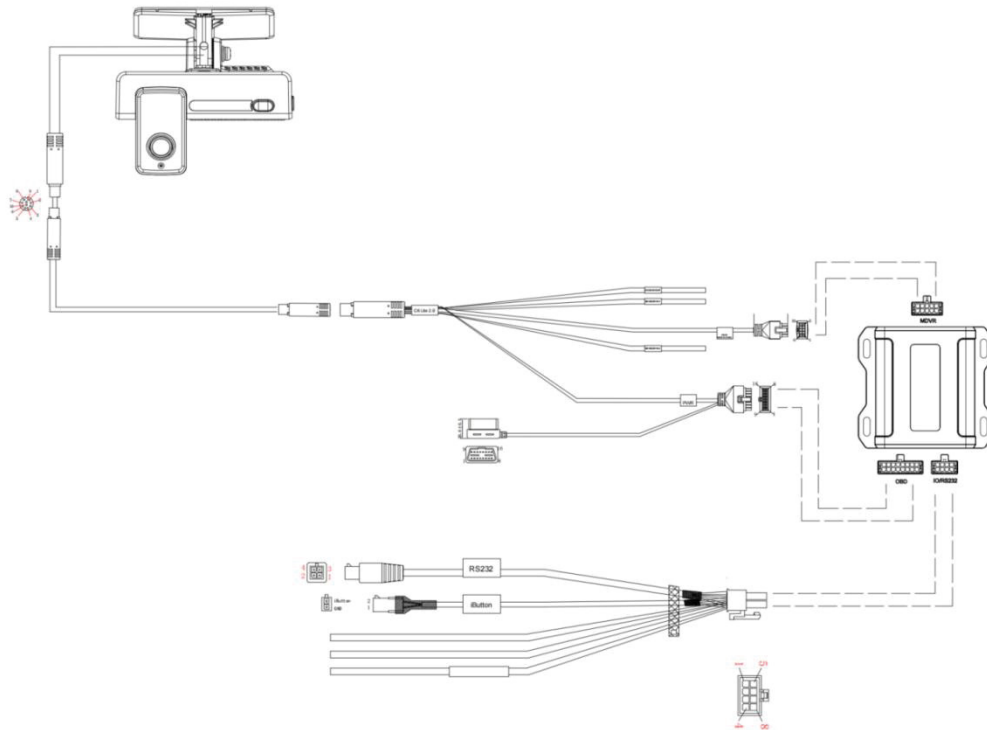
## ▶ ACC POWER CONNECTION SYSTEM DIAGRAM



