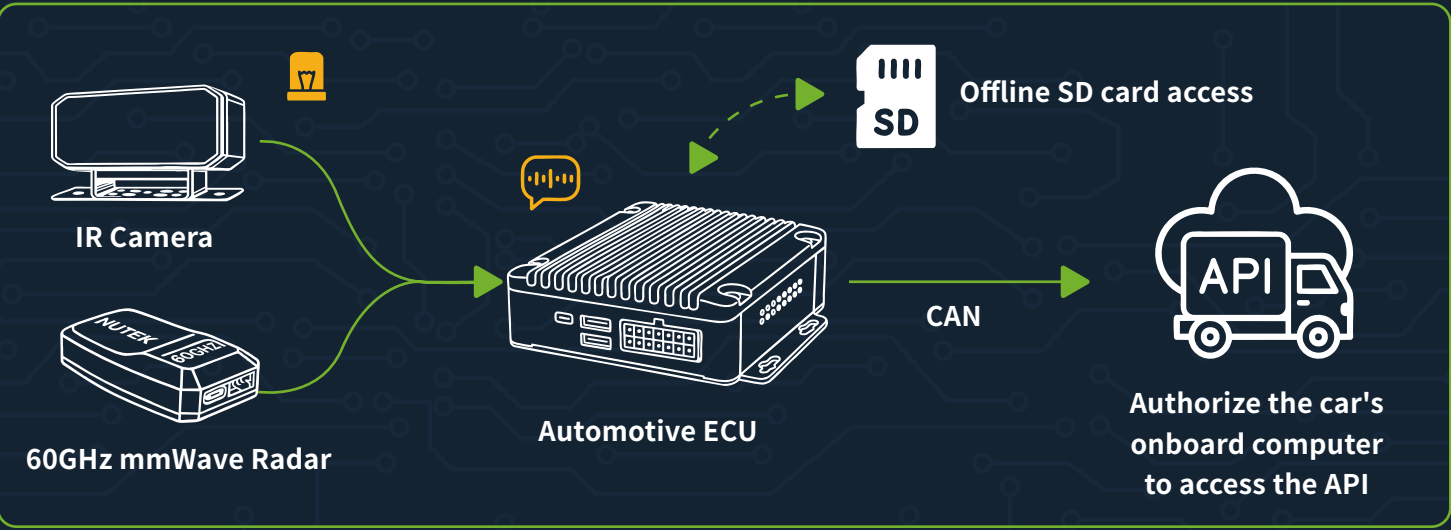


Designed to be built into your system.

Supplied as a sensor module together with the DMS ECU. Detection processing is completed on the ECU, so no algorithm implementation is required on your side.



Key specifications

Automotive ECU		IR Camera	
Operating Temperature Range	-40°C to +85°C	Operating Temperature Range	-40°C to +90°C
Power Supply Voltage	9 V to 36 V	Outside Dimenstions (Width) × (Depth) × (Height)	84mm × 48mm × 38mm
Consumed Current	Avg. 0.3 A / Max. 2.7 A (at 24 V)		
Sleep Current	Max. 3 mA	60GHz mmWave Radar	
Connectivity	SD card / CAN	Operating Temperature Range	-40°C to +85°C
Outside Dimenstions (Width) × (Depth) × (Height)	115mm × 75mm × 35mm	Outside Dimenstions (Width) × (Depth) × (Height)	13mm × 58mm × 33mm

※ Full specifications and evaluation samples are available after an NDA is signed.

Let's Find the Perfect Solution for You



- This product is not a medical device. Information on breathing and heart rate is intended to support fleet operation management and may not be used for diagnosis or treatment.
- Certification of conformity to technical standards under the Japanese Radio Act is currently in process for the 60GHz band radar. Use within Japan is subject to that certification.

• Product appearance and specifications are subject to change without notice.

Contact Us
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※ Phone support available in English and Mandarin
※ Monday–Friday, 8:30 AM–5:30 PM (Taiwan Time)

閱泰科技股份有限公司
NUTEK Corporation
Founded: 1981
Automotive electronics production: 45 years
Vehicle sirens, anti-theft systems, and more



<https://www.nutek.com.tw/>



DMS-R
Driver Monitoring System with Radar Enhance

From Gaze to Heartbeat.

DMS-R that watches with two kinds of eyes: camera and mmWave radar.

Detection Accuracy 97%

Verified in joint testing with ARTC
(Automotive Research & Testing Center, Taiwan)



Infrared camera



Millimeter-wave radar

Aftermarket Equipment
Commercial Vehicles
Passenger Vehicles

On long, late-night drives, some risks stay invisible to the camera. Breathing and heartbeat never do.

NUTEK DMS-R combines image recognition with mmWave radar — one eye that watches the driver's gaze, and one that senses breathing and heart rate. Together, they catch drowsiness, shifts in posture, and the earliest signs of trouble, before behavior itself changes. Dual detection — gaze and cardiac/respiratory signals — sharpens both the accuracy and speed of anomaly detection.



