ATrack

AP1
User Manual

Revision: 01
Revision Date: 2017/02/06

Table of Contents

1. Notification

1.1. Disclaimer

This document, and all other related products, including device, firmware, and software, are exclusively developed by ATrack Technology Inc. Due to the continuous developments and improvements of device functionalities, changes in the protocol, specification, and firmware functions are subjects to change without notice. ATrack Technology Inc. reserves the right to modify all documentations based on its own timelines. Document modification notices will be released to ATrack Technology Inc.'s customers upon completion.

ATrack Technology Inc. products are not intended to be used as life support or rescue equipment. ATrack Technology Inc. is not liable for any loss or injury caused by using or referencing to any of its products. Any possible means of using or integrating ATrack Technology Inc. products shall be avoided.

1.2. Copyright

ATrack Technology Inc. holds all parts of intellectual rights applicable in the copyright laws in all the countries. Any and all contents of this document shall not be exposed, delivered, and/or disclosed to non-authorized 3rd party without any form of approval and consent from ATrack Technology Inc. Any form of, including but not limited to, verbal, duplicate, or internet sharing, of releasing or exposing information to an unauthorized party shall be prohibited. ATrack Technology Inc. reserves the rights of litigation in the violation of copyright laws.

1.3. Warning

Connecting of the input wires can be hazardous to both the installer and your vehicle's electrical system if done by an inexperienced installer. This document assumes you are aware of the inherent dangers of working in and around a vehicle and have qualified understanding of electrical behaviors.

2. Introduction

Congratulations on your purchase of the ATrack AP1 GPS device, combining with the easiest installation and economical vehicle tracking solution, which provides real-time location monitoring. The GPS data is transmitted to the control center over a mobile network, for instance, GSM, GPRS, UMTS or CDMA. This product does not require the OBD port, which many people concern about the vehicle safety and warranty. Furthermore, you may configure other advanced driving behavior events such as harsh braking, sudden acceleration, speeding, cornering, and much more in order to reduce the risks of vehicle damage and the fuel cost.

3. Installation

3.1. Package Content

Package Default Content:
- AP1 Device * 1

Operational accessories:
- USB Configuration Cable * 1

4. Hardware Features

4.1. Cigarette Lighter Plug

The AP1 has a cigarette plug, which includes a 5A replaceable fuse.


4.2. Built-in Push (SOS) Button

On the side of AP1, a push button is embedded on the case.

4.3. Configuration Port and Setting

The configuration cable is used to connect to the socket inside the AP1 and PC for configuring parameters and firmware upgrade. When the configuration cable is connect to your PC/laptop, a "USB Serial Port" will show up in the device manager. This will be used as serial port to communicate with AP1. Please note down the COM port in order to select it correctly when using a terminal emulator.
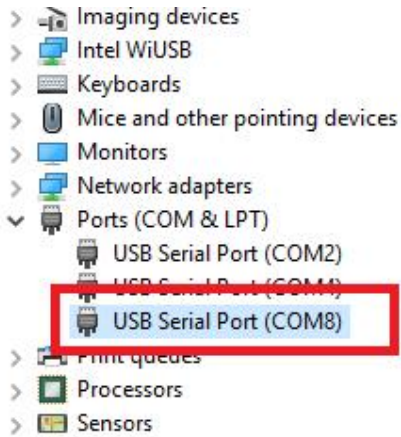
Next, connect the 4-pin board-to-board connector as shown below:
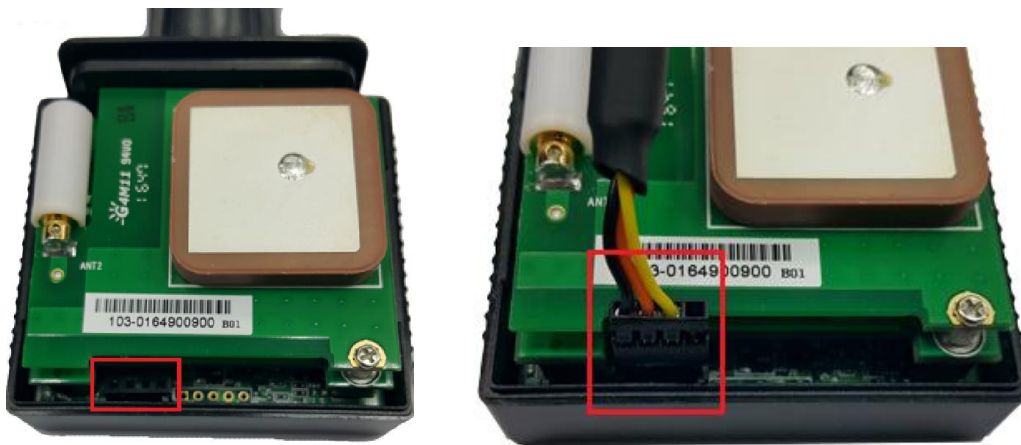
Note that the black wire (GND) is on the side of polar-type antenna, and yellow wire is on the side of GPS patch-type antenna. Once it is done, please open a terminal emulator with serial port as noted before with setting of 57600-N-8-1 and line characters of "\r\n" (or 0x0D 0x0A).

