

AI-powered safety for modern fleets



-  Built-in GPS tracking
-  Road & Driver Event Detection
-  Wi-Fi hotspot
-  Wide-angle, road-facing view
-  Plug & Play installation (OBD-II & JBUS)

Wake-up at will

Remote wake-up and sleep mode allows your team to stream or view historic footage remotely when needed while also conserving vehicle battery life.

Driving has never been safer

FleetCam Essential's powerful AI detects and warns of safety events, saving lives and improving driving behavior with features like harsh driving detection, follow distance warning, and more.

Next-level clarity

Armed with 1080P HD resolution, FleetCam Essential gives you the clarity you need while infrared ensures excellent low-light performance.

Effortless communication & tracking

With Wi-Fi, cellular communication, positioning module, echo cancellation, and noise canceling support, in-cab communication becomes effortless and clear.

FleetCam Essential

FC-ESNTL-NA-V4, FC-ESNTL-R-NA-V4, FC-ESNTL-EMEA-V4, FC-ESNTL-R-EMEA-V4, FC-ESNTL-LAT-V4, FC-ESNTL-R-LAT-V4

Built on powerful AI edge processing, the FleetCam Essential gives you everything you need to monitor your fleet and improve driver safety and accountability. It features AI safety event detection and alerts, 2-channel recording, and crystal-clear HD footage with excellent low-light visibility.

Specification

Positioning

GNSS	• Supported • GPS L1 C/A: 1575.42 MHz • Galileo E1: 1575.42 MHz • GLONASS L1: 1598.0625~1605.375 MHz • BDS B1, BDS B1C, QZSS L1 C/A
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Network

Wi-Fi	Support 2.4G (IEEE Std. 802.11a/b/g/n)
4G	Plug-in SIM card (Nano SIM card)
North America:	LTE FDD: B2/B4/B5/B12/B13/B14/B66/B71 WCDMA: B2/B4/B5
Europe and Asia:	LTE FDD: B1/B3/B7/B8/B20/B28A WCDMA: B1/B8, GSM: B3/B8
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

Physical

Dimensions (mm)	• Dashcam: 113.0 mm × 67.8 mm × 88.2 mm (excluding bracket) (± 2 mm) • Package: 176 mm × 150 mm × 114 mm; (± 3 mm)
Weight (kg)	• Device Only: 295g • Accessories + package: 745g (±10g)

Storage & Sensor

Six-axis Sensor	Harsh acceleration, Harsh deceleration, Harsh cornering
Environmental Light Sensor	Used for the in-cab camera, for day/night mode switching
Micro SD card	Micro SD card×2, (SDXC 32GB-512GB) (FTS Approved SD cards only)

Power

Power supply	12-24V Range
Power consumption	• standby: 13.5V@5.66mA, 27V@3.4mA • sleep: (4G and MCU powered): 13.5V@71~125mA, 27V@30~56mA • Typical power consumption: ~7.56W • Full-load power consumption: ~10.06W

Audio-Video

AV Recording	2-channel video (2 internal channels / Support ADAS and DMS)
Video Coding	H.265
Audio Compression	G.711
Audio	Built-in MIC
Loudspeaker	Built-in speaker, power: 3W, with adjustable volume, not less than 70 dB at 1 m distance

Environment

Operating Temp.	-40°C ~ +70°C (-40°F ~ +158°F)
Storage Temp.	-40°C ~ +85°C (-40°F ~ +185°F)
Operating & storage Humidity	15~95% non-condensing
IP Rating	IP30

Recording

Video Compr. Format	H.264/H.265 (Default)
Audio Compr. Format	ADPCM, G.711, G.726
Image Resolution	• ADAS: 1080P (1920 × 1080) • DMS: 1080P (1920 × 1080) • Supports PAL & NTSC

Status Indicators



Power Status Lights

Off: The device is not powered on

Steady green: The device is powered normally



Alarm Indicator

Off: The device is not currently uploading data

Red flashes three times: The device is uploading data



GPS Signal Indicator

Off: Normal

Steady red: No GPS, or module may be malfunctioning

Red flash (once per second): GPS reception is poor



Network Status Indicator

Off: The device is connected to the server normally

Steady red: The device is not connected to the server



Wi-Fi Status Indicator

Off: The device is in Disable or Client mode

Steady green: The device is in AP mode

Steady red: There is an issue with the Wi-Fi



Recording Status Indicator

Off: The built-in or extended camera is operating normally

Steady red: The built-in or extended camera stopped recording (including privacy mode)/failed



