AT1(E)Pro/AT3(E)
User Manual

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1. Notification

1.1. Disclaimer

This document, and all other related products, such as device, firmware, and software, is developed by ATrack Technology Inc. thoroughly. At the time of release, it is most compatible with specified firmware version. Due to the functionalities of the devices are being developed and improved from time to time, the change in the protocol, specification, and firmware functions are subjects to change without notice. ATrack Technology Inc. is obligated to modify all the documentation without the limitation of time frame. A change notice shall be released to ATrack Technology Inc. customers upon the completion of document modification.

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1.2. Copyright

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1.3. Warning

Connecting the wire inputs can be hazardous to both the installer and your vehicle’s electrical system if not done by an experienced installer. This document assumes you are aware of the inherent dangers of working in and around a vehicle and have a working understanding of electricity.

2. Hardware

2.1. Package Content

Each package contains the following device/accessories:

- Device * 1 (one of the devices below)

AT1Pro

AT1EPro

AT3

AT3E

- Serial Cable * 1

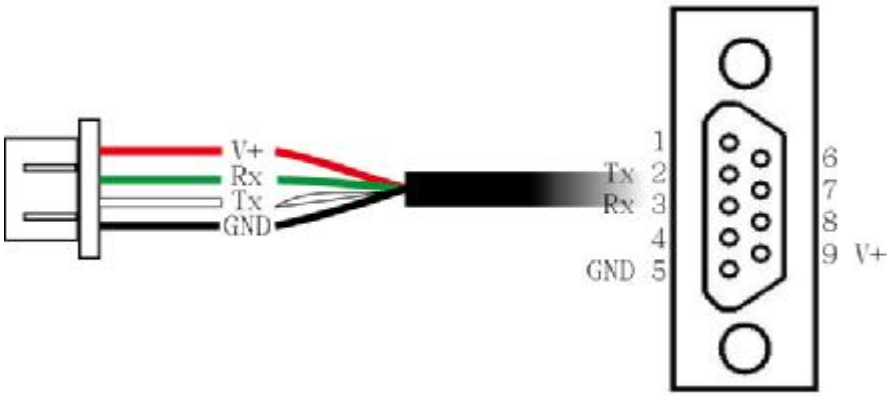
- GPS Antenna * 1 for AT1EONLY

- Power/IO Cable * 1

Note: The label of the device with GPS antenna built-in has to be placed toward sky. If the label side is not facing up, or is covered by metal or thick objects, the GPS reception quality will be degraded dramatically.

2.2. Pin Assignments

2.2.1. Serial Cable (JST Female Connector to DB9 Female Connector)



2.2.2. Power/IO connector

The Power/IO connector pin assignment is shown on the device.

Positive Inputs: ACC (Triggered when connects to V+ range from 3.7 ~ 40V)

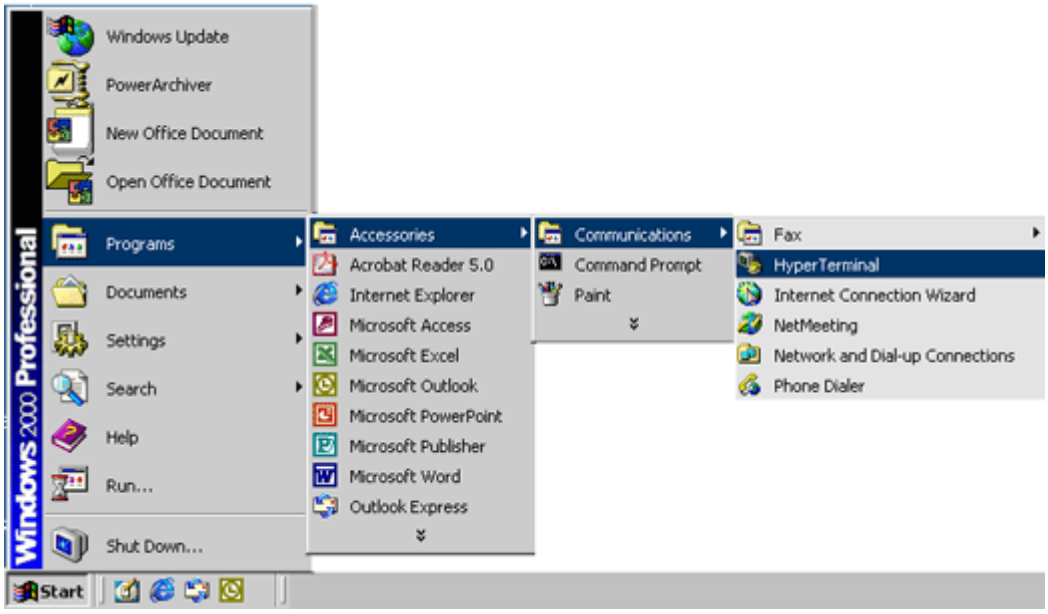
Negative Inputs: IN1 (Triggered when connects to ground range from 0.8 ~ 0V)

All outputs are open collector type (grounded when enabled) with max. sink current of 300mA.

