

C6 Lite2.0 Specification



Preface

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About this Product Specification:

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The data provided in the specification are theoretical values obtained from Streamax Technology's internal laboratories under specific test conditions (please refer to specific explanations). Actual usage may vary slightly due to product individual differences, software versions, usage conditions, and environmental factors; please refer to actual usage conditions.

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Please read this manual first to ensure correct usage and the proper functioning of the required features.

	Warning: Situations that may involve the safety of the device user or cause harm to the device user.
	Special Attention: Situations that may compromise data integrity or damage the device firmware and hardware.
	Note: Additional explanations, glossary of terms, etc.

Date	Revision Version	Description of Changes	Author
2024/7/18	V0.0.1	Initial Draft	Dong Yuhao
2024/10/15	V1.0.0	First Edition Releases	Dong Yuhao

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Abbreviation List:

Abbreviation	English Explanation
1080P	Resolution ratio 1920×1080
ADAS	Advanced Driving Assistance System
DSC	Driving Safety Cockpit
VBR	Variable Bit Rate
CBR	Constants Bit Rate
LDW	Lane Departure Warning
HMW	Headway Monitoring Warning
FCW	Forward Collision Warning

1. Product Introduction

C6 Lite2.0 is an intelligent driving recorder designed to help drivers reduce traffic accidents and assist fleet management in improving efficiency. Utilizing AI technology, it can actively identify dangerous driving events and poor driving behaviors, providing local real-time alerts to drivers to avoid risks and supporting event uploads to the fleet management platform for driver training. It offers real-time, accurate vehicle location information and operational data to the fleet management platform, along with high-quality remote intercom and video preview playback functions, reducing fleet management difficulty and enhancing efficiency. Additionally, this product is reliable in quality, easy to install, simple to use, and cost-effective.

2. Features

- Front road wide-angle lens, supports up to 1080P HD recording
- Rear driving cockpit ultra-wide-angle lens, supports up to 1080P HD recording
- Supports up to 2 channels of recording
- Supports H.264/H.265 encoding
- Supports 2*512GB dual Micro SD card storage, supports simultaneous saving of main stream and sub stream
- Built-in Wi-Fi, 4G communication module, and standard positioning module
- Audio and video data supports AES256 encryption, data transmission supports TLS1.3 encryption protocol
- Supports 2 IO inputs, 1 IO output, and 1 selectable CAN or RS232 port
- Compact design, does not obstruct the driver's view in both large and small vehicles
- Supports OBD power supply for convenient and quick installation
- Built-in ADAS function, supports lane departure, forward collision, and close distance detection
- Built-in DSC function, supports detection of poor driving behaviors

- Supports echo suppression algorithm, enhances the quality of two-way voice intercom
- Supports sleep mode and remote wake-up
- Built-in 6-axis gravity sensor, supports detection of rapid acceleration, rapid deceleration, sharp turns, and collisions

2.1 AI Features

C6 Lite2.0 uses machine vision based on video analysis technology to automatically identify road risks and driver poor driving behaviors. Detected events trigger audio-visual alerts to provide real-time warnings to the driver, and event recordings can be uploaded to the cloud.

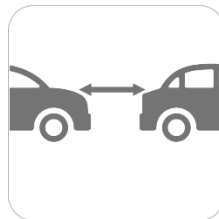


Warning: The AI functions must be calibrated and configured strictly according to the installation and usage instructions; otherwise, proper functionality cannot be guaranteed.

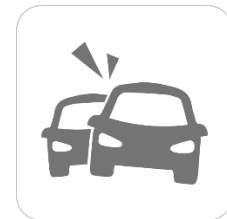
2.1.1 ADAS Features



LDW



HMW

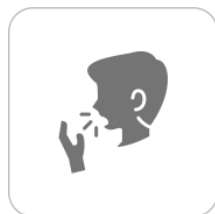


FCW

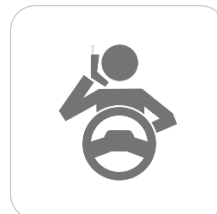
2.1.2 DSC Features



Lens Covered



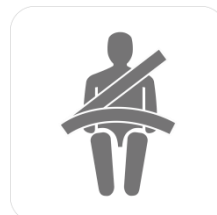
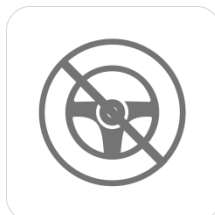
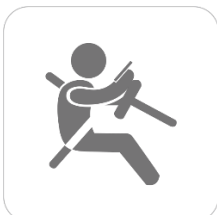
Yawning