4.4. Buzzer Operation

The internal buzzer of the AP1 can be configured by any events or triggered by a remote server. Refer to the ATrack Protocol Document for details. When a device is configured and plugged into a cigarette lighter socket, it performs some basic function tests. You can simply verify whether it is installed properly via buzzer indication. Please refer to the following table for details:

Buzzer Indication	Description
Short Beep 1 time	Device Power ON
Short Beep 3 times	GSM/GPRS Connected
Short Beep 4 times	GPS Fix
Long Beep 1 time	G Sensor Calibrated

4.5. Power Supply

The AP1 device is connected to the cigarette lighter socket of a vehicle and draws power from the socket. No additional power cabling is required for the operation.

4.6. SIM Card Installation

AP1 supports SIM cards with 1.8V (ISO/IEC 7816-3 class C) or 3V (ISO/IEC 7816-3 class B) operating voltages. To install SIM, remove the cover.
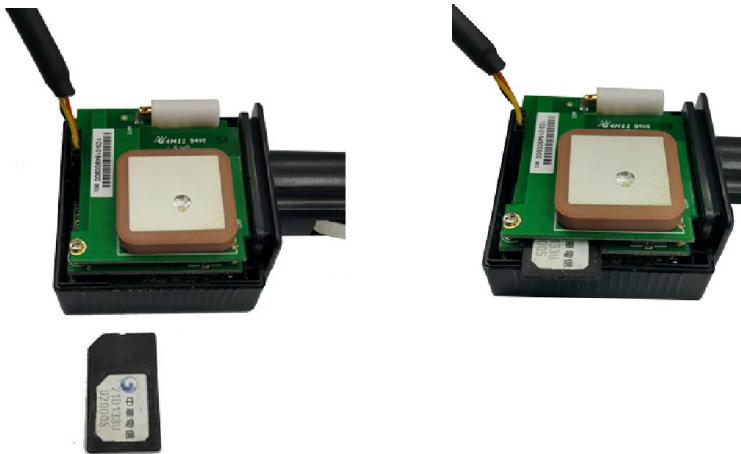
4.7. LED Indicators

The following table describes the LED states:

| LED Indicators	Color	LED Status	Description
OBD	**Green**	Blinking every 10 seconds	Sleep/Deep sleep mode
GPS	**Blue**	Solid OFF	GPS power OFF
		Blinking every 1 second	GPS not fix
		Solid ON	GPS Location Fix
GSM	**Red**	Solid OFF	GSM Power OFF
		Blinking every 1 second	GSM no signal
		Blinking every 2 second	GSM registered
		Blinking twice every 2 second	GPRS connected

5. Configuration

You can explore many of AP1's great features through AT commands. The commands can be sent to AP1 via configuration cable, SMS or cellular network (e.g. GPRS/CDMA/UMTS).