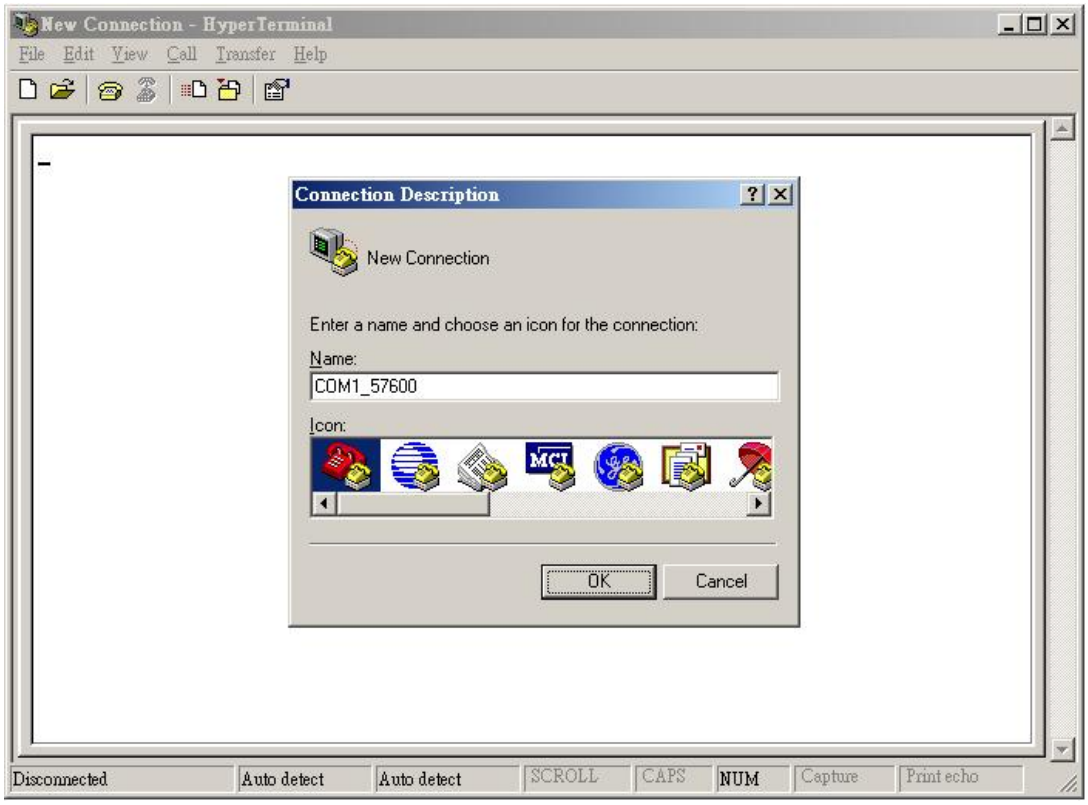
3. Firmware Upgrade

3.1. Firmware Upgrade by serial connection

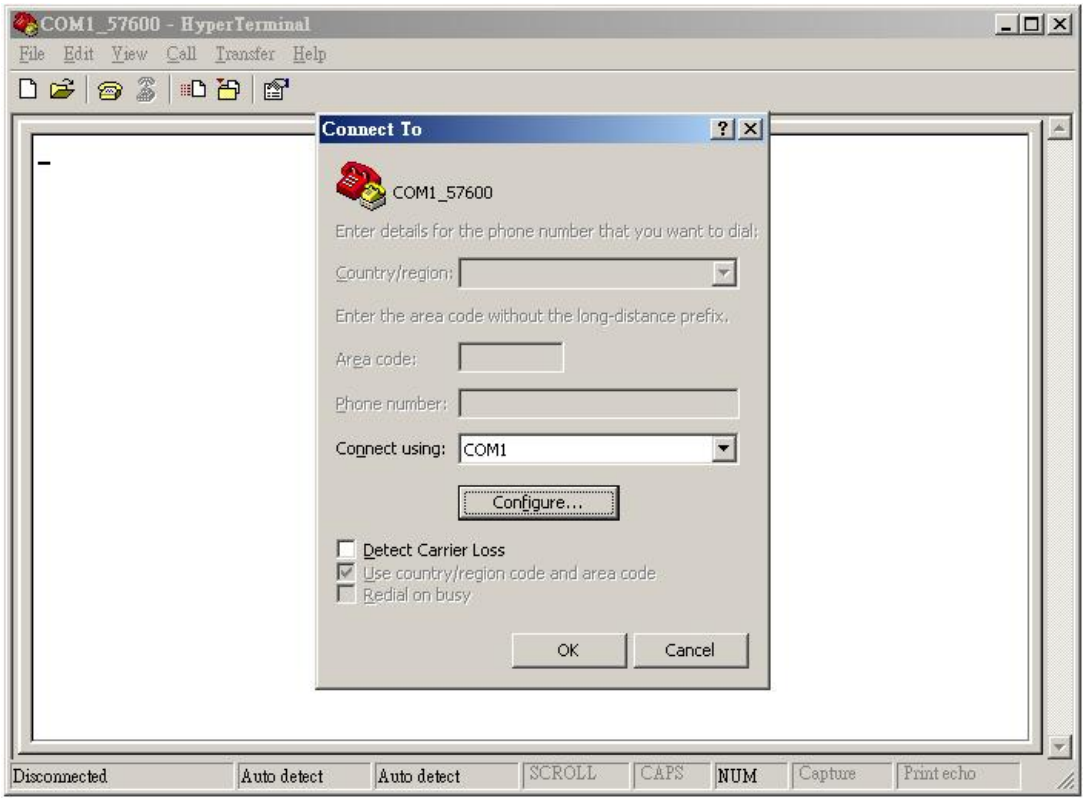
