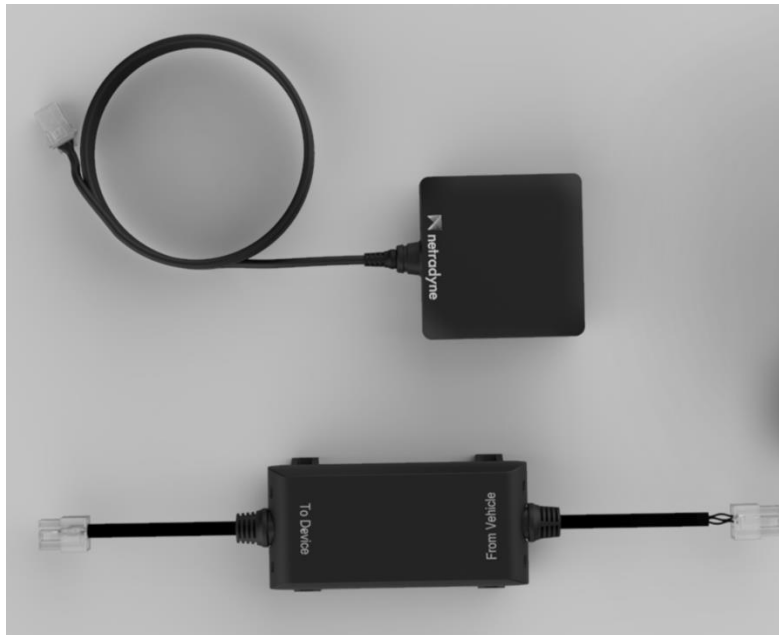# D-430

Technical Specification

OVERVIEW

Driveri® is an AI powered vision based IoT system, sold as an aftermarket product to fleets. The device is installed in trucks/cars behind the rear-view mirror, and the power is supplied from the car battery though a Power cable. The device is capable to connect with the OBDII/J1939 of the vehicle to collect the engine data. This device is passive to the driver.

When the truck is running, the device captures 360° videos where the outward facing camera is the primary recording and other 3 cameras are optionally configured as per the customer requirement. The recorded videos are processed (using our patented machine learning algorithms) on the device together with the other sensory data and can detect any events related to driving behavior and driver behavior.

When an event is detected, an alert together with the supporting processed data is uploaded to the cloud dashboard where the events and related data can be accessed by the fleet manager. The device has 2 buttons on the bottom side of the device, when pressed creates alerts which are user generated. 2 LEDs on driver facing side indicate the current operational state of device.

Features

- Nvidia TX2 Module
  - CPU - Dual-core Denver 2 64-bit CPU and quad-core ARM A57 complex
  - GPU - NVIDIA Pascal™ architecture with 256 NVIDIA CUDA cores - 1.3 TFLOPS (FP16)
- Includes outward facing camera OV2775 with HDR ISP OV491
- Inward /driver facing camera OV2735 with IR LED for night vision
- Connectivity - LTE / WiFi / BT
- 2 LED indicators to represent device state
- Integrated Microphone & Speaker
- 4GB RAM + 128GB eMMC based Storage (Storage expandable up to 256GB)
- Inertial sensor (Accelerometer & Gyro), Thermal sensor

GPS/Wireless Module (above), Supercap Cable (below)

Processor and GPU Specification

GPU	NVIDIA Pascal™ architecture with 256 NVIDIA CUDA cores
CPU	Dual-core Denver 2 64-bit CPU & Quad-core ARM A57 complex
Video Encoding - H.265	1080p @ 30 fps
Video format	MP4 with H.265
Sensors	IMU – Accelerometer + Gyro, Temperature, Light

RAM and Storage

Memory (RAM)	4 GB LPDDR4
Storage	16 GB eMMC (System) + 128GB eMMC (Video)
Expandable Storage	Up to 256GB via eMMC

Camera Specification

Camera	Outward	Inward	Right & Left
Camera Sensor	OV2775	OV2735	OV9732
Pixel Size	2.8µm OmniBSI-2 pixel	3µm x 3µm	3µm x 3µm
Dynamic Range	>90dB dual capture; >120dB in HDR mode	72db (not true HDR)	72db (not true HDR)
Responsivity	~5 V/lux sec	3.3 V/lux sec	3.3 V/lux sec
Lens Size	1 / 2.7"	1 / 4"	1 / 4"
F No.	1.6	2.0	2.0
Field of View	74° (Horizontal) 57° (Vertical) 90° (Diagonal)	148° (Horizontal) 80° (Vertical) 168° (Diagonal)	127° (Horizontal) 82° (Vertical) 143° (Diagonal)
Construction	6G – Visible	6G + 1R Filter - Dual Band Pass	2G2P – Visible with IR Filter

Wireless Connectivity & I/O

LTE Connectivity	4G LTE (Cat 3) – Band 25, 26
SIM Connector	No, embedded SIM
Wi-Fi	802.11 ac

Bluetooth	v4.0

Electrical Specifications

Input Voltage	7V-17V
Input current (full operation)	12V 2500mA
Max Power Consumption	30W
Signals Input – High Voltage (Positive)	+17V
Signals Input – Low Voltage (Negative)	0v

Physical Dimensions

Length x Width x Height	190mm x 79.3mm x 96.2mm
Color	Black
Case Material	Polycarbonate (PC)
Power Cable Length	3 meters
Power Cable Thickness	5.3 mm