ATC1000 - TCP/IP to RS232 / RS422 / RS485 Converter

Configuration Manual

V1.0

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Designers & Manufacturers of Programmable Electronic Displays and Color Graphic Boards

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Purpose of this document

The purpose of this document is to present information related to the TCP/IP to RS232 / RS422 / RS485 converter, model number ATC1000. This document contains information relating to specifications and other technical information related to this device.

1   Definitions and Abbreviations

1.1   Abbreviations

DE	-	Drive Enable
BPS	-	Bits Per Second
PC	-	Personal Computer
PSU	-	Power Supply Unit
Rx	-	Receive
Tx	-	Transmit
UTP	-	Unshielded Twisted Pair

1.2   Definitions

Asynchronous   -   Transmission   of   digital   data   without   an accompanying clock signal.

2   Hardware Installation

Connect an Ethernet cable to the ATC-1000 unit if connecting to a switch or cross-over direct to the PC as in Figure 1 below.
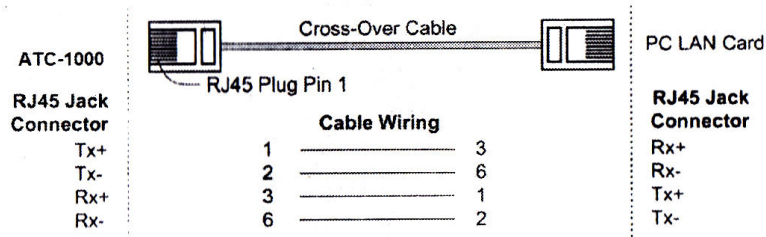

Figure 1 - Network cable

Connect the Power Supply unit to the ATC1000 as per Figure 2 below.

Figure 2 - Power and network connection

ATC-1000 LED indication
- LINK – Indication Ethernet Link, Green on Ethernet Link established.
- ACT – Data Sending/Receiving between Serial and the Ethernet
- PWR – Indication power.

3 Software Installation

Insert the software CD and search for such as F:/Driver/ ATC-1000 folder to run VCOMSETUP.

Note: Be sure you have administrative rights and disable firewalls in Windows XP and Windows 7.

4 ATC1000 Configuration

4.1 Start the software
Start the software by clicking on the VCOM shortcut (Figure 3 below) on the desktop.

Figure 3 - VCOM shortcut

4.2 Search for ATC1000 devices
Click on the "Search" button (Figure 4 below) to search for ATC1000 devices on the network.
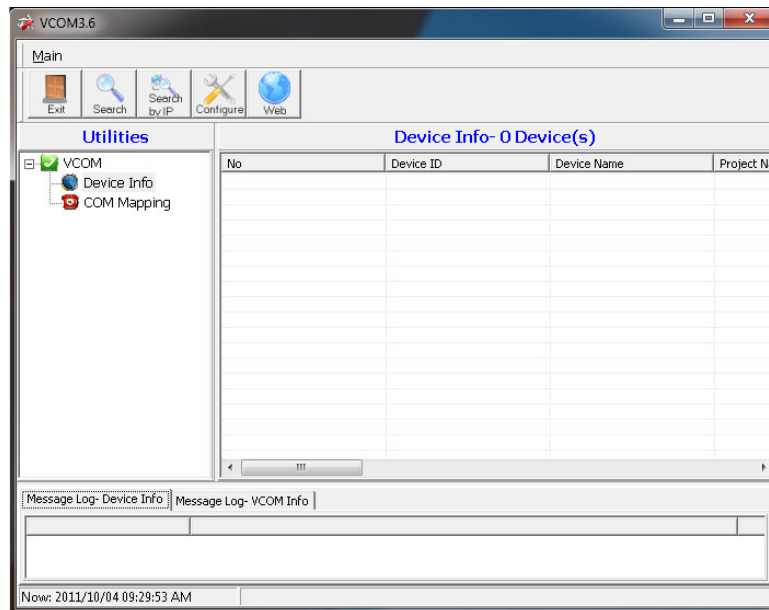