(1) Run HyperTerminal program



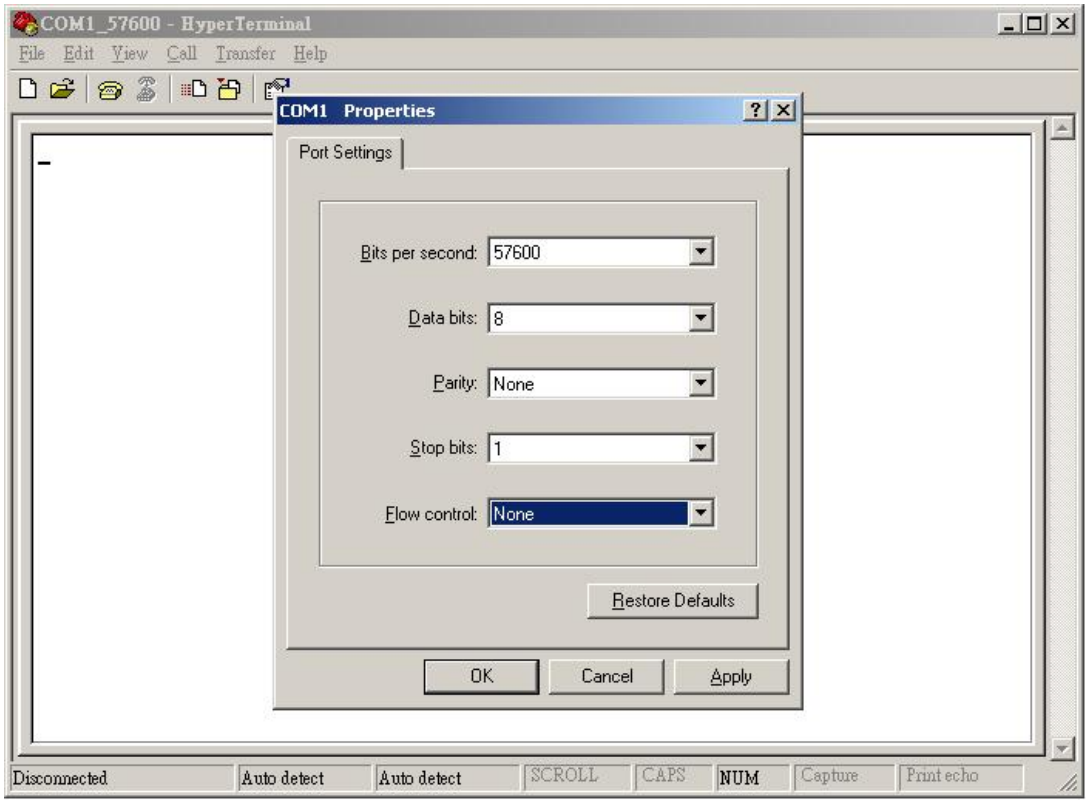
(2) Enter a name for the connection



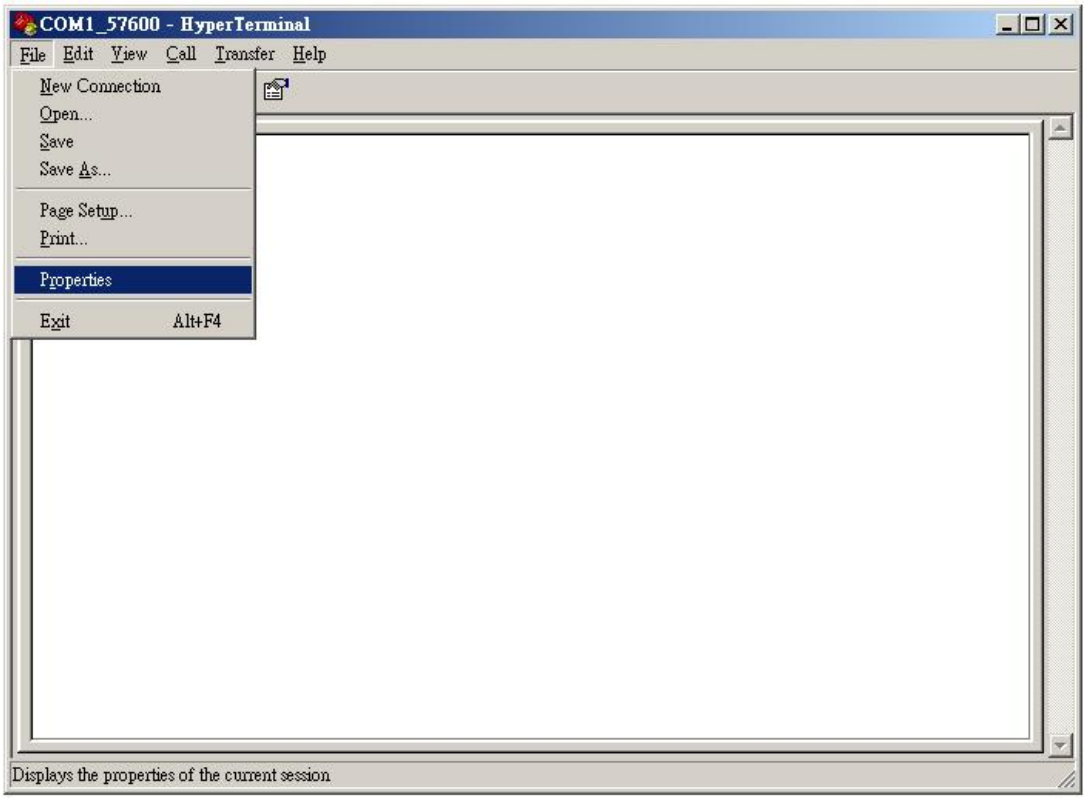
