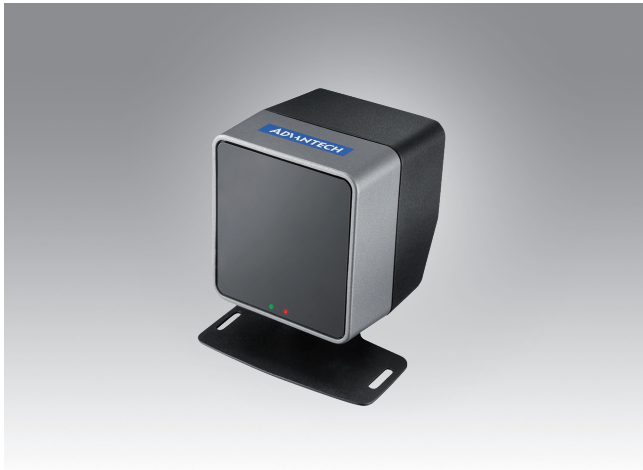


# TREK-132 FL

## Long-Range Driver Behavior Recognition Module



### Features

- Long-range detection distance (70 ~ 110 cm/27.55 ~ 43.3 in)
- Drowsiness detection
- Distraction detection
- Eating/smoking detection
- Phone use detection
- Supports all ethnicities and sexes
- Supports interior driving environments and both day and night lighting conditions
- Vehicle-grade design (12V/24 vehicle power, wide temperature range, and optimized vibration detection and tolerance)
- Compatible with sunglasses (excluding glasses with specular reflection lenses)
- Sunshine and light refraction does not cause interference

### Introduction

TREK-132 FL (facelift) is a driver behavior recognition module that supports a long-range detection distance (70 ~ 110 cm/27.55 ~ 43.3 in) for driver behavior monitoring. The module features recognition technology and algorithms that monitor changes in driver eye and body movement patterns in order to detect drowsiness and distraction. If inappropriate behavior is detected, the module will send alert signals via the COM port to the in-vehicle computer. The in-vehicle computer integrated with third-party software then emits warning notifications to alert the driver and back-end managers. The module also supports video recording and streaming to facilitate subsequent analysis for effective management. By enabling real-time driver behavior management, TREK-132 FL provides an intelligent safety solution for effective accident prevention.

### Specifications

Intelligent Video Analysis <sup>1</sup>	Drowsiness Detection	Monitors driver eye movements and blink frequency. Alerts are emitted if the pre-configured threshold is exceeded
	Distraction Detection	<ol style="list-style-type: none"> <li>1. Drowsiness</li> <li>2. Lack of attention to the road</li> <li>3. Cell phone use (via hand)</li> <li>4. Eating/smoking</li> </ol>
	Detection Conditions	The distance between the driver's face and the camera sensor should be 70 ~ 110 cm/27.55 ~ 43.3 in <sup>2</sup> Supports all ethnicities, genders, as well as the wearing of glasses/sunglasses (excluding glasses with specular reflection lenses) Suitable for indoor environments (e.g., low illumination, light refraction)
Electrical Interface	Camera Sensor	CMOS type, 480p@30fps resolution, 74.8dB dynamic range; field of view <sup>3</sup> (D x H x V): 41.2°/32°/26°
	I/O	1 x 8-pin automotive connector (grey) for video-out, TX/RX, and ACC/GND
	Power Input	Supports 12/24 V vehicle power, 9 ~36 V <sub>DC</sub> , with ISO-7637-II compliance
	Power Consumption	7.2W typical (input current <600 mA @ 12 V)
Environment	Operating Temperature	-30 ~ 80 °C/-22 ~ 176 °F
	Storage Temperature	-40 ~ 85 °C/-40 ~ 185 °F
	Operating Humidity	30 ~ 80% @ 40 °C/104 °F
	IP Rating	N/A
Certification	Vibration/Shock	MIL-STD-810G, EN60721 (5M3)
	EMC/Safety	CE, FCC, RCM, VCCI
	Vehicle Regulation	eMARK (E13)
Mechanical	Dimensions (W x H x D)	60 x 65 x 58.7 mm/2.36 x 2.55 x 2.31 in (with mount kit: 75 x 81 x 58.7 mm/2.95 x 3.18 x 2.31 in)
	Weight	155 g/0.34 lb

<sup>1</sup> The system emits a warning when ACC is activated.

<sup>2</sup> Because this is an imaging-based driver behavior recognition system, the detection accuracy may be affected by certain conditions and/or situations. Refer to the user manual for further details.



#### Disclaimer

1. Environmental conditions, such as bright lighting or the camera being covered, may trigger false warnings.
2. The presence of dirt or moisture on the camera may impact the recognition capabilities.
3. The TREK-13x series only provides warnings when an object is within the detection area.
4. The TREK-13x series is designed to alert drivers to certain potentially dangerous situations. However, the module cannot replace the functions that drivers would ordinarily perform when driving a vehicle, nor does it reduce the need to remain vigilant and alert at all times, to conform to safe driving standards and practices, and to obey all traffic laws, rules, and regulations.

### Ordering Information

Part Number	Description
TREK-132-BL01A0E	TREK-132 FL with 2-meter cable for large vehicles (70 ~ 110 cm/27.55 ~ 43.3 in detection range), NTSC, RS-232

### Optional Accessories

Part Number	Description
TREK-132-AC01A0E	TREK-132 IP66-rated cover