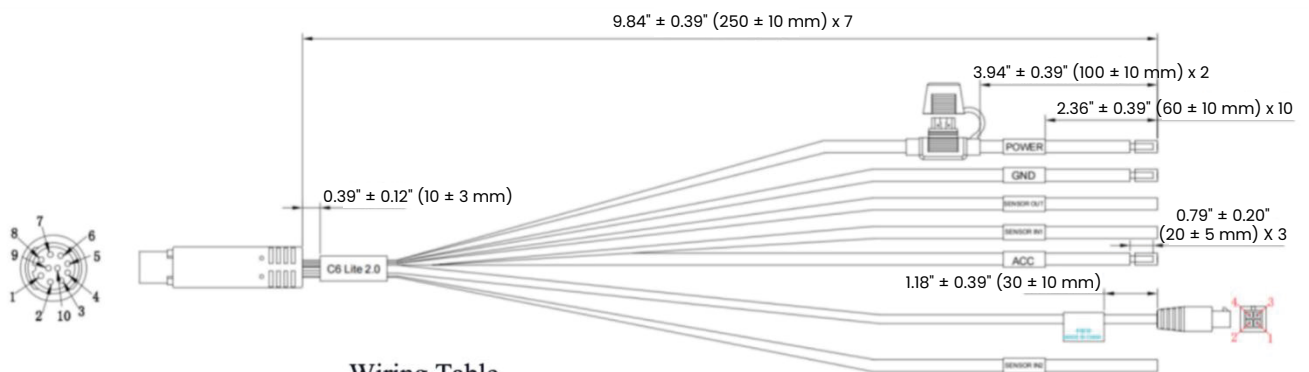
## ▶ OPTIONAL OBD POWER CONNECTION SYSTEM WIRING DIAGRAM



## CONNECTION TO PBP SYSTEM WIRING DIAGRAM



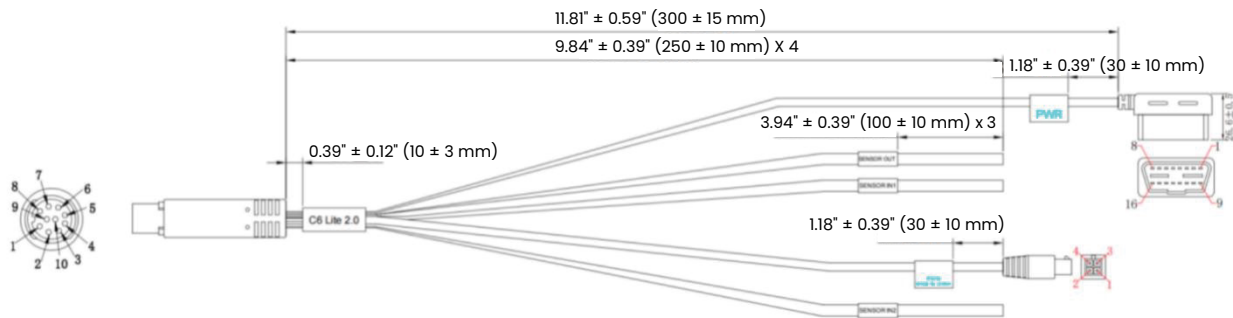
## ACC CONNECTION WIRE INTERFACE DEFINITION



Wiring Table

		Suspension wire	10P BMW male port
Half Stripped	ACC	Orange wire	1 0.35 mm <sup>2</sup>
SENSOR	OUT	Blue wire	2 0.35 mm <sup>2</sup>
SENSOR	IN2	Green-yellow wire	5 0.35 mm <sup>2</sup>
SENSOR	IN1	Grey wire	6 0.35 mm <sup>2</sup>
Half Stripped	POWER	Red wire	3A Fuse Box 10 0.5 mm <sup>2</sup>
Half Stripped	GND	Black wire	9 0.5 mm <sup>2</sup>
		Small 5559-4P	10P BMW male port
		Black wire 4	9 GND
		Red wire 1	3 +12V
		White wire 2	7 RX (L)
		Yellow wire 3	8 TX (H)

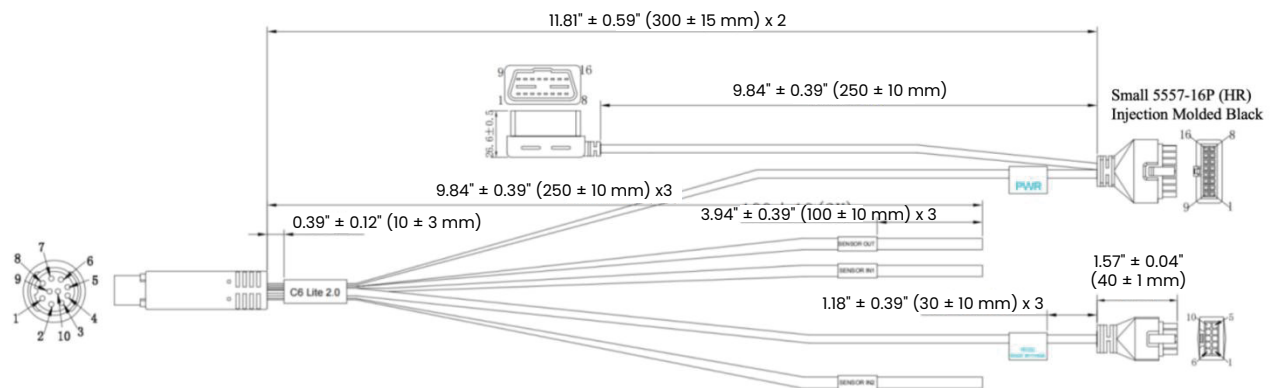
## OBD CONNECTION WIRE INTERFACE DEFINITION



Wiring Table

	Suspension wire		10P BMW male port
SENSOR OUT	Blue wire	2	0.35 mm <sup>2</sup>
SENSOR IN2	Green-yellow wire	5	0.35 mm <sup>2</sup>
SENSOR IN1	Grey wire	6	0.35 mm <sup>2</sup>
	16P OBD plug		10P BMW male port
POWER	Red wire	16	3A self-resetting fuse 10
GND	Black wire	4+5	9+4
	Small 5559-4P		10P BMW male port
	Black wire	4	9 GND
	Red wire	1	3 +12V
	White wire	2	7 RX (L)
	Yellow wire	3	8 TX (H)