(3) Choose COM port and click [Configure…] button.



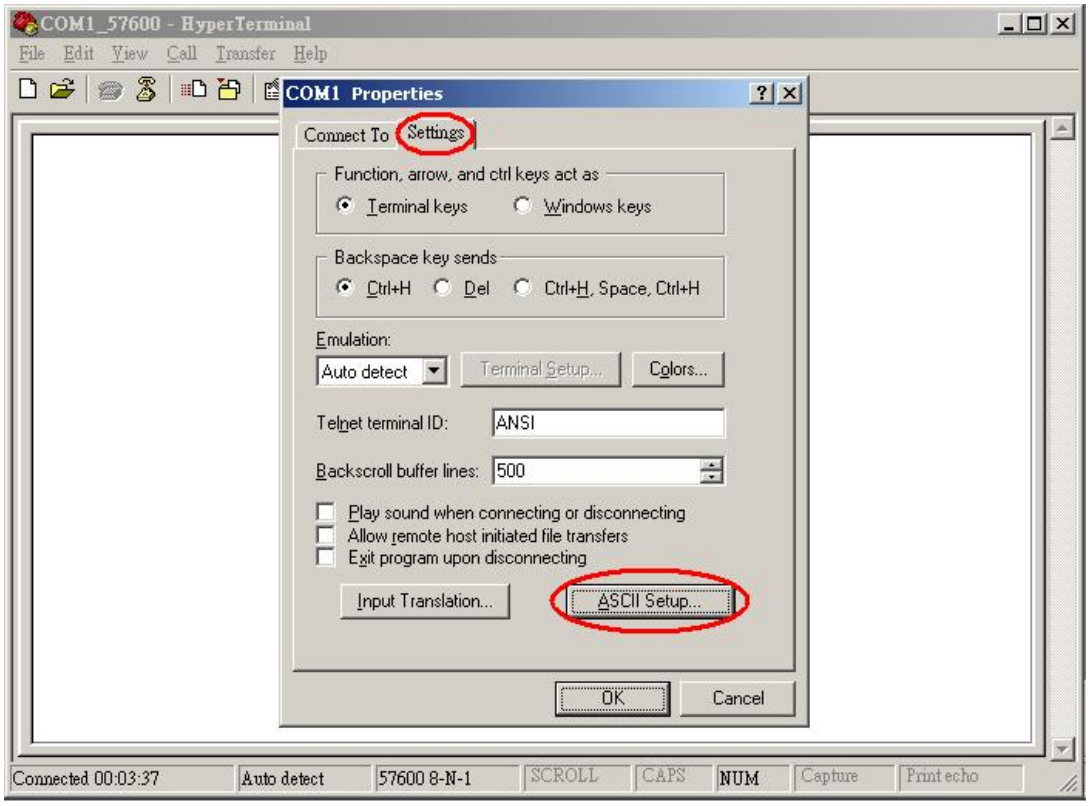
(4) Choose 57600,8,N,1 None flow control properties and click [OK] button.



