

VEHICLE TELEMATICS VIDEO

# VisionAI Enterprise

Your trusted co-pilot, for a safe trip every time

**VisionAI Enterprise** is an advanced dual-camera dash cam which detects risky driving behaviour such as unsignaled lane departure, imminent forward collision, unsafe following distance, driver fatigue, distraction, smoking and mobile phone usage. VisionAI Enterprise utilises machine vision-based technology to detect risky driving behaviours.

VisionAI Enterprise combines vehicle tracking with a single camera device advanced video for a comprehensive solution that's quick to perform and easy to install.

It helps you monitor vehicle location, driver behaviour, and driving quality. This integrated data aids in making informed decisions to enhance fleet safety and efficiency at a cost-effective price.

Safety is the pulse of transport industry, a mandate beyond mere goals. Powerfleet stands as your ally in the mission.

AI in telematics is a groundbreaking development that is revolutionising the way fleet management operates. By combining artificial intelligence with dashcams, video telematics empowers fleet managers with deeper insights and data-driven analysis.

Risky driving behaviour events and respective video files are uploaded to Unity for review by fleet managers and drivers to aid them in coaching driver performance.

VisionAI Enterprise consists of the following components:

- Main unit with Road and In-cab Camera
- Optional: AI Driver Coach
- Ability to support two additional cameras



## Key features



GPS tracking location and positioning



Driver behaviour data



Driver ID via MyMiX app



Fast installation without an onboard computer



Cost-effective video telematics to maximise safety

## Designed to Revolutionise Your Fleet Operations

Gain complete control over videos, trip and driver data all in one place with **VisionAI Enterprise**, with a full view of your fleet's performance with easy-to view and use dashboards that transform complex data into quick-to-action information to streamline your business.



Driver safety monitoring



Alerts for road events



Driver performance management



Location-based events



Asset movement/utilisation management



Real-time driver coaching





# Technical Specifications

## Main Unit

### Connectivity

Connectivity	Quectel EC25, LTE Cat4 with fall back
Positioning	GPS L1 1575.42 MHz, GALILEO E1B/C1, GLONASS L1OF 1602MHz, SBAS: WAAS, EGNOS, MSAS, GAGAN
Sensors	6-axis sensor
Storage	2 x TF-Cards with maximum 256GB per card

### ADAS Camera Parameter

Video Resolution – HD	5MP (2592 × 1920) @ 20 Frames per second (recommended)
Video Resolution – SD	576p (704 × 576) @ 10 Frames per second (recommended)
Image Sensor	1/2.7" 5 megapixel CMOS Sensor
Shutter speed	1/30s-1/100000s (Rolling shutter)
Lens	2.8mm
Illuminance	Colour 0.05 Lux/F1.2
Wide dynamic range	Digital WDR
Backlight compensation	Supported
FOV (H x V x D)	123° x 65° x 140°
Singla-to-Noise Ratio	≥ 48dB

### Video/Audio

Image Setting	Adjustable brightness, chroma, contrast, colour saturation, and sharpness
Video Encoding	H.264
CMR/VBR	Options: VBR and CBR. Default: VBR
Audio Compression	ADPCM, G.711, and G.726
Speaker	Built-in 3W loudspeaker
Microphone	Built-in Microphone for audio recording

## Technical Specifications (cont'd)

### Interface

Serial	1 x RS232
Video Out	1 x AHD, 1 x IPC
Video In	1 x AHD
IO Alarm	4 x Input
CAN	1 (J1939 protocol)
Speed (analogue)	1
Button	1 (Panic, Privacy mode, AP Mode)
LED Indicators	Power, Alarm, GPS, Network, Wi-Fi, Recording

### Environmental

Dimensions (L x W x D)	113×67.8×88.2mm   4.4×2.7×3.5"
Temperature (operating)	-40°C - +70°C   -40°F - +158°F
Temperature (Storage)	-40°C - +85°C   -40°F - +185°F
Power Input	9 – 36Vdc
Power Consumption	+/- 12.66W (<8W Typical)
Backup Power	SuperCap for controlled shutdown
Relative Humidity	15% - 90%
IP Rating	IP 30

