IN-VEHICLE RECORDING SYSTEM

Smart recording, built on security and privacy you can trust

The In-Vehicle Recording System captures high-quality video and data from both interior and exterior cameras, with built-in cybersecurity and privacy safeguards. Designed for **reliability and ease of use, it supports fleet management, incident review, and enhanced driver accountability, providing safe and efficient driving experience.**

Key Features

- Fully compliant with **Turkey's AITM regulation** ensuring official type-approval eligibility for domestic market deployment.

- Compliant with **Turkey's AITM and relevant UN/ECE regulations** — type-approval eligible.

- Designed for **ISO-21434** cybersecurity readiness (secure boot, encryption) and data privacy **(GDPR, KVKK).**

- **Integrated camera units** (sensor + lens + electronics) for internal and external installations.

- **Multi-camera support** (front, exterior, interior/DMS).

- **Continuous loop recording** (front + interior) and **event-based recording** (emergency button).

- **Live streaming over LTE (HLS).**

- Embedded metadata: **timestamp, vehicle ID, license plate, GPS location.**

- **User/operator access control** with 112 (emergency) integration.

- **Type-C data export** and **firmware update** with rollback capability.

- **Internal (cabin) camera: IR illumination + optimized lens and integrated IR LEDs** for reliable occupant detection in low/no light.

- **External camera: high-quality color sensor optimized** for wide-area external view with robust day/night and all-weather performance.

- Image quality validated against automotive test charts and **AITM** performance criteria.

- **Automated active alignment** and **multi-axis calibration** for geometric accuracy.

- **EMC compliant and validated** for vehicle integration, robust operation across temperature, vibration and humidity ranges.

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TECHNICAL DETAILS INTERNAL CAMERA

Camera Resolution: 1600*1300 (2MP) IR

Field of View: 110° HFOV

Supply Voltage: DC 9–20V (Nominal 12V)

FPS: 30 FPS

Global Shutter: Available

Led Flicker Mitigation: Available

Eye Safety Stadard: TS EN 62471

Synchronous LED Lighting: Available

Video Output: GMSL2

Data Interface: I2C

Operating Temperature Range: -40°C to +85°C

TECHNICAL DETAILS EXTERNAL CAMERA

Camera Resolution: 1920×1280 (2.5 MP)

Field of View: Min 110° HFOV

Supply Voltage: 8V-16V (12V Nominal)

FPS: 30 FPS

Global Shutter: Available

Led Flicker Mitigation: Available

ISP: Available

HDR: 120 dB

Video Output: GMSL2

Data Interface: I2C

Operating Temperature Range: -40°C to +85°C

TECHNICAL DETAILS ECU

Processor: Quad-core Cortex-A53 64-bit processor

Memory: 2 GB + 16 GB (LPDDR4X eMCP, Default), 1TB to 4TB SSD

Connectivity: LTE, Type-C

Camera Input Encoder: CSI up to 4, 2 port H.265 Encoder

Security: Secure Boot, Hardware Crypto Engine

GNSS: GPS/ BDS/ GLONASS/ Galileo/ QZSS/ SBA

Operating Systems: Linux

Operating Temperature Range: -30°C to +75°C

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