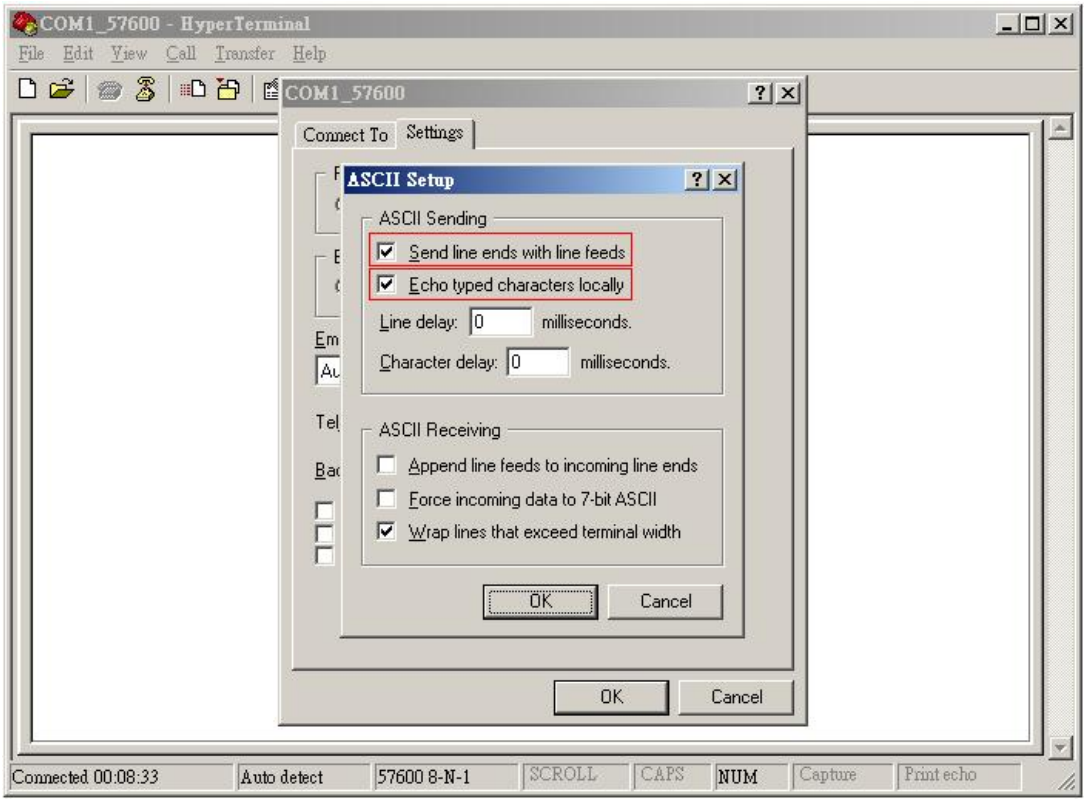
(5) Click [File] **à** [Properties]



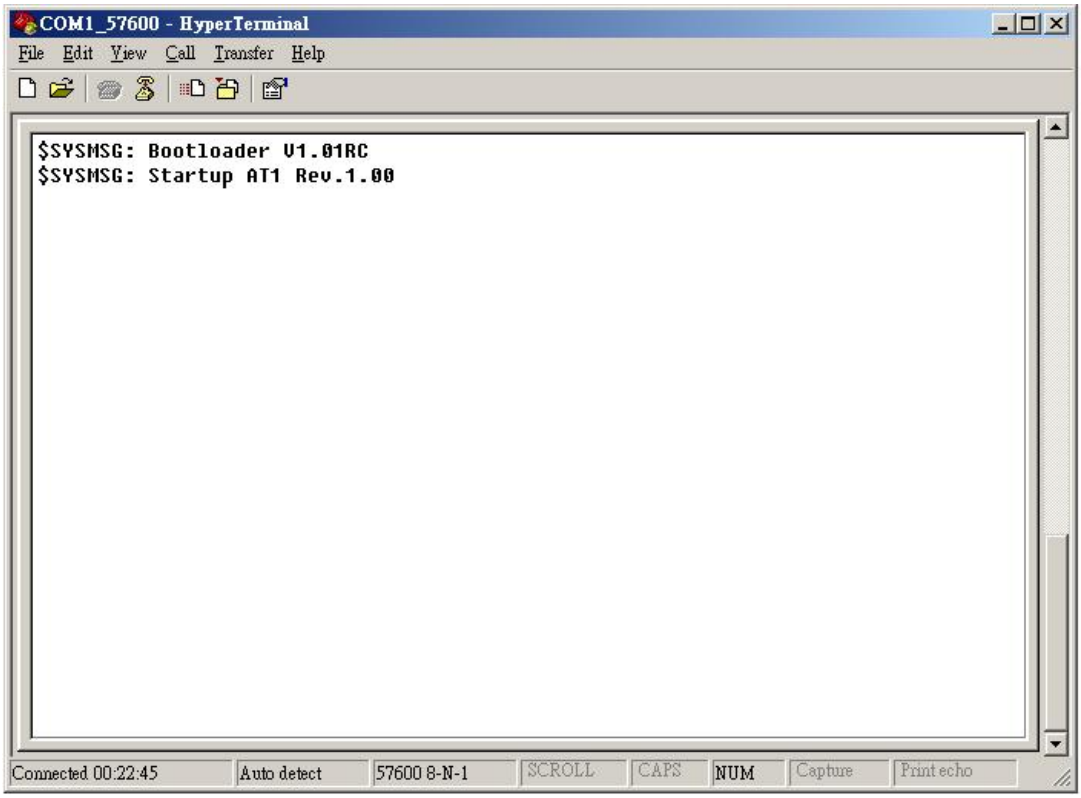
(6) Click [Settings] tab and [ASCII Setup…] button



