

AIS project specification

AIS is Driver Monitoring System (DMS) for fleet and aftermarket, increasing road safety by detecting driver drowsiness or distraction.

Using infrared light, AIS identifies even the most subtle changes in the driver's behavior. Through AI-powered software, the systems are able to detect early signs of drowsiness or distraction and prevent dangerous situations.

AIS combines high intelligence with great flexibility. The system is scalable and developed with several different output options for alarming the driver. It can easily be upgraded and integrated with other systems. The AIS can also be connected to a vehicle CAN bus for HMI integration.

The system consists of an Electronic Control Unit (ECU) and a camera unit, mounted slightly below the line of sight in order to view the face of the driver.

- Network Connectivity – BT Bluetooth BLE v5
- Power consumption 0.6 A (12.5V)
- Vehicle Connectivity 1xCAN
- Standby current 0.1 m
- ECU Size 113*120*30 mm
- IP ECU IP52; Camera IP52
- Operating temperature -40 to +85 degrees
- Frame rate 60 fps
- Storage temperature +125 degrees
- Wavelength 940 nm
- Input voltage 9-36 V

The first type camera:

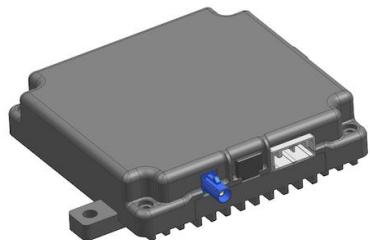
- Camera Size: 131*23*63 mm
- Active pixels: 2 MPixel
- Working distance: 400-900/700-1200 mm
- Visual angle 28° x 45° (vert x horiz)

The second type camera:

- Camera Size: 67*17*25 mm
- Active pixels: 1 MPixel
- Working distance: 400-900 mm
- Visual angle 28° x 45° (vert x horiz)

ECU and camera

ECU:



The first type camera

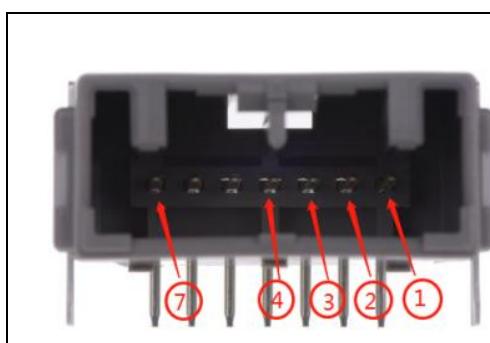


The second type camera



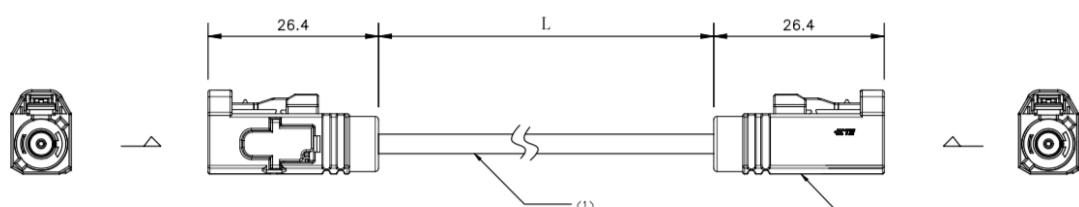
One cable harness for power supply (and CAN where applicable).

Connector for electronic control unit.



PIN	Function	Color
1	KL15 Ignition	White
2	KL30 Battery	Red
3	CAN H	Blue
4	CAN L	Green
7	GND	Black

One coaxial cable with connectors for connecting the camera unit to the electronic control unit.



FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm from your body.