## Modem Specifications

### Quectel EC25-EC (EMEA/ South Korea/ Thailand/ India)

Device Details		Quectel EC25-EC Cat4 LTE with 3G fallback compatible with 3GPP E-UTRA Release 11 standards
4G	Bands	LTE FDD: B1 / B3 / B7 / B8 / B20 / B28A LTE TDD: B38 / B40



## Technical Specifications (cont'd)

3G	Output Power	Class 3 (23dBm±2dB) for LTE FDD
	Bands	WCDMA: B1 / B8
2G	Output Power	Class 3 (24dBm+1/-3dB) for WCDMA
	Bands	GSM: B3/B8
	Output Pow	B3: 30dBm / B8: 33dBm

### Quectel EC25-AFXD (North America)

Device Details		Quectel EC25-AFXD Cat4 LTE with 3G fallback compatible with 3GPP E-UTRA Release 11 standards
4G	Bands	LTE FDD: B2 / B4 / B5 / B12 / B13 / B14 / B66 / B71
	Output Power	Class 3 (23dBm±2dB) for LTE FDD
3G	Bands	WCDMA: B2 / B4 / B5
	Output Power	Class 3 (24dBm+1/-3dB) for WCDMA

### Quectel EC25-AUX (Latam/ Australia/ New Zealand)

Device Details		Quectel EC25-AUX Cat4 LTE with 3G fallback compatible with 3GPP E-UTRA Release 11 standards
4G	Bands	LTE FDD: B1 / B2 / B3 / B4 / B5 / B7 / B8 / B28 LTE TDD: B40
	Output	Class 3 (23dBm±2dB) for LTE FDD Class 3 (23dBm±2dB) for LTE TDD
3G	Bands	WCDMA: B1 / B2 / B4 / B5 / B8
	Output Power	Class 3 (24dBm+1/-3dB) for TD-SCDMA Class 3 (24dBm+1/-3dB) for WCDMA
2G	Bands	GSM: B2 / B3 / B5 / B
	Output Power	Class E2 (27dBm±3dB) for EDGE 850/900MHz Class E2 (26dBm+3/-4dB) for EDGE 1800/1900MHz Class 4 (33dBm±2dB) for GSM 850/900MHz Class 1 (30dBm±2dB) for GSM 1800/1900MHz

## Technical Specifications (cont'd)

### Wi-Fi/Bluetooth Specifications

#### Realtek RTL8723DU

Standard	WI-FI: IEEE 802.11 b/g/n (HT20); BT: v2.1/v4.2
Frequency	2.412~2.4872GHz
Modulation	DSSS ,DBPSK, DQPSK, CCK and OFDM (BPSK/QPSK/16-QAM/64-QAM)
Data Rates	11b:1, 2, 5.5 and 11Mbps 11g:6, 9, 12, 18, 24, 36, 48 and 54 Mbps 11n: MCS0~7, up to 150Mbps
Current – WI-FI	TX 11b mode: 130mA , RX 11b mode: 90mA
Current - BT	OPP TX : 40mA, OPP RX:24mA

### Optional: Driving Coach Display

#### Display

Dimension (L x W)	40mm x 45mm
Resolution/ Size	128*128   1.4"
Brightness	400 cd/m3
Light Sensor	Support
Lens	Glass
Communication	RS485

#### Other

Buzzer	Built-in, adjustable volume, volume not less than 80db
Power Input	5 – 12V DC
IP Rating	IP30

## Technical Specifications (cont'd)

### Optional: Additional Cameras

VisionAI Enterprise supports two additional camera options, 1 x IPC and 1 x AHD type. When using the Driver camera (IPC port) an additional camera can be added on AHD port.



