AK7V | OPTIMIZED VEHICLE TRACKER

CE IC FC

AK7V is a vehicle tracking device that is both rich in feature and economical making it perfect for fleet management solution. With 4G / 3G / 2G connection, AK7V is able to monitor vehicle location and remotely control its I/O port to deliver accurate data, including vehicle location and status. Featuring a two-way voice function, AK7V makes communication for the drivers much more efficient and convenient. Through additional accessory – ATrack AC3R, AK7V is compatible with OBDII, J1939, J1708 protocols which allows AK7V to be suitable for all types vehicle and ideal for automotive track & trace and monitoring applications.

4G LTE
4G / 3G / 2G Connectivity
With LTE / UMTS / HSPA / GSM communication.

CAN bus
Multiple Vehicle Compatibilities
Compatible with OBDII, J1939, J1708 protocols via additional accessory – ATrack AC3R.

Two-Way Voice Communication
Featuring a two-way voice function makes communication more efficient and convenient.

G
3-axis Accelerometer
Built-in 3-axis accelerometer for motion and impact detection.

BLE
Bluetooth
Optional Bluetooth Low Energy (BLE) for IoT applications.

Optional Accessories

I/O Expansion
RS1:1-3 RS232 Expander Cable
RS2:RS232-to-RS485 Adapter
AC1P:OBDII_ J1939 Diagnostic Adapter (DB9-Pin)
AC1R:OBDII_ J1939 Diagnostic Adapter (JST-Pin)
AC3R:OBDII / J1939 / J1708 Interpreter

Safety
12V / 24V Relay
CMOS Camera CAM7570
CMOS Camera CAM5650
SOS Push Button Cable (Unlocked)
Business / Private Trip Switch Button Cable (Locked)

Identification
1-Wire® iButton Reader & Tag
1-Wire® Magnetic iButton Reader & Tag
1-Wire® Trailer ID
RFID Reader & Tag
Active RFID Reader & Tag

Utility
Speaker
Microphone
1-Wire® Temp. Sensor Probe

ATrack Proprietary Tool
ACT (ATrack Configuration Tool)
ADM (ATrack Device Management Portal)

Hardware Specification — AK7V

CELLULAR

AK7V-ME (Europe)	LTE FDD Cat.M1
	B1, B3, B8, B20, B28
	GSM 900, 1800
AK7V-MK (Japan)	LTE FDD Cat.M1
	B1, B3, B8, B18, B19, B26
AK7V-UG (Global)	WCDMA 800, 850, 900, 1900, 2100
	GSM 850, 900, 1800, 1900
AK7V-2G (Global)	GSM 850, 900, 1800, 1900
Data Support	UDP / IP, TCP / IP, SMS
Antenna	Embedded cellular antenna

GPS

Receiver Type	99 channel engine
Location Technology	GPS & GLONASS
SBAS Support	WAAS, EGNOS, GAGAN, MSAS
Tracking Sensitivity	-167dBm
Acquisition Sensitivity	-149dBm
Location Accuracy	2.5m CEP 50%
Antenna	Internal (Optional external antenna)

INPUTS/OUTPUTS

Vehicle Bus (Optional)	External Adapter
Serial Interface	RS232
Digital Ignition Input	1 Positive Input
Digital Inputs	Up to 3 (Configurable)
Digital Outputs	2 (Max. sink current 300mA)
Analog Inputs	Up to 2 (Configurable)
	DC 0~40V (12bits resolution)
1-Wire® Interface	1 (Driver ID, Temperature sensors)
LED Indicators	3 LEDs (Power, GPS, Cellular)
Bluetooth (Optional)	Bluetooth Low Energy v4.2 Class 2
Speaker Out (AK7V-2G/UG)	1 (Mono)
Microphone (AK7V-2G/UG)	1

SENSORS

Accelerometer	3-axis ±16g

ELECTRICAL

Operating Voltage	Vehicle 12V / 24V system
Current Consumption	Operating: 50-250mA@ 12V
	Deep Sleep: 1.5mA@ 12V
Backup Battery (Optional)	3.7V 250mAh

MEMORY

Internal Flash Memory	64 Megabit
	Up to 135,000 logs
	Up to 27,000 positions

ENVIRONMENTAL

Operating Temperature	−40 to +85 °C (without battery)
	−20 to +60 °C (with battery)

PHYSICAL

Dimension	70 mm x 75 mm x 21.5 mm
	(2.76" x 2.95" x 0.85")
Weight	90g (0.2 lb)
Enclosure	Flame Retardant ABS+PC
Mounting Method	Adhesive

CONNECTORS

I/O Connection	Molex 12 Pin Connector
SIM Card Socket	NanoSIM (4FF)
Accessory Interface	RS232 with 5V power
External GPS (Optional)	SMA
Configuration Interface	RS232
Speaker Out (AK7V-2G/UG)	3.5mm Mono Jack
Microphone (AK7V-2G/UG)	3.5mm Mono Jack

CONFIGURATION

Device Maintenance	Firmware and configuration
	Update via ADM

CERTIFICATIONS

Standards	CE, FCC, IC, TELEC, JATE, RoHS
Carriers (Module Certified)	NTT docomo, KDDI, SoftBank

About ATrack

ATrack Technology Inc. specializes in GPS telematics hardware designing and manufacturing, and has a product portfolio including solutions for cars, trucks, containers & non-powered assets, trailers, and motorcycles. In addition to a line of stable and robust hardware, we are also experienced in firmware and hardware modifications, and customized product developments. ATrack always strives to provide the most reliable hardware and excellent service for our customers and has obtained ISO 9001 Quality Management Systems to enhance product quality and ultimately improve levels of customer satisfaction. For System Integrators & Telematics Service Providers who value vendor responsiveness and flexibility, and are looking for a hardware partner who does not have a competing business model, ATrack is globally proven to be the best choice.

ATrack Technology Inc.

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