

VISION INSIGHT AI

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Connected 3-Channel AI-Powered Dashcam

+ Optional A-pillar DSM Camera

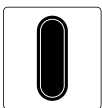
The **VISION INSIGHT AI** is an advanced 3-channel AI dashcam designed to capture full HD (1080P) video, with an optional A-pillar DSM camera for detecting unsafe driver behaviour. The **VISION INSIGHT AI** also delivers precise vehicle positioning data and operational insights in real-time.



Using real-time audio alerts and leveraging advanced AI algorithms, the system warns the driver of potential risks and uploads incident data to VisionTrack's cloud-based fleet management platform, [Autonomise.ai](https://www.autonomise.ai), for fleet management to review.



Key features:



Optional **DSM camera** detects unsafe driver behaviour.



OBD power harness for easy and fast installation.



Ultra-wide 133° DFOV **driver-facing lens**, supporting up to 1080P HD video recording.



Built-in **Wi-Fi, 4G** communication and **GNSS** navigation positioning module.

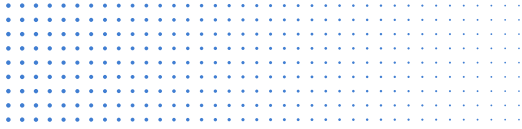


Supports up to **3-channel** video recording.



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Driver Behaviour Functions



Harsh Acceleration



Hard Braking



Sharp Cornering



Shock

DSM Functions



Driver Fatigue



Lens/Camera Obstruction



Cell Phone Usage



Smoking



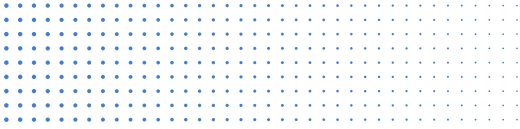
Driver Distraction

Specifications:

SoC	Novatek NT98528, ARM Dual Cortex A9 CPU core, DLA engine boasting a computing power of up to 1.5 TOPS.
OS	Embedded Linux
Language	English
CMOS	GalaxyCore GC2053, 1/2.9", 2M pixels CMOS
Sensitivity (lux)	3870 mV/lux's
Lens	3.2mm
FoV	HFOV: 112°/VFOV: 55°/DFOV: 133°, ±5°
Mobile Networks	<p>Universal Version for Europe, Asia, and Africa: Quectel EC200A-EU</p> <p>LTE-FDD: B1/ 3/ 5/ 7/ 8/ 20/ 28</p> <p>LTE-TDD: B38/ 40/ 41</p> <p>WCDMA: B1/ 5/ 8</p> <p>GSM/ EDGE: B3/ 8</p> <p>Latin American and Australian Universal Version: Quectel EC200A-AU</p> <p>North American Version: Quectel EC25-AFX</p> <p>Global Version: Quectel EG25G</p>
Wi-Fi	802.11b/g/n
Storage	
RAM	1GB
ROM	256MB
SD Card Support	<p>MicroSD card slots x2 (Each MicroSD card slot supports a maximum of 2TB):</p> <ul style="list-style-type: none"> MicroSD card 1: Stores the main stream in a proprietary DXR stream storage format. MicroSD card 2: Stores the sub-stream in a proprietary DXR stream storage format.

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Audio/Video

Video Input **A total of 3 video input channels:**

- [Built-in]
 - Channel 1: Front camera integrated into the main unit.
- [Optional]
 - Channel 2: Optional, default for DMS functionality.
 - Channel 3: Optional, default for in-cabin, cargo hold, side or rear camera usage.