Everything a DMS needs to detect.

Not just distraction and drowsiness. We track gaze itself rather than head orientation, and go further still, to changes in breathing and heart rate that never show on the surface.



Gaze deviation
point-of-gaze level

Distraction
head orientation

Eye closure / drowsiness
eyelid opening

Postural collapse
body position



Breathing / heart rate
physiological anomaly

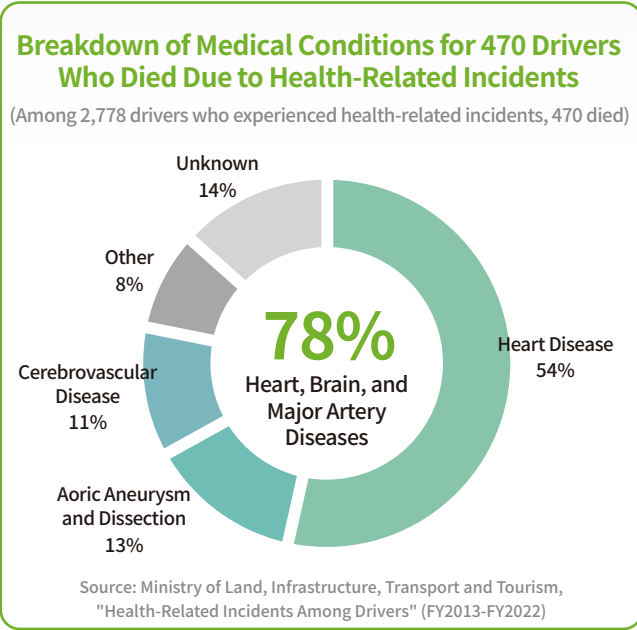
The region the camera never sees.

Most drivers who die in health-related incidents do so from cardiac, cerebrovascular, or aortic disease. These events show in breathing and heart rate before posture ever collapses.

60GHz millimeter-wave radar

It captures chest movements through clothing. While the camera monitors for changes in posture, it detects abnormalities in physiological conditions.

Jointly tested with ARTC (Automotive Research & Testing Center, Taiwan). Camera and radar sensor fusion verified at 97% detection accuracy.
※ Measured under ARTC test conditions. Actual results vary with the operating environment.



The face may be covered. The eyes are still visible.

Masks, caps, helmets, glasses. When part of the face is covered, most camera-based methods lose accuracy. This product tracks the eyes themselves rather than the whole face, so gaze detection continues even under occlusion.



Mask
mouth covered

Cap / helmet
brim shadow

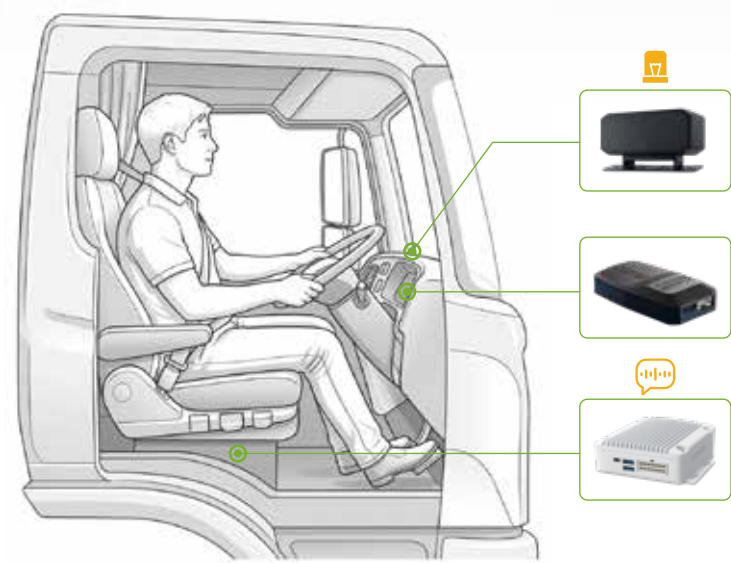
Glasses
lens reflection

Sunglasses
IR sees through

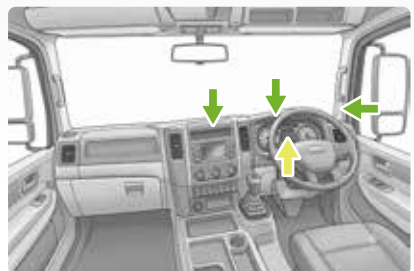
Fringe / winter wear
partial occlusion

Installation Locations

A retrofit solution that installs on existing trucks, buses, and passenger vehicles.



Trucks & Buses



- IR Camera**
- Above center of dashboard
 - Center console area
 - A-pillar
- 60GHz mmWave Radar**
- Inside center of dashboard

Passenger Vehicles



- IR Camera**
- Above center of dashboard
 - Center console area
- 60GHz mmWave Radar**
- Inside center of dashboard