

IO Ports :

1. Digital Inputs : Please select the required digital inputs and enter the required text.
2. Digital Outputs : Please select the required digital outputs and enter the required text.
3. Analog Inputs : Please select the required analog inputs and enter the required text.

Note : Please go through the connection diagram in last section.

RS-232 :

User can connect any serial port peripherals like RFID Readers, Fuel sensor, taxi meter etc to get the data to device.

RS 232 Settings :

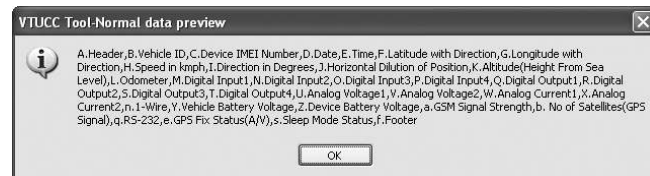
Please select the corresponding Bits per second, baud rate, Data Bits, Parity bits and stop bits of serial communication devices which you need to connect.

As per the protocol document of serial communication device, please select Data , No.Of Bytes, Header and Footer of external serial communication device.

Protocol :

User can select output protocol header, separator, footer and information (parameters) in required formats and fashion.

Default Output protocol format :



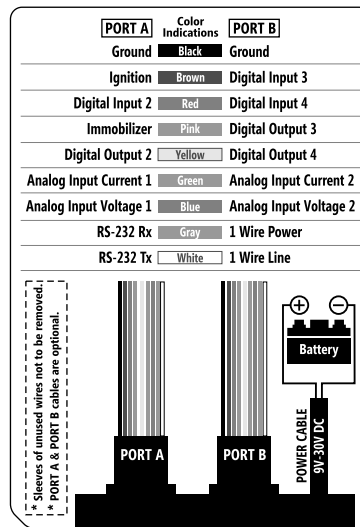
User can also choose output alert protocol as per choice and fashion.

Default Alert Protocol :



User can also add/add all/delete/delete all/up and down the parameters using arrow buttons.

4 Connection Diagram



LED Indications

LED	Status	Flashing
Red	Unit Power ON	
Yellow	Searching for GPS GPS Not available.	GPS Fix available
Green	Searching for the GSM network. GSM Network not available.	GSM Network available. Note: The LED will flash at higher speed when sending data to remote server.

WARRANTY

VISIONTEK 87VT, Vehicle Tracking Unit is warranty for a period of 12 months from the date of sale against manufacturing defects. GSM, GPS antennas and Battery are warranted for six months against manufacturing defects. Linkwell Telesystems Pvt. Ltd., obligation under this warranty shall be limited to servicing or replacing the defective parts provided that notice of such defects and satisfactory proof thereof is given to Linkwell Telesystems Pvt. Ltd.

The warranty does not cover any defect in the product caused by accident, misuse, mishandling, negligence, alteration, modification or substitution of any of the components or parts or any attempt at internal adjustments, any form of tampering by unauthorized/unskilled service personnel, loss of components or accessories, natural calamities and over voltage of electricity.

Under no circumstance shall Linkwell Telesystems Pvt. Ltd., be liable for any consequential or resulting injury or for loss, damage or expenses directly or indirectly arising from the use of this product Linkwell Telesystems Pvt. Ltd. will make every effort to carry out repairs/replacement under this warranty as early as possible and it is expressly made clear that the company shall not be liable to do so within any specified time or period.

The decision of Linkwell Telesystems Pvt. Ltd. as to the nature of the defect and applicability of this warranty shall be final. Claims if any, to this warranty shall be only made before the courts having jurisdiction in Secunderabad, Telangana, INDIA.

NOTE : DO NOT THROW THE BATTERIES INTO THE DUST BINS, FIRE AND IN OPEN AREAS. PLEASE DISPOSE THEM IN ENVIRONMENT FRIENDLY MANNER.

Product Pictures



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Product from
An ISO 9001:2008 & ISO 14001:2004 Certified Company

User's Manual Rev.1.0

VEHICLE TRACKING UNIT 87VT

Congratulations !!! We thank you for purchasing VISIONTEK VEHICLE TRACKING UNIT 87VT equipped with state of the art GPS receiver that provides reliable and accurate navigation data. This User's manual will help you in knowing all the features of the system including installation. Operational and programming procedure in a step by step manner. Please keep this handy manual for easy reference.

