VL802

LTT CAT 1 & GSM
VEHICLE TERMINAL
User Manual

V1.0

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Product overview

VL802
Vehicle Terminal

Internal battery
1000mAh Li-Po3.7V
Operating voltage
DC = 9~36V

THIS SIDE TOWARDS SKY

PWR	VCC(Red)
	GND(Black)
	ACC(Orange)
	RELAY(Yellow)
Data	PWRO(Red)
	RX(Blue)
	TX(Green)
	GND(Black)
EXT	ADC1(Purple)
	IO1(Orange & White)
	DOUT(Yellow & White)
SOS	SOSIN(Orange)
	GND(Black)
SPK	SPK+(Orange)
	SPK-(Black)
MIC	MIC+(Gray)
	MIC-(Black)

Position tracking

GPS & LBS positioning
Real-time location query

Anti-theft

Ignition detection
Power/Fuel cut-off
SOS emergency call
Power supply disconnection alert
Geo-fence alert
Towing alert
Vibration alert

Configurable peripherals

Vehicle door status alert
Turn light/buzzer triggering
Fuel level monitoring
Temperature monitoring
Driver behavior monitoring

Specification

Frequency	**VL802:** **LTE-FDD: B1/B2/B3/B4/B5/B7 /B8/B28** **GSM: 850/900/1800/1900MHz**
GNSS Type	MTK all-In-one multi-GNSS SOC
Sensitivity	Cold start: <32s Hot start: <1s
Position Accuracy (CEP50)	Autonomous: <10m
Dimensions	106mm x 56.8mm x 22mm
Weight	104g
Backup Battery	Li-Polymer, 1000 mAh
Operating Voltage	9V to 36V DC
Operating Temperature	−30°C to +70°C −30°C to +85°C for storage
Transmit Protocol	TCP

Product setup

Insert SIM
Remove the soft plug on one side of the device and insert the SIM card into the card slot.

Power on & off
Toggle the power switch besides the SIM slot to power on or off the device.

LED indications

Power Status (Red)

Behavior	Meaning
On for 0.1s and off for 1s	0%～20% remaining battery
On for 0.1s and off for 4s	20%～100% remaining battery
Solid on	Power supply connected

GNSS Status (Blue)

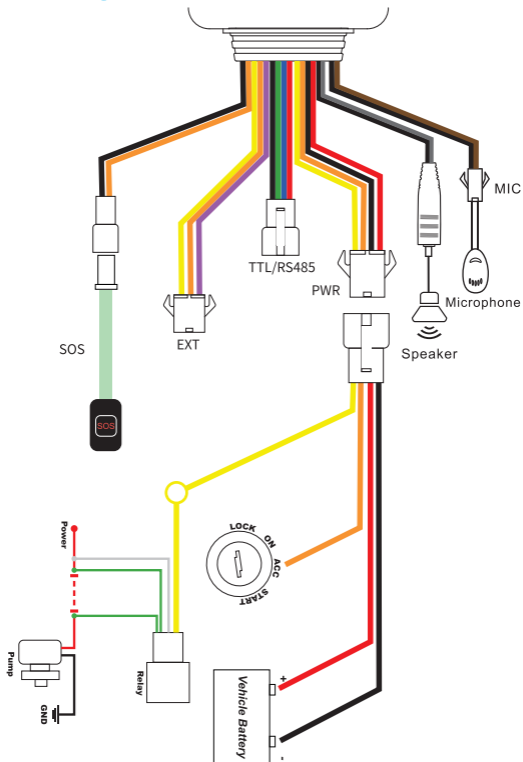| Behavior	Meaning
On for 0.5s and off for 0.5s	GNSS synchronizing
On for 2s and off for 4s	Positioning
On for 0.1s and off for 4s	Positioned
Off	GNSS module is in sleep mode or not working

Wireless Network & SIM Card Status (Green)

Behavior	Meaning
On for 0.5s and off for 0.5s	SIM card not recognized
On for 2s and off for 4s	Registered but no inbound acknowledgement
On for 0.1s and off for 4s	Network connected
Off	No signal received or no SIM card detected

Interfaces

PWR	Red	DC 9 to 36v input
	Black	GND
	Yellow	Relay control to cut vehicle fuel support
	Orange	Vehicle ignite 12V/24V detection
Data	Blue	TTL RX/RS485 B
	Green	TTL RX/RS485 A
	Red	DV 5V output max.500mah
	Black	GND
EXT	Purple	Analog detect 0v to 30v
	Orange	GND trigger digital input
	Yellow	Extend relay control
SOS	Orange	GND trigger digital input for SOS function
	Black	GND
MIC	Brown	Microphone
	Black	GND
SPK	Grey	Speaker
	Black	GND