Handheld Devices



Smoking



Distraction







No Driver



Unfasten Seat Belt


3. Specifications

Product Model: C6 Lite2.0	
System	Embedded Linux
Languages	Chinese, English, Spanish, Portuguese, French, Russian, Japanese (default: English) *Languages include interface language and voice prompts. TTS supports only Chinese and English.
Audio-Visual	
Recording	2 video channels (default 2), 1 audio channel
Maximum Resources (with 2 AI channels)	1080P@25fps(ADAS)+1080P@20fps(DSC) Recommended Configuration (1080@20fps+1080P@15fps)
Video Encoding	H.264/H.265 optional (default: H.265)
Audio Compression Standard	ADPCM/G.711/G.726 optional (default: ADPCM)
CBR/VBR	VBR/CBR optional (default: VBR)
Audio	Built-in MIC
Speaker	Built-in speaker, 3W power, sound level not less than 70dB at 1m distance, adjustable volume
Front Road Camera Parameters	
Sensor Type	1/2.9" 2MP CMOS sensor
Shutter Speed	1/30s-1/100000s

Lens	4mm focal length HFOV: 89°; VFOV: 46°; DFOV: 106°; Tolerance: $\pm 5^\circ$
Minimum Illumination	Color: 0.05Lux/F1.2
Lens Interface Type	Built-in lens
Wide Dynamic Range	Digital wide dynamic
Backlight Compensation	Supported
Signal-to-Noise Ratio (S/N)	$\geq 48\text{dB}$
Rear Cabin Camera Parameters	
Sensor Type	1/2.9" 2MP CMOS sensor
Shutter Speed	1/30s-1/100000s
Lens	2.2mm focal length HFOV: 151°; VFOV: 84°; DFOV: 170°; Tolerance: $\pm 5^\circ$
Lens Interface Type	Built-in lens
Wide Dynamic Range	Digital wide dynamic
Backlight Compensation	Supported
Signal-to-Noise Ratio (S/N)	$\geq 45\text{db}$
Infrared Light	Supported, with built-in ambient light sensor for automatic on/off *Day-to-night threshold: 4lux, night-to-day threshold: 8lux. Different devices may vary; subject to actual measurements.

LED Status Indicators	
Power Status Light	 Off/Green Light Off: Indicates the device is not powered Steady Green: Indicates the device is powered normally
Alarm Indicator Light	 Off/Red Light Off: Indicates the device has not generated an alarm Red Light Flashes Three Times: Indicates the device has generated an alarm
GPS Indicator Light	 Off/Red Off: Indicates device GPS positioning function is normal Steady Red: Indicates device GPS positioning function is abnormal (not positioned, module not connected, or module damaged) Flashing Red (once per second): Indicates poor device GPS positioning quality
Network Status Light	 Off/Red Off: Indicates the device is connected to the server normally Red Steady: Indicates the device connection to the server is abnormal Red Blinking (once per second): Indicates the device has entered flight mode
WiFi Status Light	 Off/Red/Green Off: Indicates the device is in Disable or Client mode Green Steady: Indicates the device is in AP mode Red Steady: Indicates the device WiFi is abnormal
Recording Status Light	 Off/Red Off: Indicates the built-in camera or extended camera recording status is normal Red Steady: Indicates the built-in camera or extended camera recording has stopped (including privacy mode) or has a fault