Button

SOS or Manual trigger event: Single Press

Privacy Mode: Press and hold to enable

WiFi AP Mode: Press twice within 2 seconds to enable

FleetCam Essential – Driver Events

ADAS FEATURES

-  Following distance warning
-  Forward collision warning
-  Lane departure
-  Rolling stop sign
-  Pedestrian warning

DMS FEATURES

-  Driver distracted
-  Driver fatigued
-  Driver smoking
-  Driver using cell phone
-  No seat belt

HARSH EVENTS

-  Harsh Cornering
-  Harsh Accelerating
-  Harsh Braking

OTHER

-  No driver detected
-  SOS/PTO event
-  Camera covered

SYSTEM EVENTS

-  Low Voltage
-  Memory Error
-  Video Loss

Feature Comparison Chart



Essential

Pro

Video recording

2-channel

Up to 6-channel*

Video resolution

1080P Road & Driver

1080P Road & Driver

Field of view (fov)

106° road / 170° driver

140° road / 170° driver

AI Driver Events

YES

YES

6-Axis Accelerometer

YES

YES

GPS

High precision GNSS

High precision GNSS
with dead-reckoning

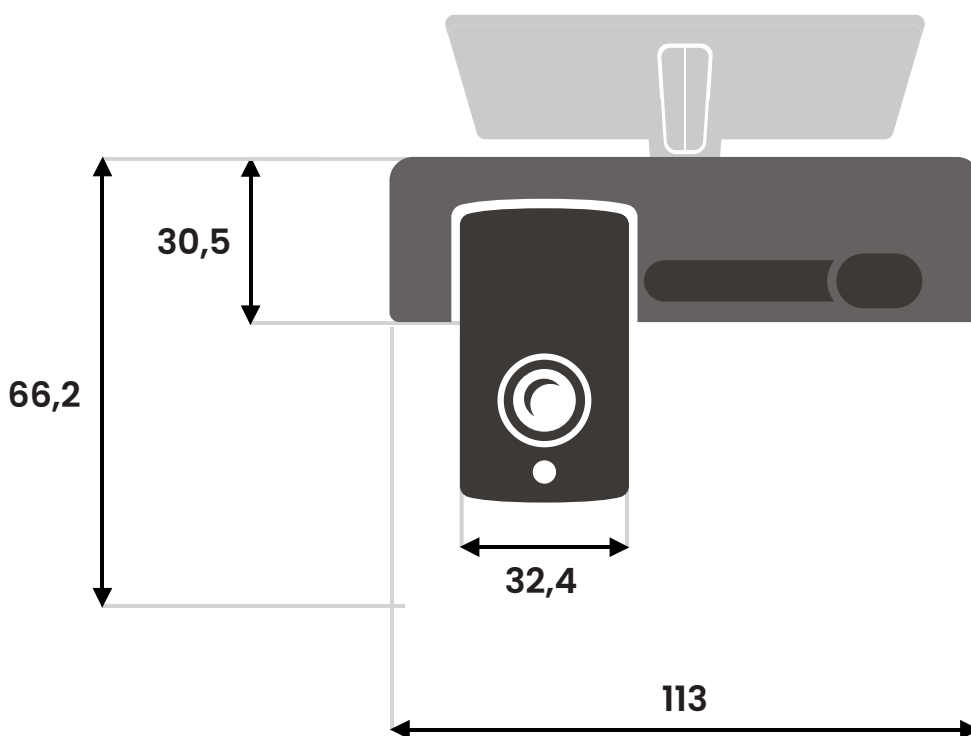
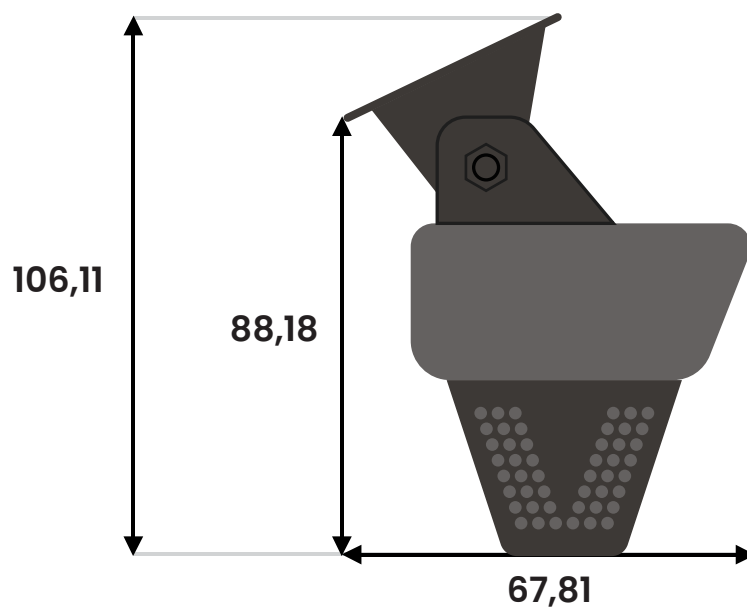
Add-ons

