



AK700 Smart AI Telematics Gateway

The AK700 is an innovative AI telematics gateway, offering GEO or LEO connectivity with 4G-LTE redundancy. Utilizing satellite networks, it ensures seamless connectivity. Equipped with advanced AI for ADAS and DMS, the AK700 delivers real-time alerts and behavior monitoring to prevent accidents. Additionally, it features DLC support for accessing detailed vehicle engine data via the vehicle bus.



Truck



Trailer



Bus



cargo vans



Features

- GEO/LEO: Satellites connectivity
- LTE-M: LTE Cat.M connectivity, multi-signal auto switch
- I/O: Multiple interfaces for various monitoring and control
- DLC: Supports vehicle bus for obtaining detailed vehicle engine data
- Wi-Fi: Wi-Fi hotspot enables other devices to access the internet
- GNSS Antenna: Built-in GNSS antenna, supports optional external antenna

Ordering Information

Model	Version	Region	GEO/LEO Satellites Connectivity
AK700-FGNXB-AT02	Standard	Global	●

Last updated: 25-November-2024

Specifications

PROCESSOR

SoC	TI_TDA4VM (Dual Arm® Cortex®-A72)
System Memory	DDR 64 Gbits
System Storage	Onboard eMMC 256 Gbits

CONNECTIVITY

AK700-FG (Global)*	LTE FDD Cat.6 B1, B2, B3, B4, B5, ,B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B38, B39, B40, B41, B42, B43, B48, (CBRS), B66, B71 WCDMA B1, B2, B4, B5, B8, B9, B19
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POSITIONING

Receiver Type	99 Acquisition channels
Location Technology	BDS, GPS, GLONASS, Galileo, QZSS
SBAS Support	WAAS, EGNOS, GAGAN, MSAS
Tracking Sensitivity	-165dBm
Acquisition Sensitivity	-158dBm
	GNSS < 1m CEP
Location Accuracy	SBAS < 1m CEP
	D-GNSS < 0.5cm CEP
Antenna	External

EVENT

ADAS	Forward Collision Warning Pedestrian Detection Warning Lane Departure Warning Virtual Bumper
DMS	Fatigue Driving Warning, Distraction Warning, Calling Warning, Smoking Warning, Seatbelt Warning, Face ID recognize up to 100 IDs
BSIS (UN R151)	Blind Spot Detection Warning
RCW (UN R159)	Rear Collision Warning
Emergency Report	SOS Button, Impact and Collision

EXTENAL CAMERA SUPPORTS* (TBC)

DMS	x 1, Up to H: 100°, V: 45°, IR: 940nm
ADAS	x 1, Up to H: 137°, V: 117.5°
BSIS (Front/Left/Right/Rear)	x 4, Up to H: 100°, V: 117.5°
RCW	x 1, Up to H: 183.6°, V: 117.5°
Reserved Camera	x 1, Up to H: 100°, V: 117.5°

VIDEO ENCODING/DECODING

HEVC	H.265
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VEHICLE BUS PROTOCOL*

Vehicle Bus	ISO 11898-1, CAN Bus2.0B, J1939
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EXPANSION SLOT*

M.2 (Key-B)	x 2, LTE Module Cat.6/SSD
MiniPCIe*	x 1, CANBus Module

INPUTS/OUTPUTS

Digital Ignition Inputs	4 Positive / 1 Negative (SOS)
Power Output	1A@5V
Serial Interface	RS232
LED Indicators	5 LEDs (Power, Cellular, GPS, Wi-Fi, Bluetooth)
Speaker*	Support
Mic*	Support
Switch	Power Button & Display Chanel

ELECTRICAL

Operating Voltage	Vehicle 9~48V system
Storage	Support M.2 Gen3, up to 512 GByte

WIRELESS

Bluetooth	Low Energy v5.1, Class2 (Support Long Range)
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SENSOR

Accelerometer	3-axis ± 16g
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PHYSICAL

Dimension	180 mm x 147.2mm x 40mm (7.1" x 5.8"x 1.6")
Weight	800g (1.8lb)
Mounting Method	Screw Mounting Bracket

ENVIRONMENTAL

Operating Temperature	-20 to +70 °C
Storage Temperature	-30 to +80 °C
Relative Humidity	95%RH @50°C non-condensing
Vibration/Shock	MIL-STD-810H, ISO16750

CONNECTORS

Molex Female 18 Pin	x 1, I/O Connection
Molex Female 20 Pin	x 1, Cameras Connection for 8 ports
PC/Accessory Interface	x 1, JST male 4 Pin
SIM Card Socket	x 1, Nano SIM (4FF)
Micro SD Socket	x 1, Micro SD Card up to 512 GByte
CB series	x 8 for Camera (TVI/AHD)
Audio Jack	x 1, Mic / Speaker dual Ø2.5mm
RJ45	x 1, Ethernet (10/100/1,000 Mbps)
SMA	x 3, GPS/LTE/Wi-Fi Antenna
USB Type A	x 1, USB3.0
Display Port	x 1, DP

DEVICE MANAGEMENT

Firmware Updated	ADM (ATrack Device Management), FOTA
Configuration	ADM (ATrack Device Management),

CERTIFICATION

Standards	FCC, IC, CE,
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*Optional Accessories Required

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