	*Recording enable (main stream, sub-stream) is turned on, and it will alert if no recording is detected. Recording enable (main stream, sub-stream) is turned off and considered normal recording status.
Storage	
Micro SD Card	Supports Micro SD-Card×2, (SDXC 32GB/64GB/128GB/256GB/512GB) Minimum read/write speed requirement Class10, recommended Class10 and above
Sensors	
Six-Axis Sensor	Supports rapid acceleration, rapid deceleration, sharp turns, and collision detection
Ambient Light Sensor	Supports day-night switching for the cockpit camera
Interfaces	
RS232	1 channel  Supports RS232 or CAN, one of the two options, default: RS232
IO Port	2 inputs, 1 output
CAN	1 channel (supports standard J1939 protocol)  Warning: Since vehicle manufacturers may customize some 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 development Supports RS232 or CAN, one of the two options, default: RS232
USB	1 channel, mini USB interface
Button	1 button Press twice within 2 seconds to switch WIFI to AP mode *For other button functions, refer to the product user manual
Network	

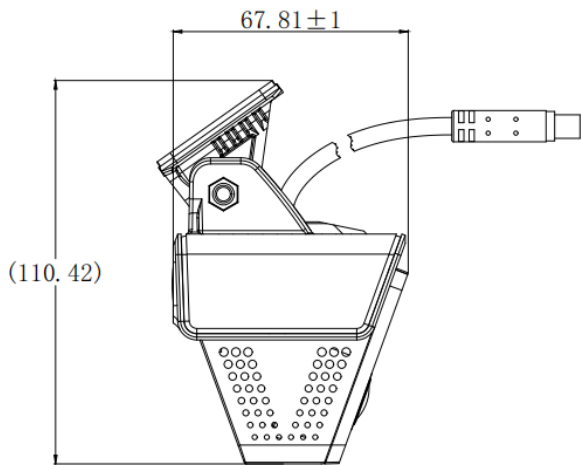
WIFI	Supports 2.4G (IEEE Std.802.11a/IEEE Std.802.11b/ IEEE Std.802.11g /IEEE Std.802.11n)
4G	<p>Supports plug-in SIM card (Nano SIM card)</p> <p>North America:</p> <p>LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71</p> <p>WCDMA: B2/B4/B5</p> <p>Europe & Asia:</p> <p>LTE FDD: B1/B3/B7/B8/B20/B28A</p> <p>WCDMA: B1/B8</p> <p>GSM: B3/B8</p> <p>Latin America:</p> <p>LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28</p> <p>LTE TDD: B40</p> <p>WCDMA: B1/B2/B5/B8</p> <p>GSM: B2/B3/B5/B8</p> <p> Warning: Requires the use of industrial-grade SIM cards (MP2), regular-grade SIM cards (MP1) are prohibited. The company is not responsible for issues caused by using regular-grade SIM cards.</p>
Positioning	
GNSS	<p>Supports</p> <p>GPS L1 1575.42MHz</p> <p>GALILEO E1B/C1</p> <p>GLONASS L1OF 1602MHz</p> <p>SBAS: WAAS, EGNOS, MSAS, GAGAN</p>
Power Related	
Power	Supports 12V, 24V vehicles (no configuration needed)

Power Consumption	<p>Device standby: 13.5V@4mA、27V@2mA</p> <p>Device sleep (only 4G, GPS, MCU powered): 13.5V@27mA、27V@13mA</p> <p>Typical power consumption (dual SD card installed, SIM card installed and dialing) : approximately 7W</p> <p>Full load power consumption (dual SD card installed, SIM card installed and dialing, WIFI on, infrared light on) : approximately 11W</p> <p>*All data are tested under specific laboratory conditions and may vary due to individual product differences, usage environments, and testing methods.</p>
Environment	
Operating Temperature	-40°C~+70°C (-40°F~+158°F)
Storage Temperature	-40°C~+85°C (-40°F~+185°F)
Operating Humidity	15% - 95% non-condensing
Storage Humidity	15% - 95% non-condensing
Protection Level	IP30 *The main unit is not waterproof
Dimensions & Weight	
Dimensions L×W×H	116.5 × 67.8 × 110.42
Weight	<p>Net weight (device main body): 313g</p> <p>Gross weight (accessories and packaging): 610g</p> <p>Tolerance ±10g</p>
*Actual dimensions and weight may vary depending on configuration, manufacturing process, and measurement methods.	
Packing List	