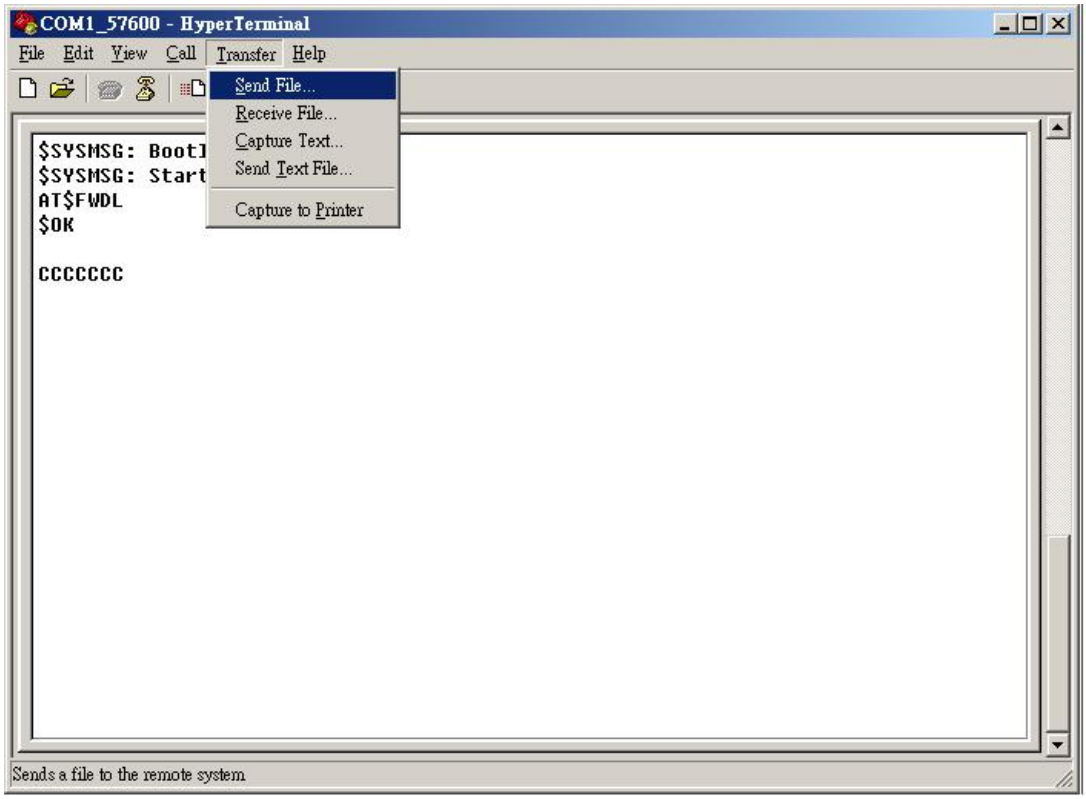
(7) Checked the following option and click [OK] button