Storage Resolution **Maximum Capacities (Commonly used 3-channel scenarios):**

- Channel 1: 1080P@25fps
 - Channel 2: 720P@25fps
 - Channel 3: 720P@25fps
- Default Configuration:**
- Main stream: 1080P@15fps (Channel 1) + 720P@15fps (Channel 2) + 720P@15fps (Channel 3)
 - Sub-stream: D1@15fps (Channel 1) + D1@15fps (Channel 2) + D1@15fps (Channel 3)

Video Encoding **Options:** H.264/H.265

Default: H.264

Audio Encoding **Options:** G.711A/G711U/G726/AMR

Default: G.711A

CBR/VBR **Options:** CBR/VBR

Default: VBR

Sensors

GPS/GNSS **Chipset:** ATGM336H-5NR32

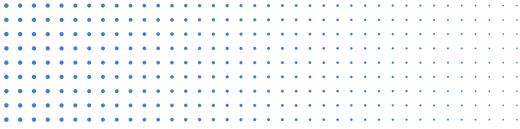
Support: BDS/GPS/QZSS/GLONASS

3-axis Accelerometer **Data Compilation:** GPS + Time (s) + Hardware Calibration Results + Three-axis Data

[x, y, z, tick] + Range, stored on MicroSD card per second.

Remote data retrieval is supported.





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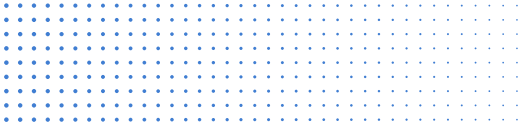
Interfaces

USB	Micro USB x1
I/O	Panic button x1
	Left turn signal detection x1
	Right turn signal detection x1
	<p>Notes on left/right turn signal detection lines:</p> <ol style="list-style-type: none"> Voltage Rating: High-level effective voltage exceeds 6.5V; low-level effective voltage is below 1.0V. Current Input Requirements: Greater than 0.1mA. Protection Level: Withstands voltages up to 60V, equipped with short-circuit protection. Active High, Low, or Configurable, etc.: Configurable for either high-active or low-active input.
SIM Card Slot	Micro SIM card
MicroSD Card Slot	2
RS232	1

Buttons and Indicator

Indicator*1	Bi-colour indicator lights (red and green)	
	NORMAL STATES:	
	Device Status:	Indicator Status:
	Device powering on	Green light flashes once every 0.5 seconds.
	Device in the process of firmware upgrade	Red and green lights alternate in a flashing pattern, with a 0.5-second interval.
Firmware upgrade completed	Green light remains steadily on.	
Normal recording on the TF card	Green light blinks with a 1-second interval.	





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ABNORMAL STATES:

Device Status:

Video loss

Indicator Status:

The red light blinks once every 4 seconds, with a sequence of 4 flashes during each cycle, and a 0.1-second interval between each flash.

Panic Button

Standard accessory

Power Supply Related

Operating Voltage

Original Vehicle Battery: 8-36V

Super Capacitor

Equipped with a built-in super capacitor, the front camera supports continuous recording for 1 second after main unit power-off, preventing the loss of recorded data and potential device damage caused by sudden power interruptions.

Power Consumption

Operating Current:

- 12V: 400mA
- 24V: 200mA

Main Unit Power Consumption (excluding external cameras), ACC OFF (standard cable):

- Sleep mode (activates after 3 minutes, stopping recording): 12V@150mA, 24V@80mA
- Deep sleep mode (activates after 5 minutes, shuts down): 12V@3mA, 24V@2mA

Note: The provided data is based on testing conducted in a specific laboratory environment and may vary due to individual product variations, working conditions, and testing methodologies.

Power Harness

- Standard power harness with fuse holders on VCC and ACC lines (ATO and mini types)
- OBDII power harness

Environment Related

Working Temperature

-30° to 70°C

Storage Temperature

-40° to 80°C

Working Humidity

15% to 95%, non-condensing

Storage Humidity

15% to 95%, non-condensing

IP Rating

IP30

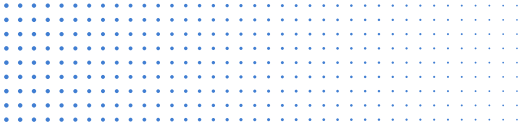
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Dimensions and Weight

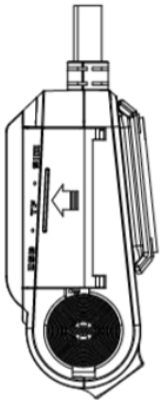
Dimensions (L* W* H)	110mm * 80mm * 41mm (main unit only), with an error margin of ± 1 mm.
Weight	Net Weight (main unit only): 300g Gross Weight (Including Accessories and Packaging): 698g Tolerance: ± 10 g

