GSM/GPRS/GPS Tracker

PrimeAT Lite
User Manual

Revision: 1.04

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Contents

1 Introduction

Prime AT Lite is a powerful GPS locator which is designed for vehicle, pets and asset tracking. With superior receiving sensitivity, fast TTFF and GSM frequencies 850/900/1800/1900. Its location can be real time or schedule tracked by backend server or specified terminals. Based on the embedded wireless tracking protocol, Prime At Lite can communicate with the backend server through GPRS/GSM network, and transfer reports of emergency, Geo-fencing, device status and scheduled GPS position etc… Service provider can easily setup their tracking platform based on the functional wireless tracking protocol.

2 Product Overview

2.1 Appearance

Figure 1-1

2.2 Buttons/Mini USB Interface Description

Button /Mini USB Interface Description	
Button/interface	Description
Power Button	◆ Power on Prime AT Lite ◆ Power off Prime AT Lite (If power button is enabled)

Function Button	◆ Geo-Fence mode
	Long press the button to enable/disable Geo-Fence ID0
	◆ Geo-Fence in current position mode
	Long press the button to enable/disable Geo-Fence ID0. If enable Geo-Fence ID0, using the current position as the center of Geo-Fence 0.
	◆ SOS mode (default)
	Long press the button to activate SOS alarm
Mini USB interface	◆ Connect a 5V DC adapter to power on the Prime AT Lite and charge the internal battery.
	◆ Connect a 3.7V Li-ion or Li-Polymer battery to power on Prime AT Lite
	◆ Backend server developer or administrator can use the data cable to configure Prime AT Lite
Reset Button	◆ Clicking this button will cut off the internal power supply of this device, which allow user to reset the Prime AT Lite while device malfunction. You need to press the power button to power on the device again after the reset button is clicked.
	Note: Reset button is invalid when external battery is used.

2.3 LED Description

Figure 1-2

There are three LED lights in Prime AT Lite device, the description as following.

Light	Event	State
GPS LED	GPS signal valid	Fast flash (blue)
	GPS turned off, GPS signal invalid	Dark
GSM LED	Network has been registered	Slow flash (green)
	Power off	Dark
Power LED	Power on and normal	Dark
	Fully charged	Slow flash (green)
	In charging	Slow flash (red)

	Power key was pressed and prepare to power off	Fast flash (red)
	Power key was pressed and prepare to power on	Fast flash (green)

2.4 External Power Interface

2.4.1 External DC Charger Interface

Pin2 on Mini-USB connector is used for charging and is called the VCHG pin, which can be connected to a 5V DC power source to power on the Prime AT Lite device and charge the included battery.
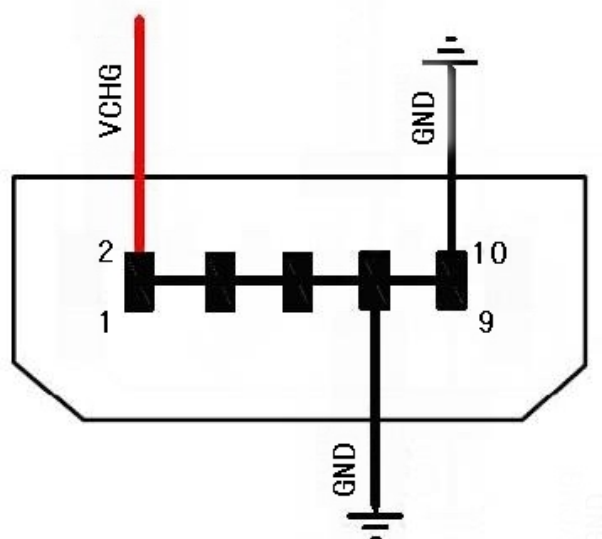

Figure 1-3

PIN NO.	NET NAME	FUNCTION
PIN1	NC	Not used
PIN2	**+5V**	**VCHG +5V input**
PIN3	NC	Not used
PIN4	NC	Not used
PIN5	NC	Not used
PIN6	NC	Not used
PIN7	**GND**	**Ground**
PIN8	NC	Not used
PIN9	NC	Not used
PIN10	**GND**	**Ground**

2.4.2 External Battery Interface

Pin 8 and Pin9 on the Mini-USB connector is used for the external battery and is called the EXTBAT pin, which can be connected to a 3.7V Li-ion or Li-Polymer battery to power on the Prime AT Lite device.

Pin6 on the Mini-USB connector is used for external battery interrupt detection and is called the EXT_VBAT INT, which must be connected to GND for EXT_VBAT detection.
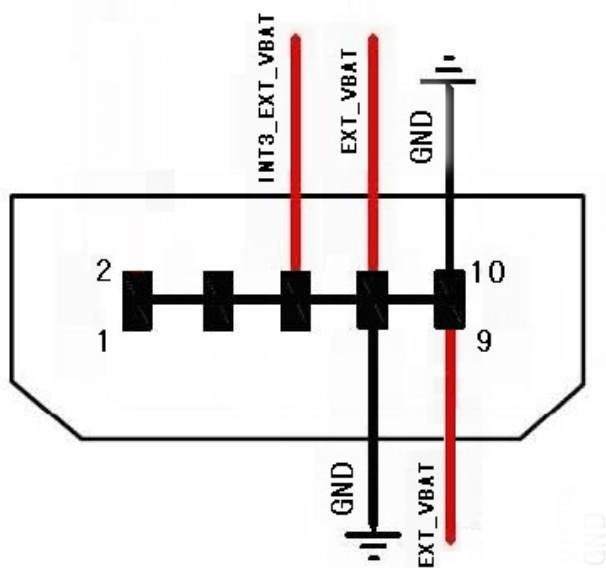