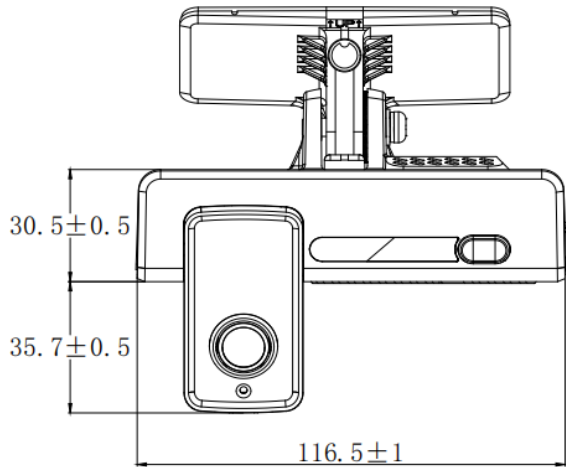
C6 Lite2.0×1, standard power cable×1, hex screwdriver×1, mounting bracket×1, bracket bolts×1, pry bar×1, desiccant×1, alcohol pad×1

*Final contents may vary by region, subject to the unboxing results

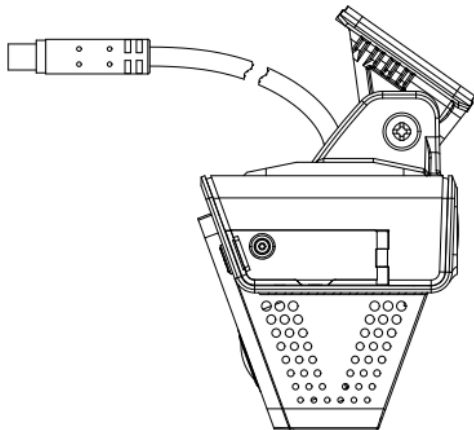
4. Dimension Diagrams (Unit: mm)