What's in the Box

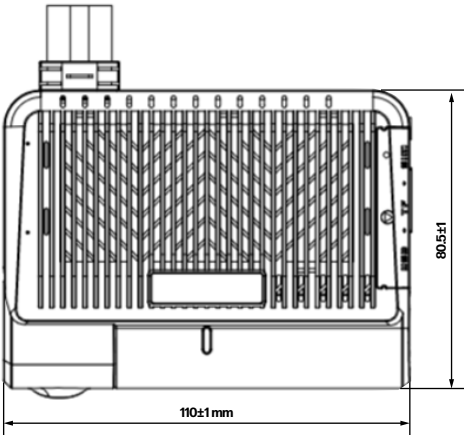
Standard	Main Unit, Bracket, Extension Cable, Standard Power Harness, OBDII Power Harness, Panic Button, L-shaped Wrench
Optional	A-pillar DMS Camera

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

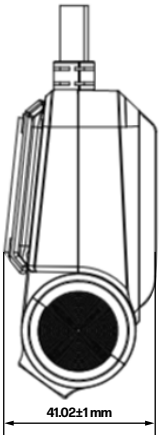
Product Diagram



Right View

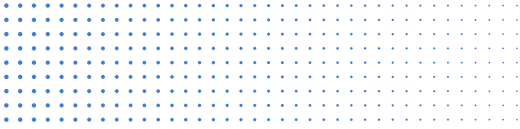


Top View

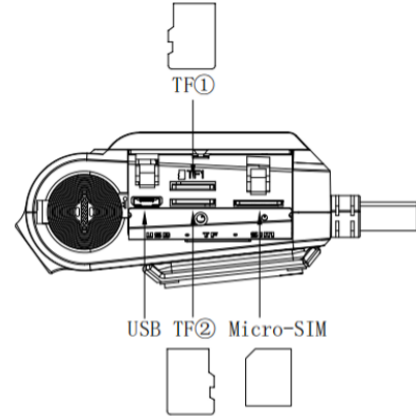
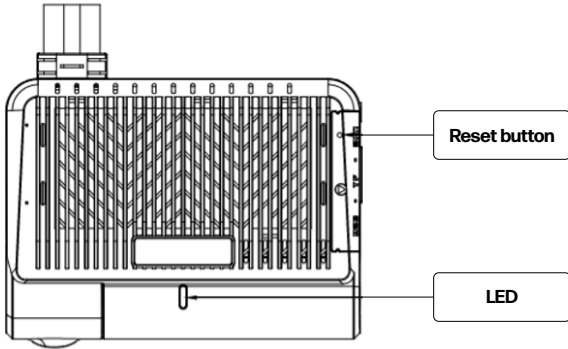