Figure 1-4

PIN NO.	NET NAME	FUNCTION
PIN1	NC	Not used
PIN2	NC	Not used
PIN3	NC	Not used
PIN4	NC	Not used
PIN5	NC	Not used
PIN6	**INT3_EXT_VBAT**	external battery interrupt detection
PIN7	GND	Ground
PIN8	**EXT_VBAT**	for external battery
PIN9	**EXT_VBAT**	for external battery
PIN10	GND	Ground

3 Getting Started

3.1 Parts List

Name	Picture	Remark
Prime AT Lite Locater		The GSM/GPRS/GPS locator.
AC-DC Power Adapter		Used to charge the internal battery of the Prime AT Lite.
Prime AT Lite Data and Charging Cable		The USB data cable can be used for firmware upgrading and configuration. It can also be used as the charging cable for the Prime AT Lite.
Car Cigarette Charger (Optional)		Used to power the Prime AT Lite with the cigarette power output on a vehicle.
Car Kit Charger (Optional)		Used to power the Prime AT Lite with the battery output on a vehicle.
External Battery Kit (Optional)		A set of accessories including an external battery and a pelican waterproof casing. It will greatly improve the life and the waterproof capabilities of the Prime AT Lite.

3.2 Battery Charging

The following are suggestions for an optimal battery charge, please pay close attention.

◆ Please connect AC-DC power adapter with the Prime AT Lite device.

◆ Insert the AC-DC power adapter into the power socket.

◆ During the charging process, the Power LED light will flash red. When the battery is fully charged, the Power LED light will flash green.

◆ You can also charge the battery using the USB cable which connects the Prime At Lite device with the PC.

◆ Charging time will take about 5 hours.

Note: When the Prime AT Lite device is first used, please make sure that the battery is fully charged, this will make the life of battery much longer.

3.3 Prime AT Lite Data Cable

Prime AT Lite Data Cable is a cable with a Mini USB connector.

The USB data cable is used for data download, which will be used for firmware update or configuration and can be used for charging at the same time.

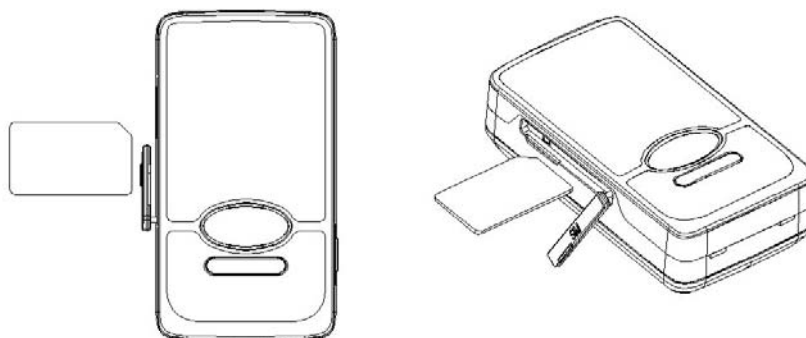Figure 2-1

3.4 How to insert SIM Card

Figure 2-2

Step1: pull out the cover of SIM card.

Step2: insert the SIM card into the slot of the device according to the direction as shown.

Step3: push the cover back.

3.5 Power on/Power off

Figure 2-3

Power on:

◆ Press the Power key at least 3 seconds and release it to power on Prime AT Lite device. Note that, the Power LED light will flash fast green.

Power off:

◆ Press the power key about 3 seconds: Power LED light will flash fast red and then turn off, this indicates that Prime AT Lite device has been powered off.

Note: the user can not power off Prime At Lite if the power button is disabled by a preset protocol command.

4 Trouble shooting and Safety information

4.1 Trouble shooting

Trouble	Possible Reason	Solution
Messages can't be reported to the backend server by GPRS.	The SIM card in Prime AT Lite doesn't has GPRS service available.	This device needs to have Internet access in order to working properly. Please contact your mobile service provider to make sure the GPRS service is available for the demanding SIM card.
	The preset configuration of your internet access through GPRS is incorrect.	Mobile service provider requests the correct APN (Access Point Name), username and password while the device intend to access the Internet. Please consult your mobile service provider for the proper settings.
	The preset configuration of the backend server is incorrect.	Please contact your vendor for help.
Unable to power off Prime AT Lite.	The function of power button was disabled.	The Prime AT Lite can be preset to not allow user to power off the tracker. Please contact your vendor for help.
Battery can not be charged	The battery will be locked after the device been unused for several months.	Please contact your vendor for help.
Prime AT Lite can't fix GPS successfully. GPS LED flashes slowly.	The GPS signal is weak.	Please move Prime AT Lite to a place with open sky.
		It is better to let the top surface face to the sky. (The same surface with indication LED)

4.2 Safety information

ATTENTION:The following suggestions are for your safety.
- ◆ Please do not disassemble the device by yourself.
- ◆ Please do not subject the device to extreme temperatures or humidity and avoid exposure to direct sunlight. High temperature will damage the device or even cause the battery to explode.
- ◆ Please do not use Prime AT Lite on an airplane or near medical equipment.