5.1. Connecting a Device Using HyperTerminal

The following example shows how to connect the AX9 through Hyper Terminal. You may use other popular terminal emulators such as Putty or Tera Term Pro to establish a console session with the AX9.
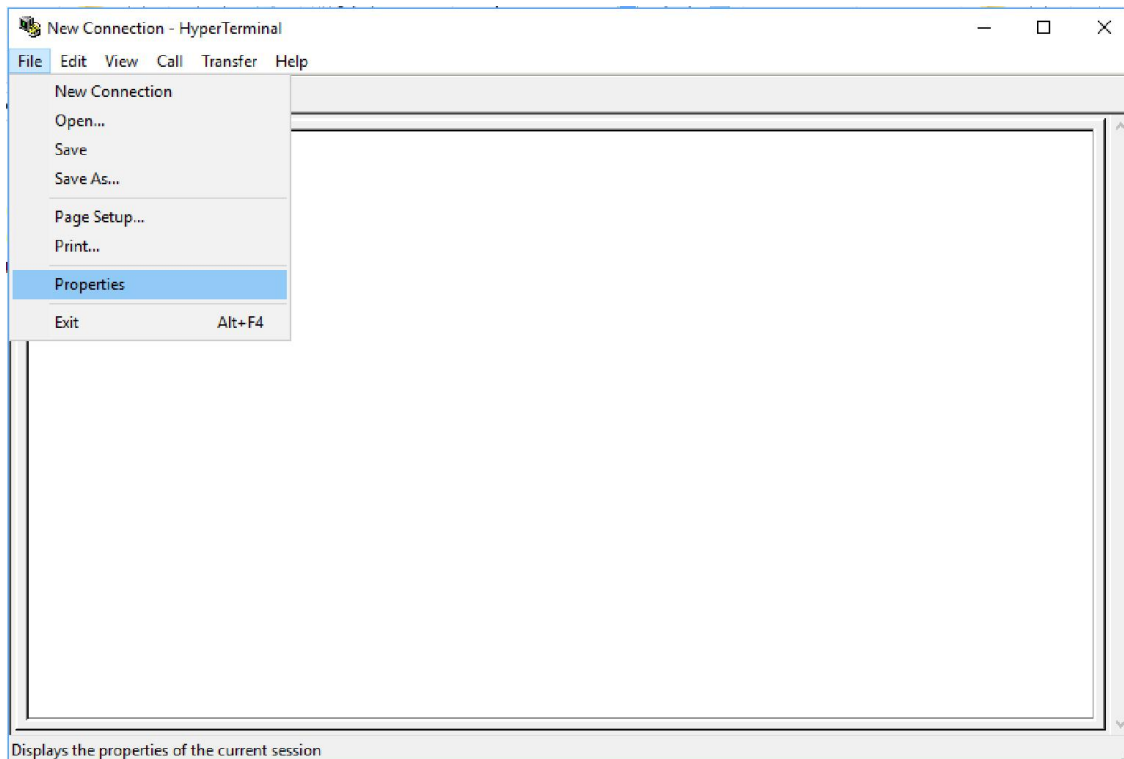
(1) Run HyperTerminal and select the correct COM port and click on the **[Configure…]** button.