For Servicing and other details kindly look at the corporate address and email id at the backside of the manual.

- 1 Introduction
- 2 SIM Card Installation
- 3 Configuration
- 4 Connection Diagram

PLM NO: 35 101521-0136

1 Introduction

VISIONTEK 87VTU Vehicle Tracking Unit consists of a Quad band GSM/GPRS modem and a powerful 48-Channel GPS receiver. The basic function of the Vehicle Tracking Unit is to acquire, monitor and transmit the position, Date, Time and status of various IO ports data to server in the form of Packets or SMS. User can also control the external devices connected to the device through remotely (using special OTA Commands).

VISIONTEK 87VT is provided with USB Port for firmware uploading, Device configuration and to capture the GSM log. Apart from USB Port, Device is also provided with RS-232 Serial port for connecting external peripherals like RFID Reader, Taxi Meter, Dip Model Fuel sensor etc.

VISIONTEK 87VT is provided with 4 Digital Inputs, 4 Digital Outputs and 4 Analog Inputs (2-Voltage and 2-Current) for detecting, measuring and controlling external devices. Device includes 1-Wire protocol port to connect i-Button, Temperature sensor etc. Special purpose 3D Motion sensor will reduce the power consumption, detection of vibrations, sleep and wake up mode detection.

Software features like Password protection, Geo-fence, SIM Lock, Sleep Mode, Fall Back SMS, Store and Forward, Track On Demand, OTA Commands and Remote Firmware Uploading makes 87VT a powerful and most robust device for the application areas like Fleet Management, Ambulance Management, Taxi/Cabs, Logistics, Education Institutions, Boats, Ships etc.

FEATURES

Hardware Features :

- Quad Band GSM Modem
- Class 10 GPRS
- 48 Channel GPS HIGH Accuracy GPS Receiver
- 4MB / 8 MB* Flash Memory
- 32-Bit micro controller
- 4 Digital Inputs (0V to 30V)
- 4 Digital Outputs (Open Collector)
- 2 Analog Inputs (Voltage)- 0V to 30V DC
- 2 Analog Inputs (Current)- 0mA to 20mA
- RS-232 Serial Port - To integrate serial devices.
- 1-wire Port- To integrate temperature sensor & i-Button
- Hard Reset Button
- Device Tamper Switch
- Immobilizer
- SMS / GPRS Communication

Software Features :

- Vehicle ID
- Device IMEI Number
- Remote Firmware Upgradation (RFU)
- Password protected OTA Commands.
- 3 LED Indicators- GSM, GPS & Power
- IP 65/IP67* Water proof Enclosure
- Internal Buzzer for Over Speed indication
- >8 Hours internal Battery Backup
- 3D Motion Sensor
- High gain Internal / External* GSM/GPRS Antenna.
- USB Port for device configuration.
- TCP/IP, UDP, HTTP, Domain and IPv6 Support
- Geo-Fence Support-Circle and Rectangle
- Password Protection for hardware and software.
- GSM Frequency Selection (min 10sec)
- Sleep Mode - Ignition Based, Speed Based Sensor Based

- Device SIM Number
- GPRS / SMS / Offline communication
- Device Serial Number
- Country Code
- Primary IP and Port
- Secondary IP and Port
- Dual IP Feature
- TCP, UDP, Http, Domain and IPv6
- GPS Frequency Selection (min 5 sec)
- GPS Not Fix - Zero Lat Lon / Previous Lat Lon
- Towing Alerts
- Static Navigation
- Geo Fencing - Circle / Rectangle
- Main Battery Connected / Removed Alert
- Device Battery Level 1 and 2
- Harsh Breaking
- Overspeed Alerts
- Track On Demand
- Power On Self Test (POST)
- Device Tamper Alert - Close and Open
- Fall Back SMS - Server Fail / GPRS Fail
- Auto APN
- GPRS Connection - Always connected / As per GSM Frequency
- Temperature Sensor
- Engine On/Off alert
- Odometer Reading
- Vehicle Battery Voltage
- Device internal Battery Voltage
- GSM Signal Strength
- GPS Signal Strength (No.Of Satellites)
- Software and Hardware version
- Software Check Sum
- SIM Card CCID
- SIM PIN Enable/Disable
- Authorised Mobile numbers (configurable)
- Password protection for OTA Commands
- Offline details via GPRS/UI Tool
- GSM Capture through UI Tool
- Export and Import of configuration details.