None

Up to 4 external cameras and 1 LCD

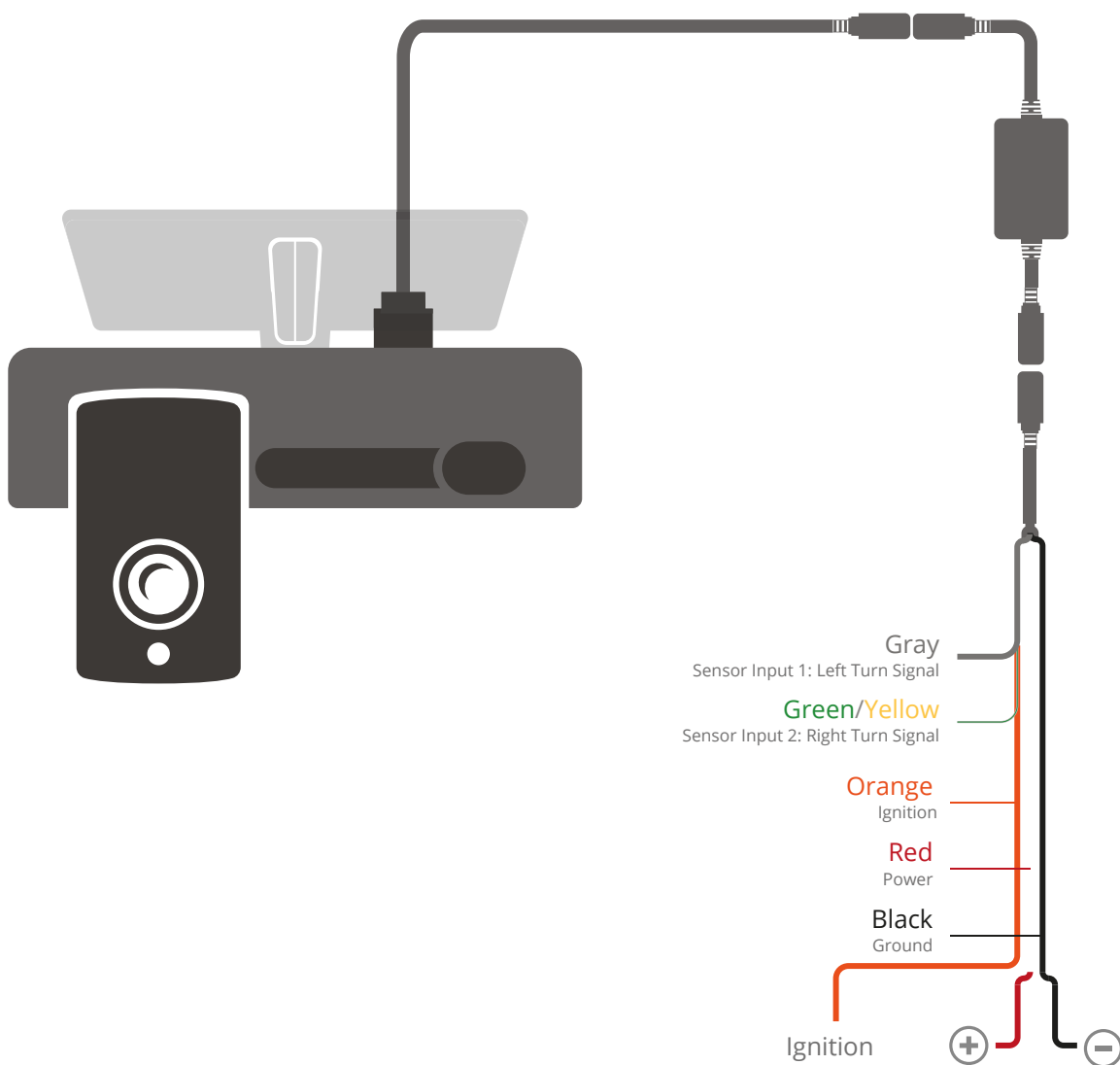
* FC Pro 6-channel capability requires the FC Hub add-on module.