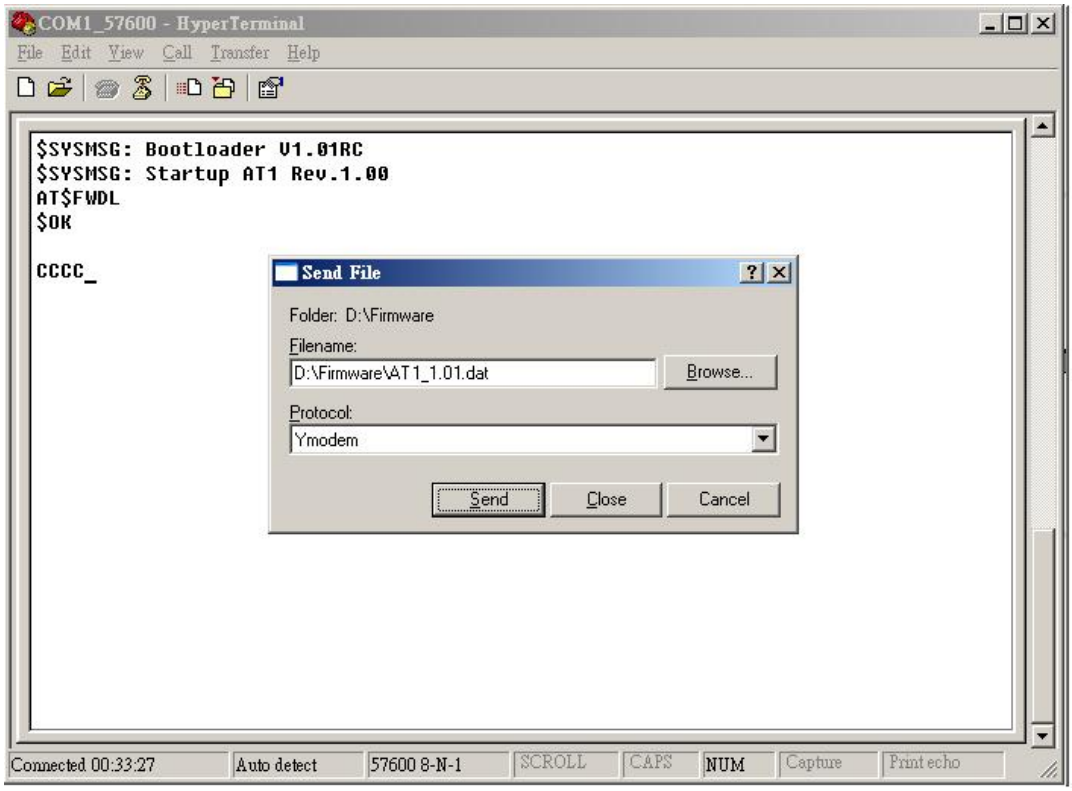
(8) Power ON the device. The startup message will show on the screen.



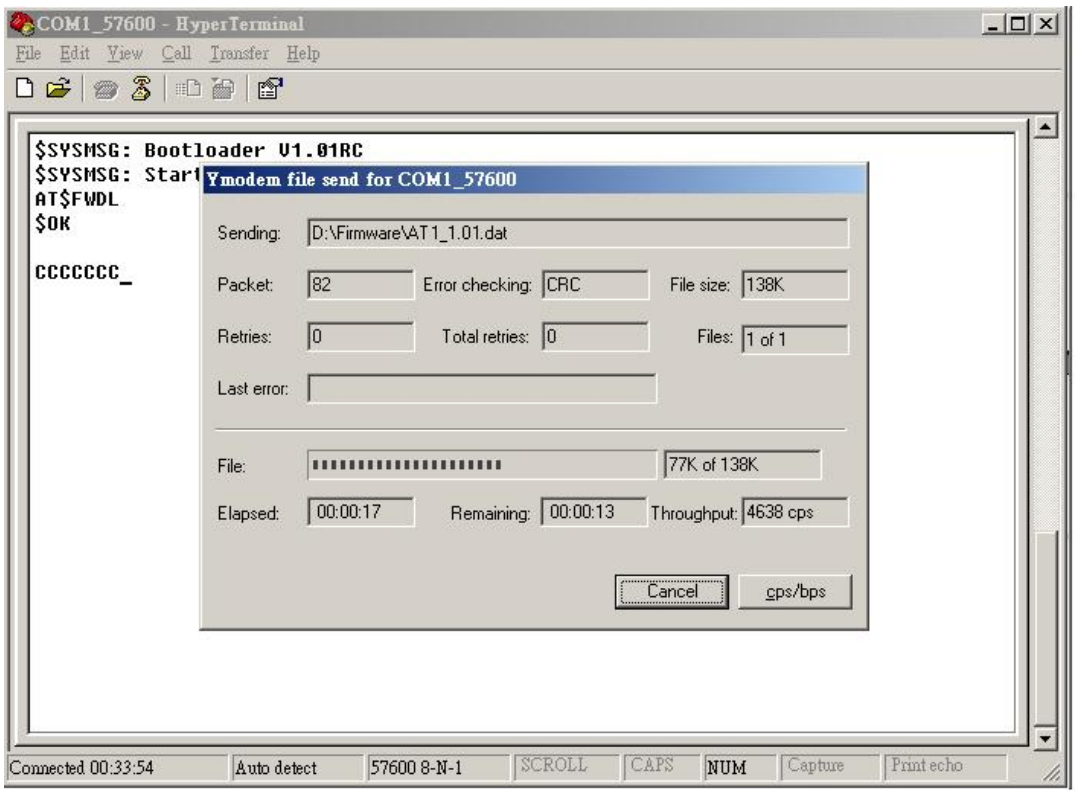
(9) Type “AT$FWDL” command and press [Enter] key. Choose [Transfer] **à** [Send File…]