2 SIM Installation

The VISIONTEK 87VT unit can be easily opened by removing the bottom 4 screws with suitable screw driver as shown in the figure. Make sure that the power cable is not connected to the external power source.

NOTE : SIM PIN Code of the SIM Card must be DISABLED.

If the device model is with internal battery provision, device will send an "device tampered" alert to the authorised mobile number.



Open the top cover carefully and open the SIM Card Tray. (Remove the internal battery connection if connected and reconnect after successful of SIM Card installation)



Close the device top cover with proper direction.

3 Configuration

It is recommend to involve a computer technician for proper configuration of VISIONTEK 87VT and an automobile electrician in order to install the system properly.

Follow the following steps for configuration of VISIONTEK 87VT.

INITIAL SET UP FOR CONFIGURATION :

Download the 87VT Configuration UI Tool from ftp link - URL : ftp://115.111.229.003

For user name and password please contact VISIONTEK technical team or send mail to vts@visiontek.co.in

CONFIGURATION TOOL INSTALLATION :

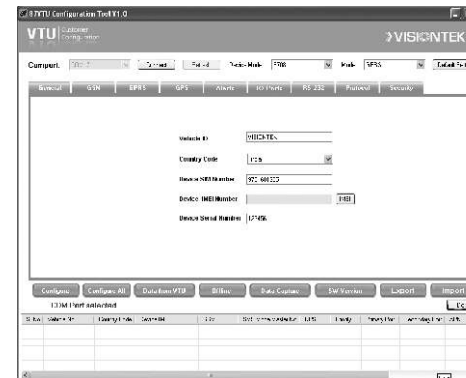
After successful installation, UI Tool will request for "LICENSE KEY". Please send the screen shot to the above mail ID for License key.

After successful key entry, tool will request for user name and password. Please enter the user name and password of your choice and make sure that details should be confident.

NOTE : Device is provided with default factory configuration settings.

Step by Step procedure to configure the device :

1. Connect the device with internal battery or external 9V to 30V DC Supply.
2. After few seconds, device will give beep sound which is ready to do configuration.
3. Connect the customized USB cable to configure the device.
4. Double Click on "87VTU Configuration UI Tool" desktop Icon.
5. Enter 'User name' and 'Password'.
6. Press "Refresh" button to select the comport automatically.
7. Select the Device Model and Mode of operation.



General :

1. Vehicle ID : Please enter the Vehicle registration number in which device is going to install. (Default : VISIONTEK)
2. Country Code : Please enter the country code. (Default : India)
3. Device SIM Number : Please enter the SIM Card 10 digit mobile number which is going to install in the device.
4. Device IMEI Number : Please press "IMEI" to get device IMEI Number.
Device Serial No : Please enter the device serial number which is on bottom side sticker of the device.

GSM :

1. GSM Frequency : Please select the GSM Frequency for which device need to send captured data to server (Default : 1 min and min frequency is 30 Sec)
2. SMS Mode Mobile No : Please enter the authorized mobile number when you configured the device for SMS Mode.
3. Sleep Mode : Please Enable Sleep mode (if required) and select the mode of operation and Frequency. To send the data to server selected mode and selected frequency.
4. Fall Back SMS : Enter the authorized mobile number and frequency, to send SMS when GPRS Fails/Remote server unavailable.

GPRS :

1. APN : Please enter the installed SIM APN or press " Auto APN" and enter " user name and password" (if any).
2. IP Settings : User can get the data in following modes
 - a) IP : Please select "TCP or UDP" (as per the remote server), and enter Primary / Secondary IP and port address.
 - b) Domain : Please enter the "domain" name of remote server and enter corresponding port.
3. Ipv6 : Please enter the Ipv6 IP and Port address (if available).

GPS :

1. GPS Frequency : Please select the GPS Frequency (min 5 Sec and default 30 sec)
2. Time offset : Please enter +0530 to get indian time
3. GPS Not Fix message : User can select zero lat lon or Previous lat lon when GPS Not Fix.
4. Towing Message : When ignition is off and speed is more than 10kms, device will send the Towing alert message with \$2 Header.
5. Static Navigation : User can select the Static navigation feature with threshold speed. Default is enable and 2kms.
6. Geofence : User can enable or disable geo fence in two modes 1. circle or 2. Rectangle.

Alerts :

Please select the required alerts and press ">" button to add.
If you want to delete the specific alert please select the alert and press "<" button.

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