

News Release

For Immediate Release
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Pioneer Introduces a Connected Dual Camera Drive Recorder that utilizes AI to detect drowsiness as part of *Intelligent Pilot*, an ADAS Solution
~Achieves improved safe driving support with driver monitoring functions~



【Intelligent Pilot】



【TMX-DM03】

Pioneer has been offering an ADAS solution called *Intelligent Pilot* since April 2017. This is a driving assistance solution which aims to support safer driving through the use of its digital map-based accident risk prediction platform and connected IoT devices.

In the latest development, to prevent car accidents caused by driver fatigue and drowsiness, it has augmented its lineup with a connected dual camera drive recorder equipped with a driver monitoring function that is able to detect drowsiness and driver distraction (planned introduction in April into Japan). This feature will make it possible to monitor the state of the driver in real-time and provide improved assistance for safe driving.

【Background leading to the product's introduction into Japanese Market】

Revised regulations went into effect on June 1, 2018 requiring businesses transporting passengers and freight to add sleep deprivation as an item recorded in driver roll-calls. Measures to deal with issues such as driver fatigue and drowsiness, which can cause vehicular accidents, have been attracting attention.

【Main features】

1) A driver monitoring function that detects driver drowsiness or distraction through an in-cabin camera & infra red sensors

-Drowsiness detection function

Through AI-based algorithms, metrics such as eyelid opening and closing times, blink frequency and face inclination are detected to determine drowsiness in real-time and issue alerts

-Distraction detection function

The face's tilt angle and time is detected to determine inattentiveness in real-time and issue alerts

* This product uses the driver monitoring software from Jungo Connectivity Ltd.

* In the future, the feature set will be upgraded to include personal authentication and other functions.

2) Equipped with a safe driving assistance function that detects dangerous driving on the part of the driver through a forward camera

-Front Car Proximity Alert

Detects when the car in front in the same lane gets too close and alerts the driver

-Lane Veering Detection Function

Detects when the car has veered to one side of the lane and alerts the driver

3) Achieves advanced safe driving support

- Issues alerts and warnings based on accident risk prediction

Predicts the risk of an accident in real-time based on various data including digital maps, probe data, accident-prone spots and weather as well as driver tendencies, and alerts or warns the driver only when there is a high risk of an accident

- *YOUR SCORING*, AI scoring feature

Uses digital map data and GPS location information to diagnose potential risks for each driver

Moving forward, Pioneer will continue to upgrade the features and the device lineup offered with *Intelligent Pilot* and make efforts to reduce traffic accidents by proposing use of the system to various companies in the automotive sector and to lay the groundwork for an overseas expansion.

【Main Specifications】



Communication System	LTE/3G
GNSS	GPS/QZSS/GLONASS/Galileo
Sensor	Equipped with three-axis accelerometer and three-axis gyro sensor
Screen size	2.4 inch LCD (touch panel)
Image sensor	2 megapixel (approximate) CMOS sensors (both in-cabin camera and front camera)
Recording angles of view	Horizontal 130° , vertical 67° , diagonal 158° (both in-cabin camera and front camera)
Recording media	microSD (compatible with MicroSDXC memory cards)
Power supply voltage	Main unit: DC 5V (when connected to included cigar lighter power cable Built-in battery capacity)
Maximum consumption current	1.5 A (when connected to included cigar lighter power cable Built-in battery capacity)
Built-in battery capacity	750 mAh
Operating temperature range	-10°C ~ +60°C (Excluding battery operation)
External dimensions	W 128 mm × H 54 mm × D 53 mm (excluding bracket component)
Weight	about 180 g (excluding bracket component)
Others	Wi-Fi/Bluetooth