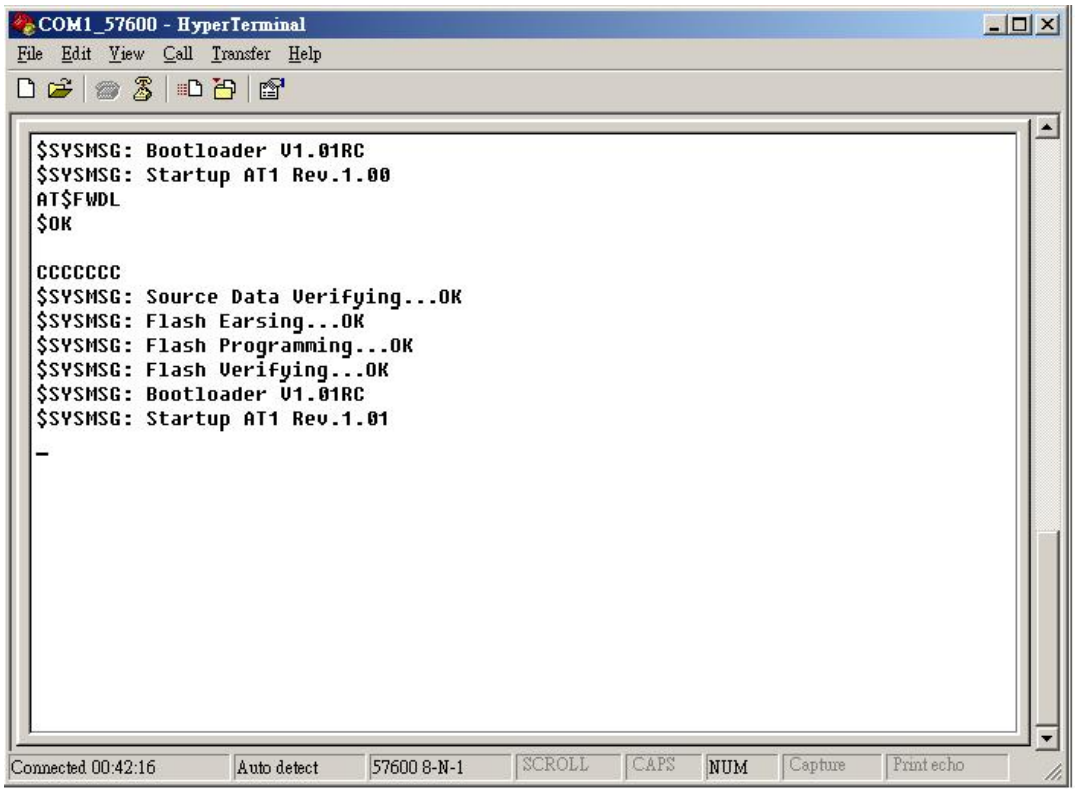
(10) Choose the firmware filename which is provided by ATrack and select [Ymodem] Protocol option and click [Send] button.



(11) When [Send] button is clicked, the file transfer progress will show as below:



(12) When file sending is completed, the device will program and restart itself automatically.



4. Appendix

4.1. Hardware Specification

AT1/AT1E/AT3/AT3E		
Physical Characteristics		
Dimension		80 * 48 * 26 mm
GSM Module		Quad-band
	Frequency Bands	850/900/1800/1900
GPS Module		High Sensitivity (65 Channel)
GPS Antennas (for AT1E)		SMA Connector Type
Shock Sensor		Built-In
Real-Time Clock		Built-In
Memory Capacity		2MB
Casing		High Heat Grade ABS
Electrical Characteristics		
Power Source		9-40 VDC
Power Consumption	Operational	100 mA @ 12VDC
	Sleep	20 mA @ 12VDC
	Deep Sleep	8 mA @ 12VDC
I/O Characteristics		
Device I/O Ports	Positive Input	1 (Triggering voltage: 3.7 ~ 40V)
	Negative Input	1 (Triggering voltage: 0 ~ 0.8V)
	Negative Outputs	2 (Open Collector Type @ 300mA$_{MAX}$)
Serial	Configurable	1
	Baud rates	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
Environmental Characteristics		
Operation	Temperature	-30 ~ +70°C (Note: Temp. up to +85°C with extreme condition)
Storage	Temperature	-40 ~ +85°C
	Relative Humidity	5 ~ 95%

4.2. 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.

RF Exposure Information

This device meets the government’s requirements for exposure to radio waves.
This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.