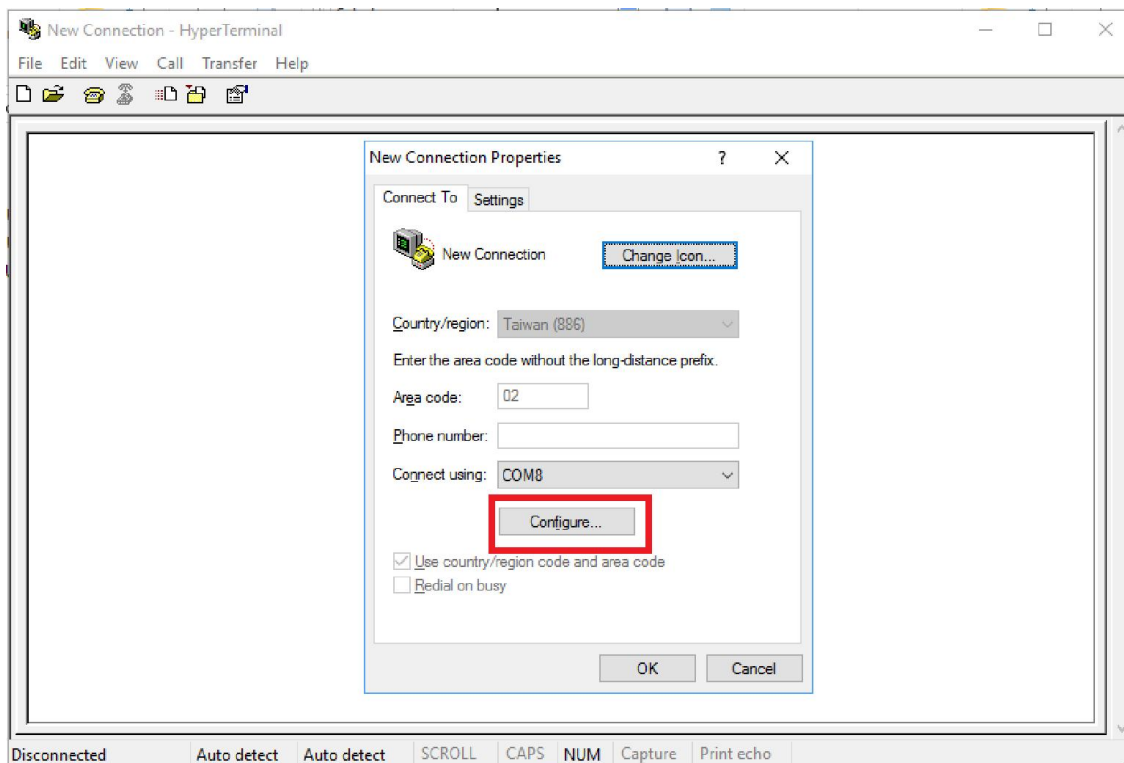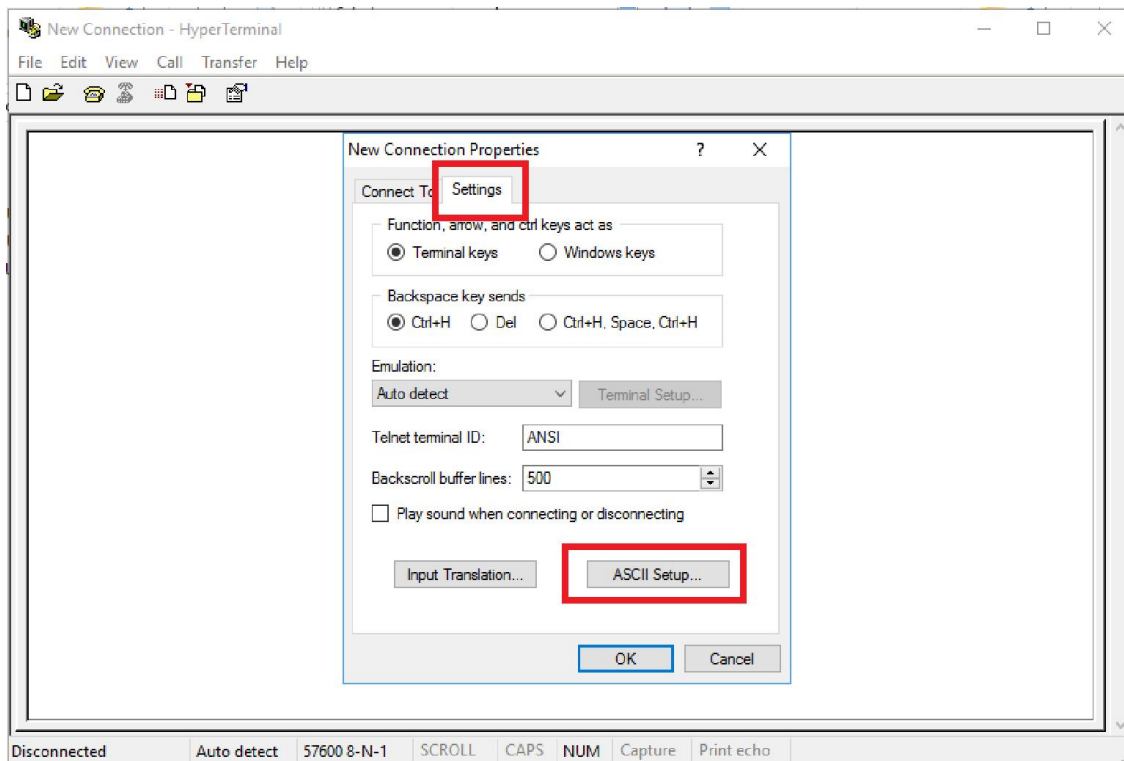
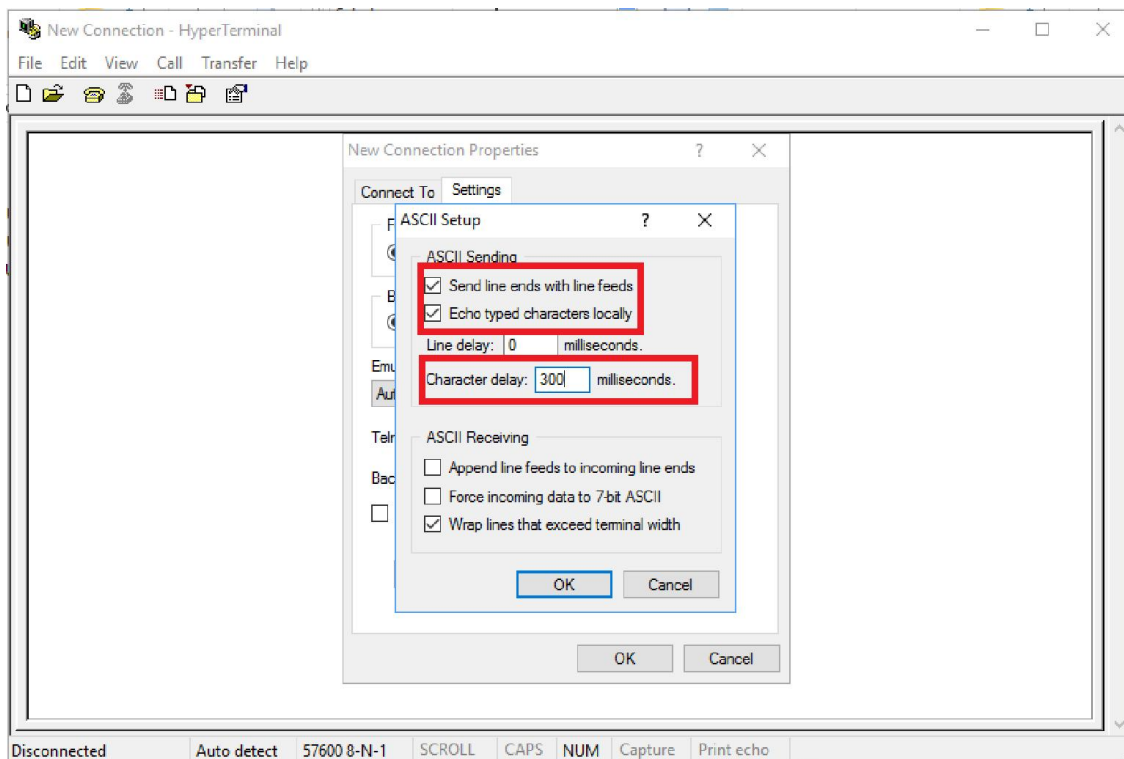(2) Port Settings should be as follows. Click on the **[OK]** button to close the Properties window.
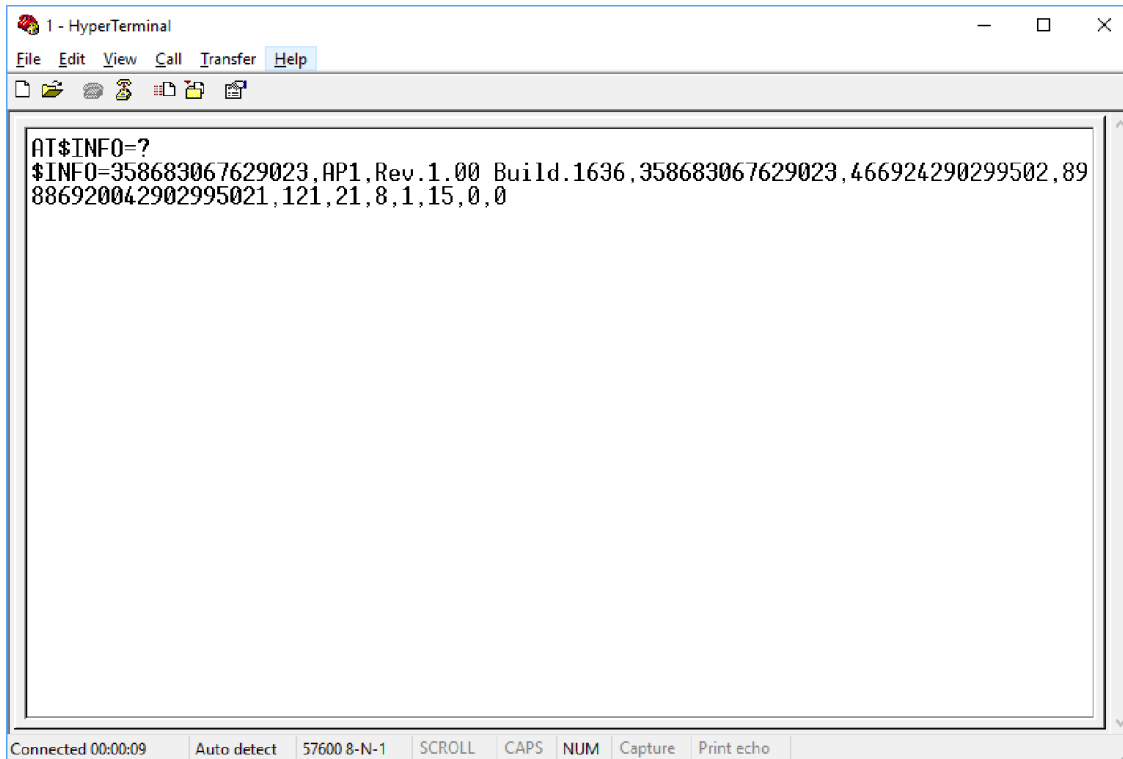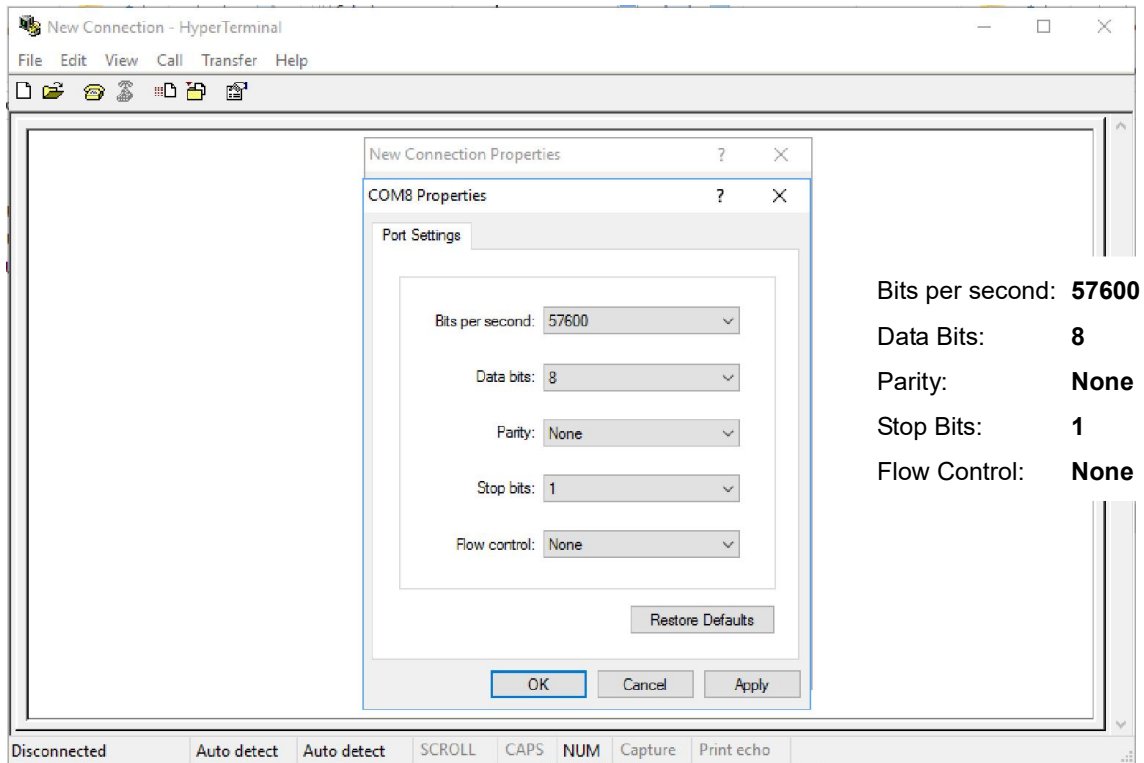

(3) Click on **[File]→[Properties]**

(4) Click on the **[Settings]** tab and click on the **[ASCII Setup…]** button.

(5) Check the following options and click on the **[OK]** button.

(6) Power up the device and you can now begin to send AT commands to query the device. Please refer to the ATrack Protocol Document for details.

6. Appendix

6.1. FCC Regulations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device 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 radiated 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This equipment must not be co-located or operated in conjunction with any other antenna or radio transmitter.