Dimensions (mm)



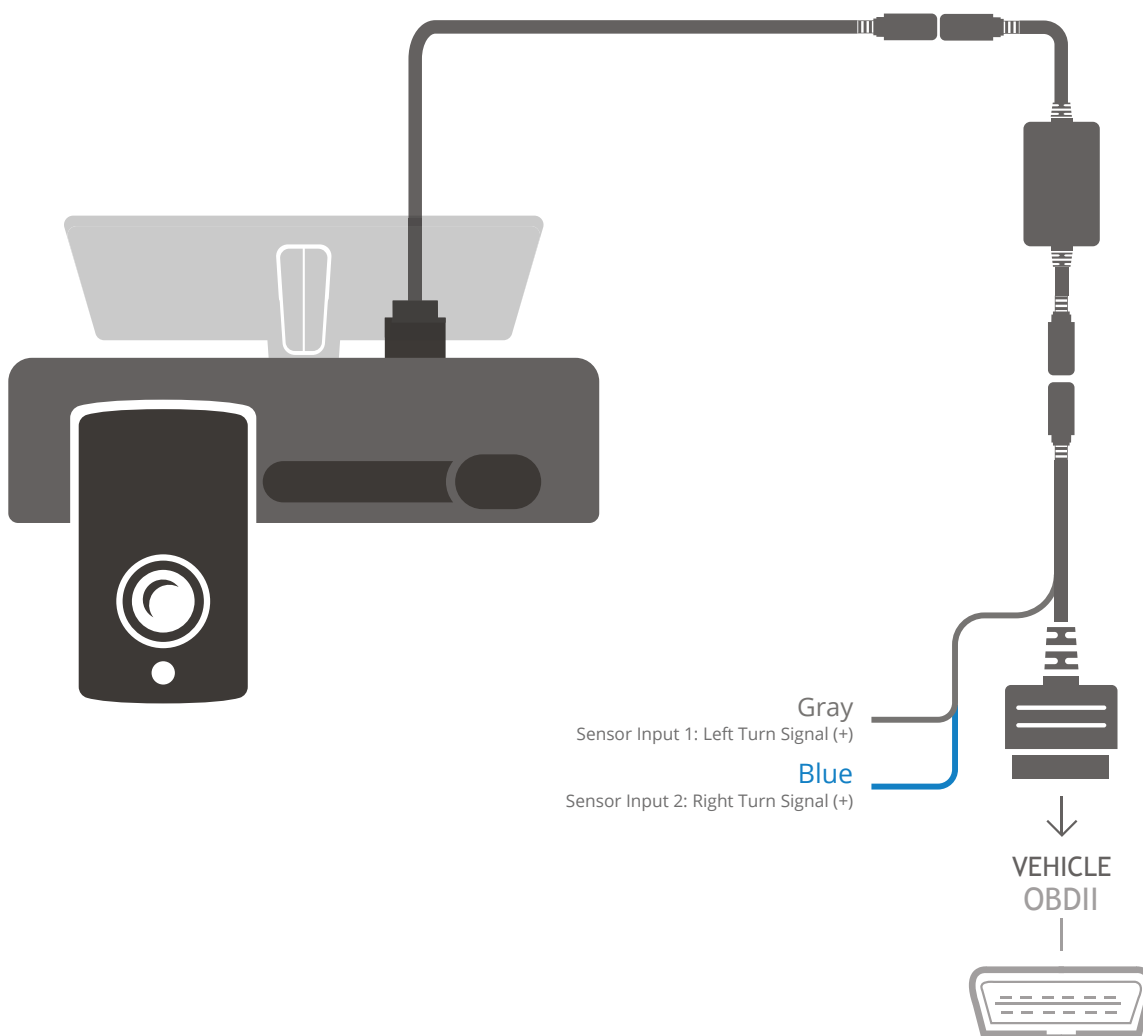
System Connection Diagrams

1. FleetCam Essential Road Only Hardwired



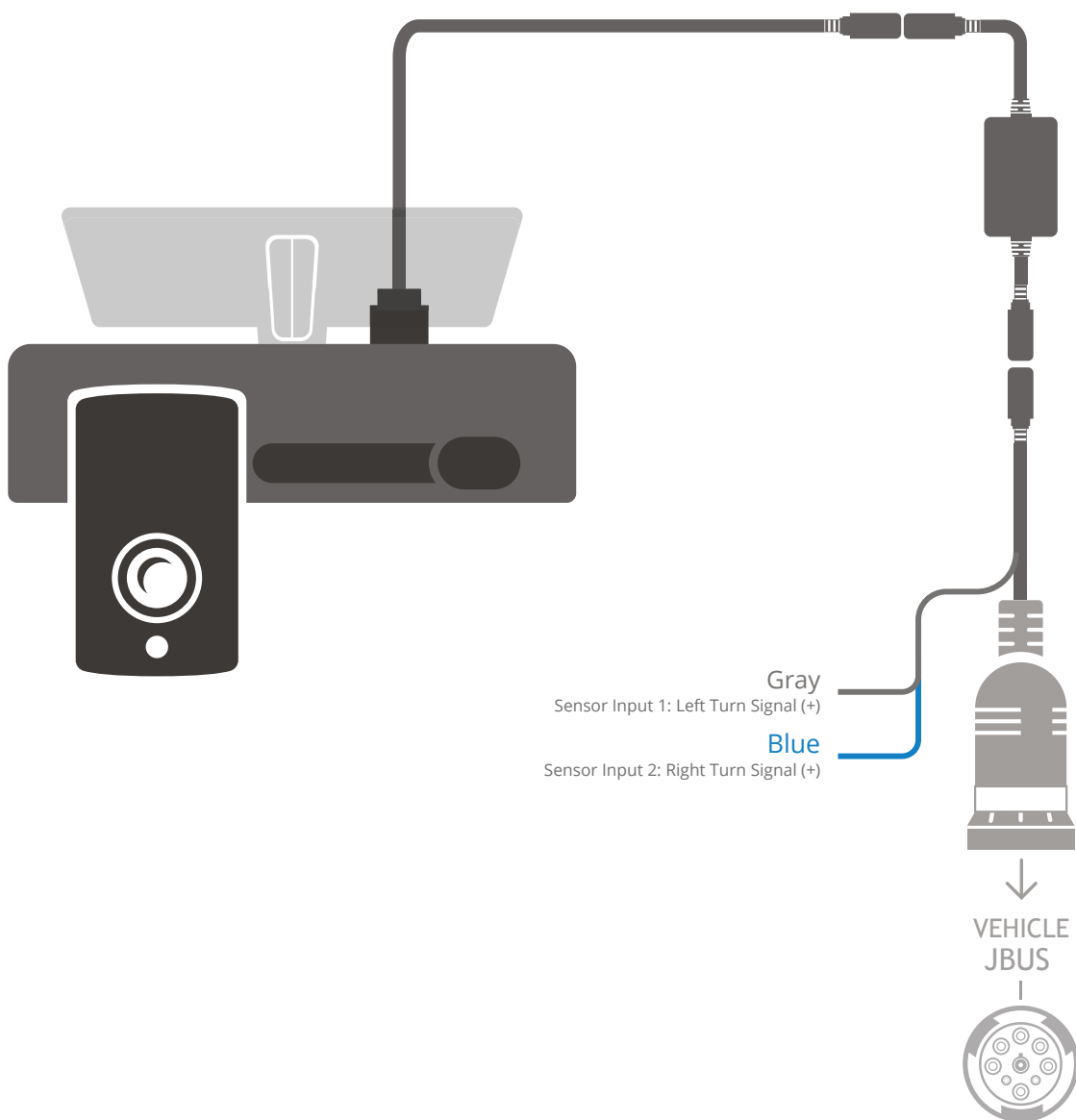
System Connection Diagrams

2. FleetCam Essential OBD-II



System Connection Diagrams

3. FleetCam Essential JBus



FCC Warning Statements

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

*RF warning for Mobile device:

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiator & your body.