Wiring indication

MIC

TTL/RS485

PWR

Microphone

SOS

EXT

Speaker

Power

LOCK   ON
            ACC
START

Pump

GND

Relay

Vehicle Battery

+

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Power connection

The standard power supply ranges from 9V to 36VDC.
During installation, negative side should connect to the ground.
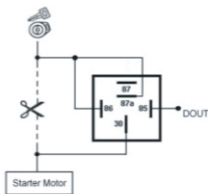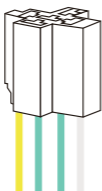Do not connect with other ground wires simultaneously.

Ignition wire

ACC line (orange) connects to vehicle's ACC, detecting ignition.
Be sure to check if it's a real ignition wire i.e.power does not
disappear after starting the engine.

Relay wiring

Relay's white line (85) connects to the positive side of battery (12V)
while the yellow line (86) connects to the device relay control (yellow
line on the power cord).

Find the fuel pump in the vehicle and cut off its positive power line.
The positive side of fuel pump connects to the green line (87a) while
the side closing to starter motor connects to green line (30) , as the
below chart. Switch of the two green lines have the same effect.

12V relay is standard. The device is suitable for vehicles with 12V
supply. If the vehicle power supply is 24V, use 24V relay.

Configuration

If you need to change the setting of the device, you can either text the command to the device, or use PC tool from supplier.

Note:

Texting command might be filtered by local carrier network deployment. In this case you can text through web management center provided by the carrier.

Common commands

Command	Description	Remark
APN	Set APN	In most countries, APN could be automatically adapted to local mobile operators. If not, please confirm your APN and do the setting. APN, ApnName# or APN, ApnName,User,Password# Auto set APN will be turned off when set APN manually. APN# Query current APN
SERVER	Platform server setting	If you need to use your own server, make sure you have changed the server setting. SERVER,1,domain name,port# SERVER,0,IP,port# Default: SERVER,1,GPSDEV.TRACKSOLID.COM,21102# SERVER# Check the current sever settings

Command	Description	Remark
PARAM	Query device parameters	
GPRSSET	Query platform server and APN Setting	
STATUS	Query status	

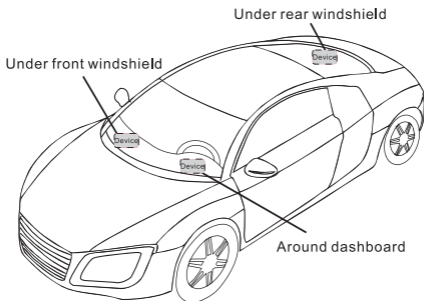# Package & Standard accessories

Standard package

VL802 device

Power cable

I/O cable

Relay (12V/24V)

SOS button cable

Installation recommendation

Under rear windshield

Under front windshield

Around dashboard

1) The device should face up to the sky.
2) Metal thermal barrier or heating layer of the windshield affects
   the signal.

Troubleshooting

Type	Use
Unable to connect to tracking platform	Check the APN and IP settings. Check whether the data service of SIM card is enabled. Check the balance of SIM card.
Tracker shows offline	Check whether external power is still connected. Check if the vehicle entered network blind area. Check the balance of SIM card.
Unable to locate	Make sure the top side facing upward without metallic things shielded. Make sure it's not in area with no satellite coverage.
Location drift	In area with poor GNSS signal (tall building around or basement) , drifting may happen. Check whether vibration happens around to trigger the accelerator.
No command reply	Make sure command format is correct. Vehicle may be in network blind area. Make sure SIM card is well inserted and has SMS service.

Warranty instructions

1. The warranty is valid only when the warranty card is properly completed, and upon presentation of the proof of purchase consisting of original invoice indicating the date of purchase, model and serial No.of the product. We reserve the right to refuse warranty if this information has been removed or changed after the original purchase of the product from the dealer.
2. Our obligations are limited to repair of the defect or replacement the defective part or at its discretion replacement of the product itself.
3. Warranty repairs must be carried out by our Authorized Service Centre. Warranty cover will be void, even if a repair has been attempted by any unauthorized service centre.
4. Repair or replacement under the terms of this warranty does not provide right to extension or renewal of the warranty period.
5. The warranty is not applicable to cases other than defects in material, design and workmanship.

Maintenance Record

Date		Service by	
Product Model			
IMEI Number			
Fault Descriptions			
Comments			

FCC Warnings:

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 operating in conjunction with any other antenna or transmitter.