## PBP CONNECTION WIRE INTERFACE DEFINITION



Wiring Table

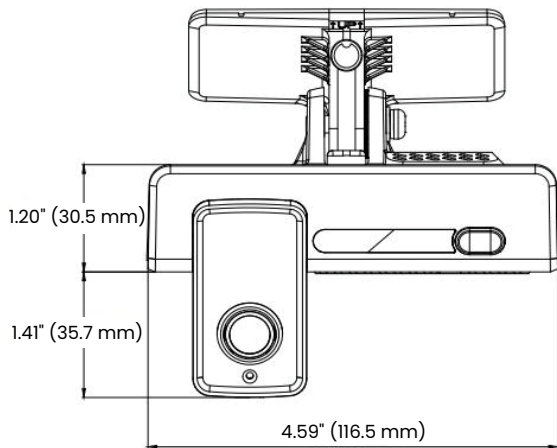
	Suspension wire		10P BMW male plug
SENSOR OUT	Blue wire	2	0.35mm <sup>2</sup>
SENSOR IN2	Green-yellow wire	5	0.35mm <sup>2</sup>
SENSOR IN1	Grey wire	6	0.35mm <sup>2</sup>
	16P OBD plug		10P BMW male plug
POWER	Red wire	16	3A self-resetting fuse 10
GND	Black wire	4+5	9+4
	Small 5557-10P		10P BMW male plug
	Black wire	7	9 GND
TX	Red wire	8	7 RX (L)
RX	Yellow wire	9	8 TX (H)

Wiring Table

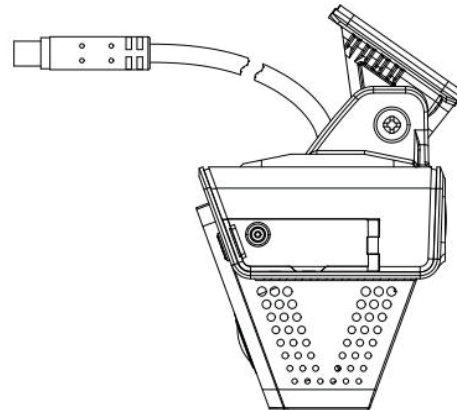
		Small 5557-16P	16P OBDII male plug
J1850 bus	Orange wire	1	2
CAN1-H	Yellow wire	2	3
CAN0-H	Blue wire	3	6
L-LINE	Green wire	4	15
J1708 bus	Brown wire	5	12
GND	Black wire	7+8	4 22AWG
J1850 bus	Orange-white wire	9	10
CAN1-L	White wire	10	11
CAN0-L	Blue-white wire	11	14
J1708 bus	Brown-white wire	12	13
K-LINE	Green-white wire	13	7
12V	Red wire	15	5A self-resetting fuse 16 22AWG
GND	Black wire	16	5 22AWG

## PRODUCT DIMENSIONS

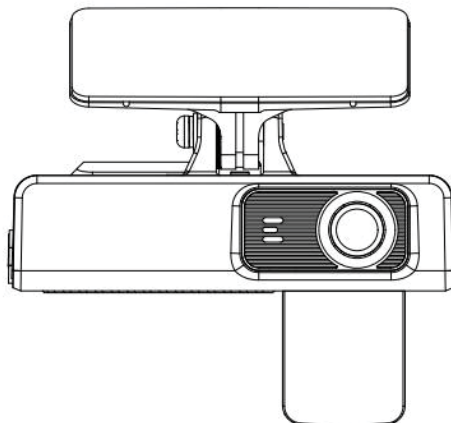
Front view



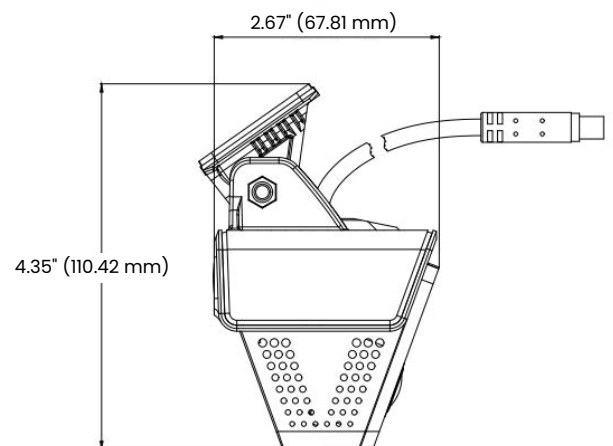
Right view



Rear view



Left view



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