**Driver Camera (AI)**



**Rear Camera**



**Side Camera**

### IPC Camera Option

#### Features – Driver Camera (AI)

Model	C29N
Video Output	IPC, 6Pin Aviation connector
Video Resolution – HD	1280H x 800V @ 20 Frames/s
Video Resolution – SD	576p (704 × 576) @ 10 Frames/s
Image Sensor	1/4"100Mp Global Shutter Sensor"
Minimum Illuminance	0.1Lux (infrared light filling), F1.4
IR Range	1.5m
Shutter speed	1/30s-1/5000s
Signal-to-Noise Ratio	≥ 48dB
Lens	3mm M12-type, F1.6
FOV (H x V)	76° x 44°
Audio	Built-in microphone

#### Environmental

Dimensions (LxWxH)	98×30×43mm   3.9×1.2×1.7"
Temperature	-40°C to +70°C / -40°F to +158°F



## Technical Specifications (cont'd)

Humidity	0% - 90%
Power	DC 9-18V
Power consumption	<2.1W
Net weight	230g   8.1oz
IP Rating	IP53

### Features

### Side Camera (non-AI)

### Rear View Camera (non-AI)

Model	C39	953C4XR
Video Output	IPC, 6Pin Aviation connector	
Video Resolution – HD	1920H x 1080V @ 20 Frames/s	
Video Resolution – SD	576p (704 × 576) @ 10 Frames/s	
Image Sensor	1/2.9" 2.0M pixel CMOS	
Minimum Illuminance	0.1Lux (colour), 0Lux (IR on)	
IR Range	5-10m	8-10m
Shutter speed	1/30s-1/10000s	
Signal-to-Noise Ratio	≥ 48dB	
Lens	2.8mm M12, F1.2	
FOV (H x V)	135° x 76°	108° x 61°
Audio	Built-in microphone	

## AHD Camera Options



Side Camera



Rear Camera



Rear Plate Camera

## Technical Specifications (cont'd)

### AHD Camera Options (non-AI)

Features	Side Camera (non-AI)	Rear View Camera (non-AI)
Model	CA39 (SVT-A6320HS)	CA39A (SVT-A6410HS)
Video Output	AHD, 4Pin Aviation connector	
Video Resolution – HD	1080P (1920H x 1080V) @ 20 Frames/s	720P (1280H x 720V) @ 20Frames/s
Video Resolution – SD	576p (704H x 576V) @ 10 Frames/s	
Image Sensor	1/2.8 " 2.13M pixel CMOS	1/3 " 1.3M pixel CMOS
Minimum Illuminance	0.0lux (IR on), 0.05Lux (IR off)	
IR Range	10-15m	
Shutter speed	1/25s-1/25,000s (auto)	
Signal-to-Noise Ratio	≥ 50dB	
Lens	2.8mm M12, F2.2	2.8mm M12, F2.0
FOV (H x V)	103° x 56° x 121°	91° x 50° x 107°
Audio	n/a	

### Environmental

Dimensions (LxWxH)	66×58×46mm   2.6×2.3×1.8"	
Temperature	-40°C - +70°C   -40°F - +158°F	
Humidity	<90% (no condensation)	
Power	DC 12V ± 10%	
Power consumption	260mA/DC12V ± 5%	240mA/DC12V ±5%
Net weight	± 180g   6.3oz	
IP Rating	IP69K	

Features	Rear Camera (1080P)	Rear Plate Camera (720P)
Model	CA4	CA39A (SVT-A6410HS)

## Technical Specifications (cont'd)

Video Output	AHD, 4Pin Aviation connector	
Video Resolution – HD	1080P (1920H x 1080V) @ 20 Frames/s	
Video Resolution – SD	576p (704H x 576V) @ 10 Frames/s	
Image Sensor	1/2.8 " 2.13M pixel CMOS	1/3 " 1.3M pixel CMOS
Minimum Illuminance	0.0lux (IR on), 0.05Lux (IR off)	
IR Range	10m	3-5m
Shutter speed	1/25s-1/25,000s (auto)	
Signal-to-Noise Ratio	≥ 50dB	≥ 48dB
Lens	2.8mm M12, F2.2	2.2mm M12
FOV (H x V)	103° x 56° x 121°	91° x 50° x 107°
Audio	n/a	

## Environmental

Dimensions (LxWxH)	75×65.1×37.7mm   3×2.6×1.5"	196.7×29.5×30mm   7.7×1.2×1.2"
Temperature	-40°C - +70°C   -40°F - +158°F	
Humidity	<90% (no condensation)	0% - 95%
Power	DC 12V ± 10%	
Power consumption	260mA/DC12V ± 5%	130mA/DC12V ± 5%
Net weight	± 280g   9.9oz	± 200g   7.1oz
IP Rating	IP67	IP69K

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