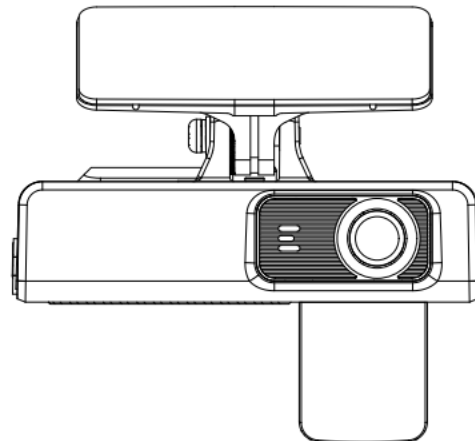
Left View



Front View



Right View



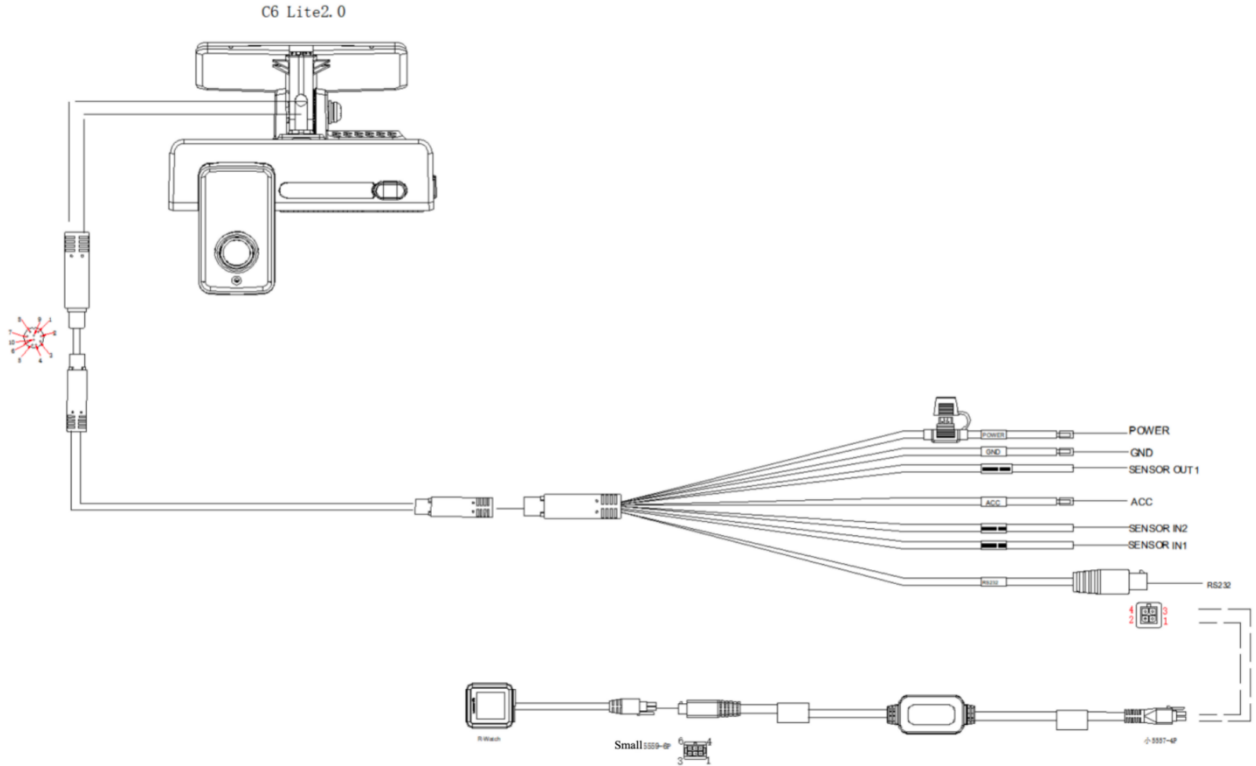
Rear View

5. System Connection Diagram

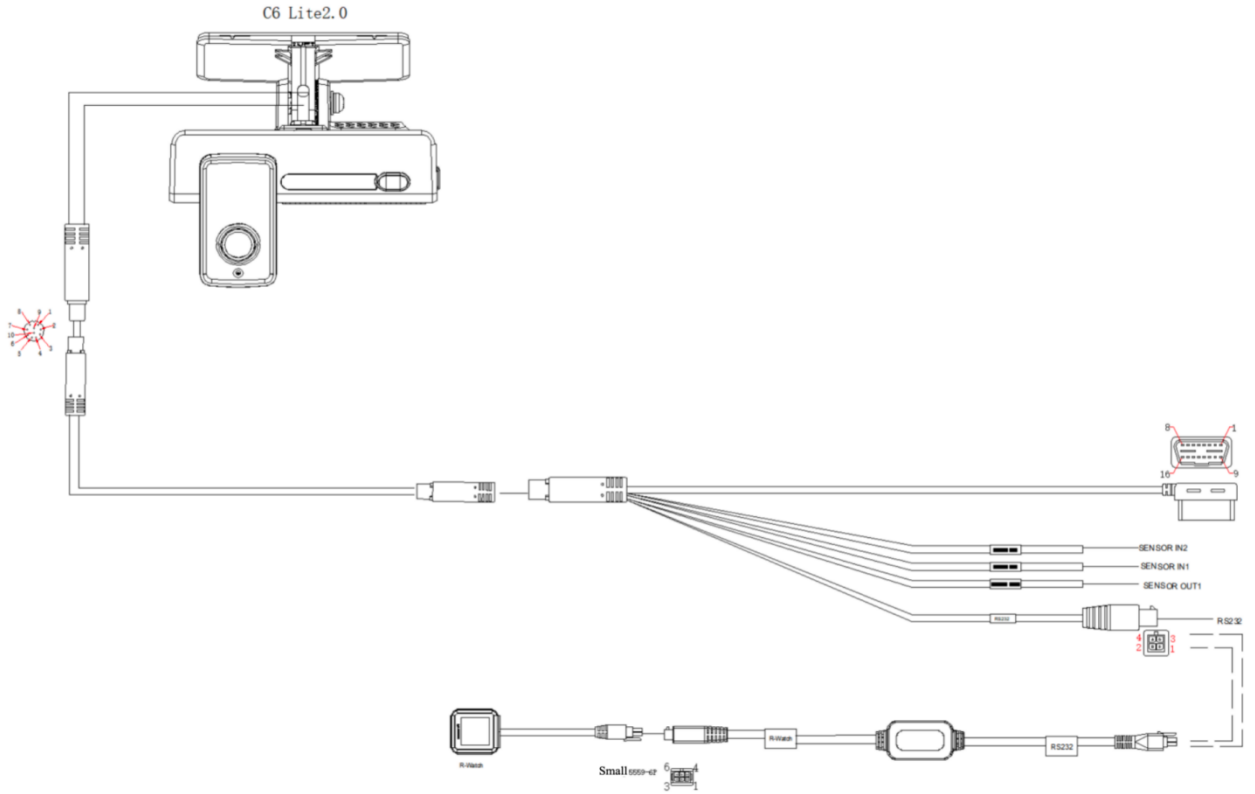
The standard shipment includes a standard power cable that supports ACC power connection to

