CAR AVL SYSTEM

GPS/GLONASS/GPRS TRACKER

Model : K7

AVL GPS Tracker

Minisentry Telematics Service is Suitable for lots applications

Main Function:

1. LBS (Location-based service), GPS & GSM mobile networks Position
2. GLONASS / GPS dual satellite
3. Real-time tracking
4. Multi-user management. (Web software)
5. Geo-fence alarm Playback history.
6. Set Geo-Fence, speed limitation.
7. Send email or SMS when alarm.
8. Used Map: Google Map,
9. Modify the time interval of tracker’s data report
10. Support Multi-languages

K7 GPS/GLONASS Tracker

Item No.	K7
Products View	

GPS/GLONASS Specifications

Item	Description	Specification
Chipset	MSTAR	MSB2311
Sensitivity	Tracking	-161dBm, typical
General	Frequency	GPS L1 1575.42 MHz, GLONASS L1 1602MHZ
	Channels	80 acquisition 20 tracking channels
Datum	WGS-84	Default WGS84
Accuracy	Position	2m CEP
	Velocity	0.1 meters/second
	Time	1PPS <20 ns resolution
Time to First Fix (TTFF)	Reacquisition	0.1 sec., average
Open Sky & Stationary Requirements	Hot start	1 sec., average
	Warm start	32 sec., average
	Cold start	34 sec., average
Dynamic Conditions	Altitude	18000m(Max)
	Velocity	515m/s(Max)
	Acceleration	4g

	Jerk	1g/s

SM/GPRS Specifications

Item	Description	specification
Air Interface	GSM or GPRS Quad Band	850/900/1800/1900MHz
	Protocol Stack	GSM Rel.97. STK Rel.99 GPRS Rel4.0 Class 10
	Output Power	Class 4 (2W) at 850/900 MHz Class 1 (1W) at 1800/1900 MHz
GSM Sensitivity	850/900 MHz	-108 dBm
	1800/1900 MHz	-107 dBm
Messaging	SMS concatenated	Yes
	Smart messaging(GPRS)	Yes

Physical Specifications

Item	Description	Specifications
Dimension (Products)	Length	86 mm
	Width	46mm
	Height	19 mm
Antenna	GPS/GLONASS	External
	GSM/GPRS	Internal& External

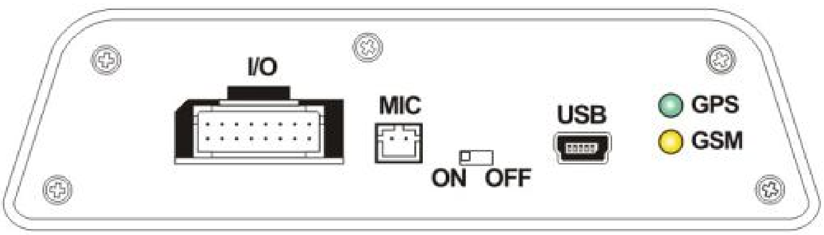
Environmental Specifications

Item	Description	Specification
Temperature	Operating range	-20 °C to 70 °C
	Storage range	-40 °C to 85 °C
Humidity	up to 95% non-condensing	

Electrical Specifications

Item	Description	Specification
Supply voltage	From Car Power	9 V – 40V
Battery	Built-in back up Li-ion battery	1000mA
Power consumption	Operation mode (GSM)	130mA~ 270mA
	Standby mode (Trace On)	70±5mA
	Power saving mode (Trace Off)	7mA

Wire Distribution



Pin 15 GND	Pin 13 GND	Pin 11 GND	Pin 9 A_Input2	Pin 7 A_Input1	Pin 5 SOS	Pin 3 D_input2	Pin 1 D_input1
Pin 16 ACC	Pin 14 Input	Pin 12 Speaker	Pin 10 D_output	Pin 8 Cut oil	Pin 6 D_output3	Pin 4 D_outpuut2	Pin2 D_output1

Pin 1 (Digital input1) **:** It's an option function, this pin can connect another exterior relay.

Pin 2 ,Pin 4 ,Pin6 (Digital output GPIO): The maximum output volt is 3V or 0V.There is no other volt serving in this port, so the users has to build their own circuit that creates for their specific use and transforms the volt to control the vehicle machine. The output voltage decides by the server. If user doesn't connect anything, please insulate it.

Pin 3(Digital Input2 GPIO) **:** This port is designed for a parking switch, user could connect this port to a button, when user has parked, press the button would activate the service. The limit voltage is also 3V.

Pin 5(SOS Digital Input3 GPIO) **:** This port would connect to a button. If any emergency happened, press the button lasting for 3 second would activate the SOS service. Its input limit voltage still 3V.

Pin 7 , Pin 9 (Analog input GPIO) **:** The user has to build their own sensor system to monitor what they want to govern. For example, Car Thermometer that set in the vehicle could send what the temperature is now to the circuit, transform the temperature into voltage sending to the server, deciding what action would be responded, the volt range is form 0 to 3V.

Pin 8 (Cut oil Digital output) **:** In this port, we have already built a circuit to control whether you want to cut oil or not. But user should still connect to a relay of the low potential position. User could control the output through server.

Pin 10 (Digital output +12v) **:** Connect cut oil relay 12V.

Pin 11 (Ground) : Connect to Speaker ground

Pin 12 (Speaker Pin) : Connect to the Speaker high potential terminal.

Pin 13 (Ground) : Connect to vehicle battery ground.

Pin 14 (Input 9-40V) : Connect the vehicle battery (the input range is 9V to 40V).

Pin 15 (Ground) : Connect to the relay for the vehicle ACC ground.

Pin 16 (ACC Pin) : Connect to vehicle ACC.

Wire Installation

1. **Lock tenon is upward, pinching the tenon and plug in parallel.**
2. **If you hear the lock sound, the installation would be completed.**
3. **Beside the I/O port is the slot for microphone.**
4. **You can try to connect microphone to K7.**

SIM Card Installation

1. **Use the tweezers to stab the button aside the SIM card tray.**
2. **Put on SIM card in the tray, and put it back.**
3. **Complete**

Firmware Update

1. **Plug USB port into the USB socket**
2. **Use the update software to renovate the firmware.**

Back-up Battery incept

1. **Back-up battery switch.**
2. **Switch to ON would start the back-up battery.**