Left View

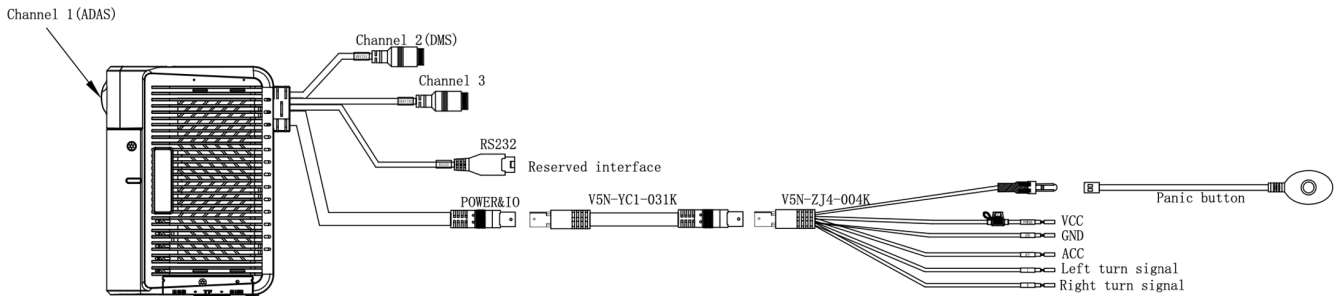




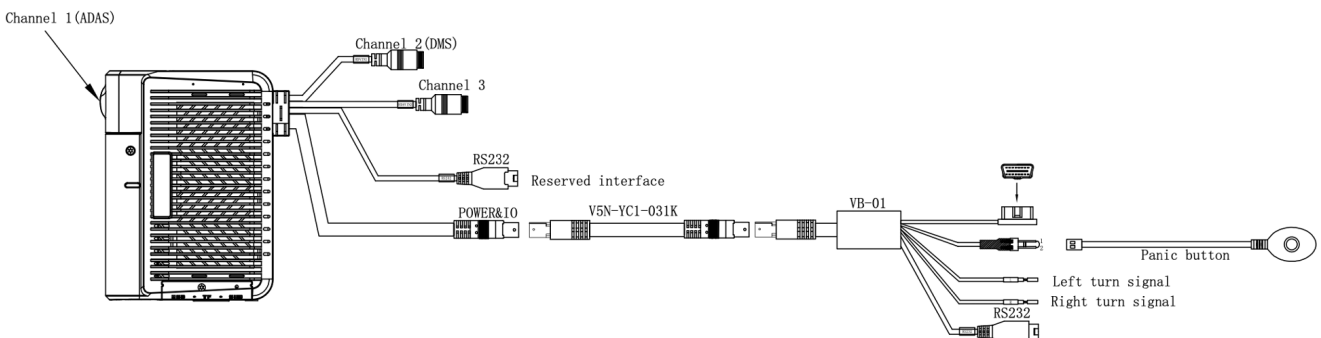
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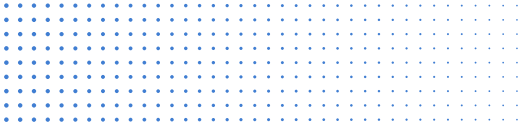


Standard Hard Wiring Diagram:



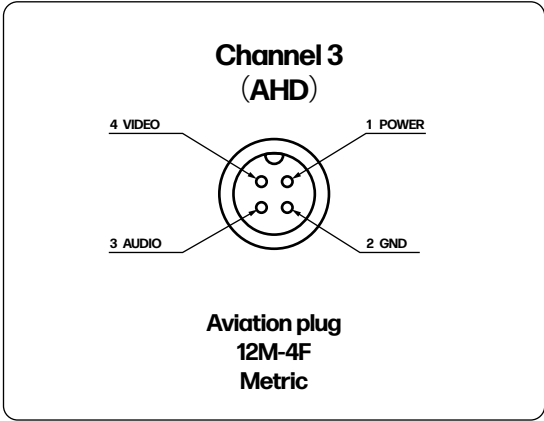
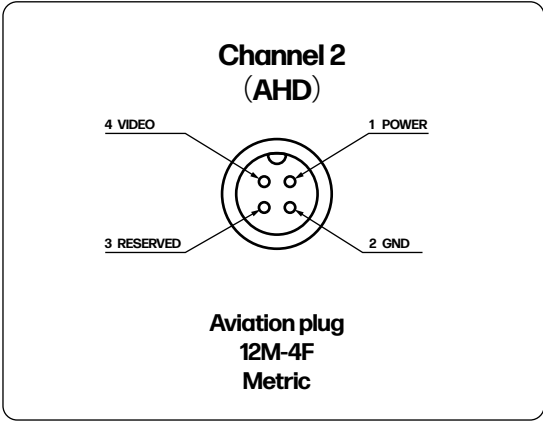
OBDII Power Supply





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Expansion Camera Interface Definition



Power Supply Information for External Camera:

- The output voltage and tolerance: 11.5V ± 0.5V.
- The maximum output current limit for external cameras: Overall maximum current 500mA, DMS camera current: 165mA.

Protection provided for cameras:

- The main unit supplies power to the camera with a regulated output of 11.5V.

Note: The Vision Insight AI camera main unit includes one integrated microphone. The audio captured by this microphone can be combined into either Channel 1 (built-in road-facing camera) or Channel 2.