the vehicle. An OBD power cable can be optionally selected for OBD power connection to the vehicle.

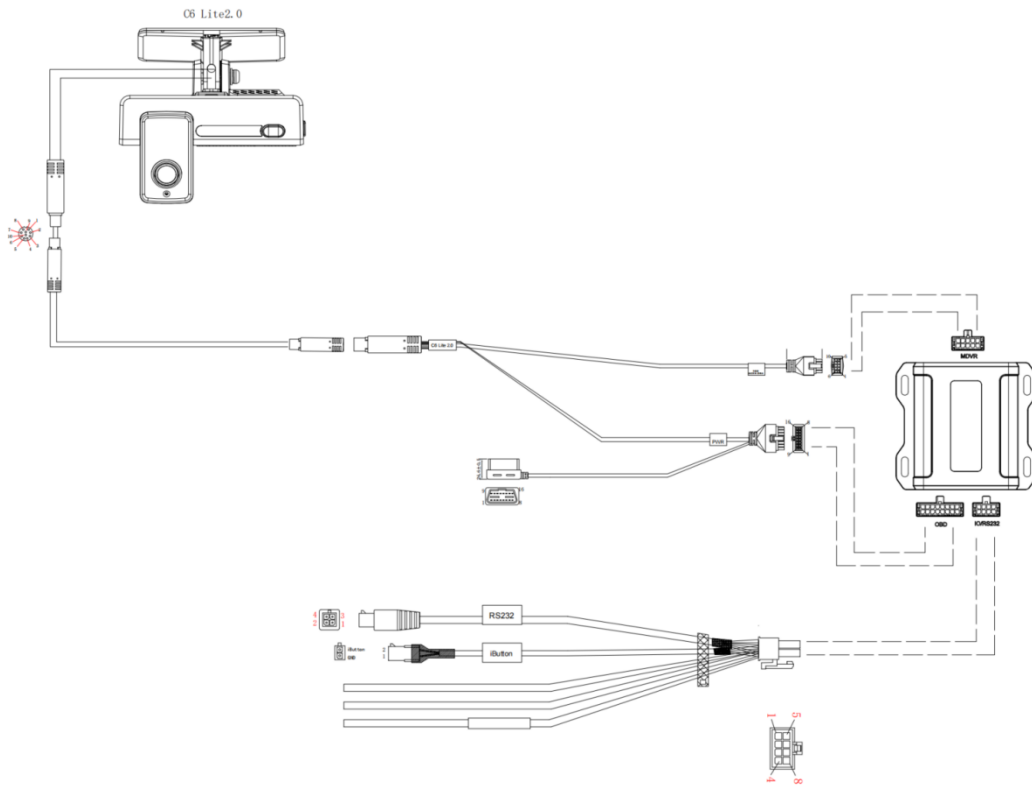
5.1 ACC Power Connection System Diagram



5.2 OBD Power Connection System Wiring Diagram

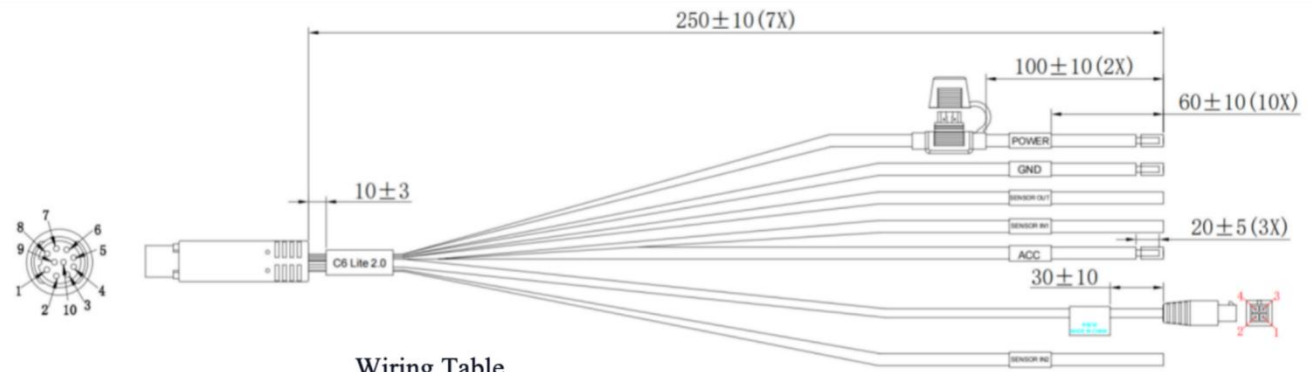


5.3 Connection to PBP System Wiring Diagram



5.4 Wiring Interface Definitions

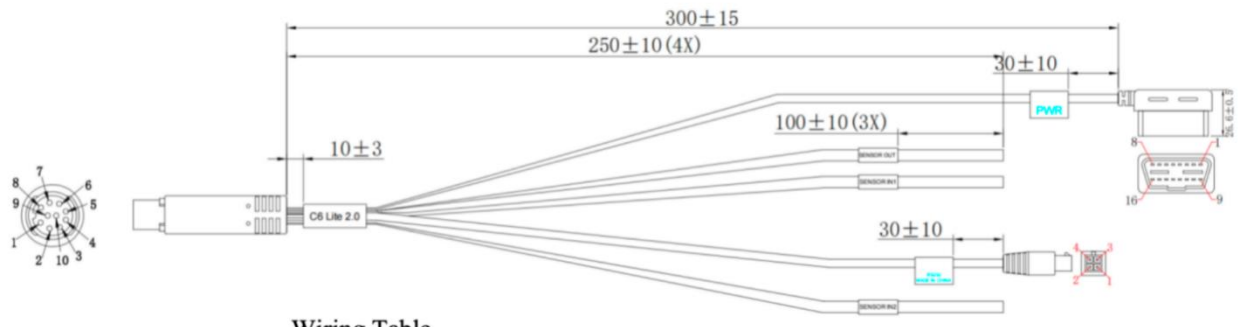
5.4.1 ACC Connection Wire Interface Definition



Wiring Table

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

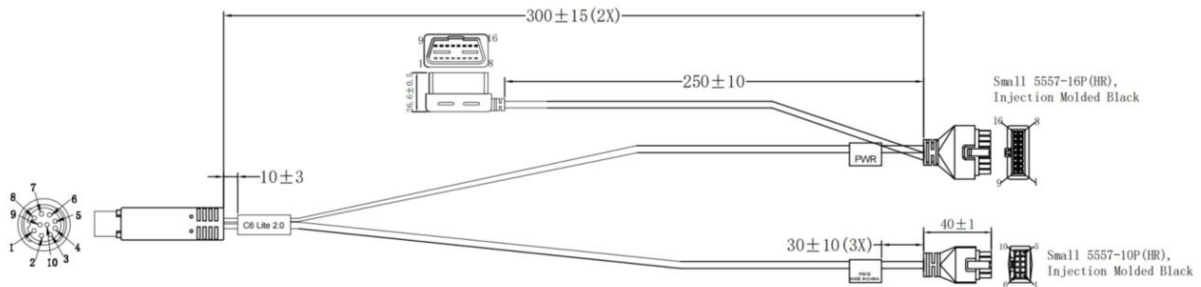
5.4.2 OBD Connection Wire Interface Definition



Wiring Table

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

5.4.3 PBP Connection Wire Interface Definition



Wiring Table

	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

6. Special Instructions

- 1) This product requires professional installation to avoid risks such as electric shock, vehicle wiring damage, compromised AI performance, and device detachment.
- 2) The surface temperature of this product can exceed 60 degrees when exposed to direct sunlight. Avoid touching sun-exposed surfaces to prevent burns.



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