Figure 4 - VCOM Main screen

A window will appear similar to Figure 5 below with a list of all the devices that were found during the search.
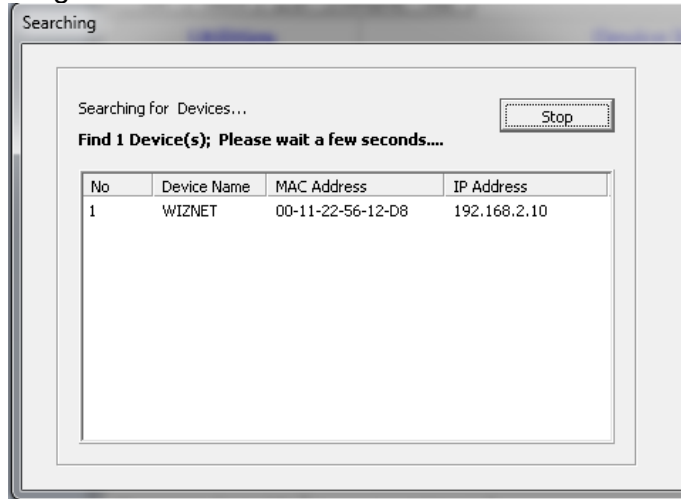

Figure 5 - Searching for devices

4.3 Device Configuration

Select the device you want to configure by clicking on the device info line.
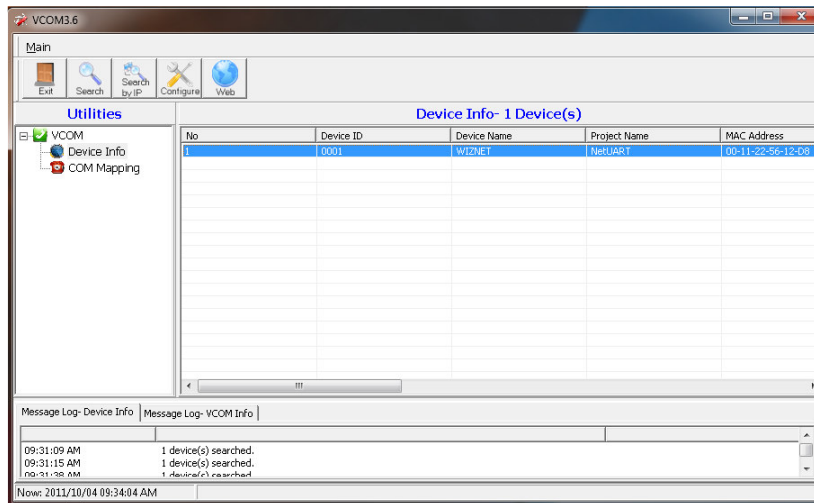

Figure 6 - Device info

Click on the configure button. If the PC and ATC1000 IP address is not in the same range, the following error will occur.

Figure 7 - TCP/IP Address Range error

4.4   Windows IP Address

Make a note of the current PC IP address and change the address so that the first three parts of the IP address matches and the last part differ from the ATC1000 IP address as detected in Figure 5 above. Refer to the local IT manager for help on how to set the IP address on Windows XP / 7.
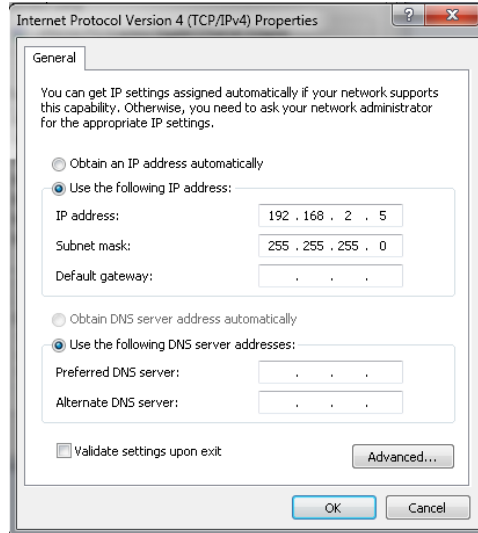

Figure 8 - PC IP Address setting

4.5   User name and password verification

Once the PC IP Address was set to within the same range as the IP Address of the ATC1000, ensure that the device is selected in the "Device Info" list, and click on configure again (Figure 6 above). The verification window, Figure 9 below, should appear. The default user name (account) is "admin" and default password is "system". Click the "OK" button once done.

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Figure 9 - Validation window

If the correct user name and password was entered the processing screen (Figure 10 below) will appear while the device parameters are being retrieved.
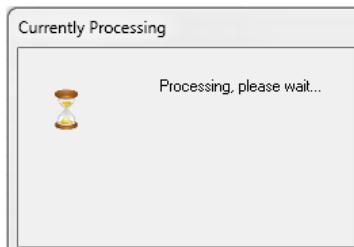

Figure 10 - Processing window

4.6   Device parameters and settings

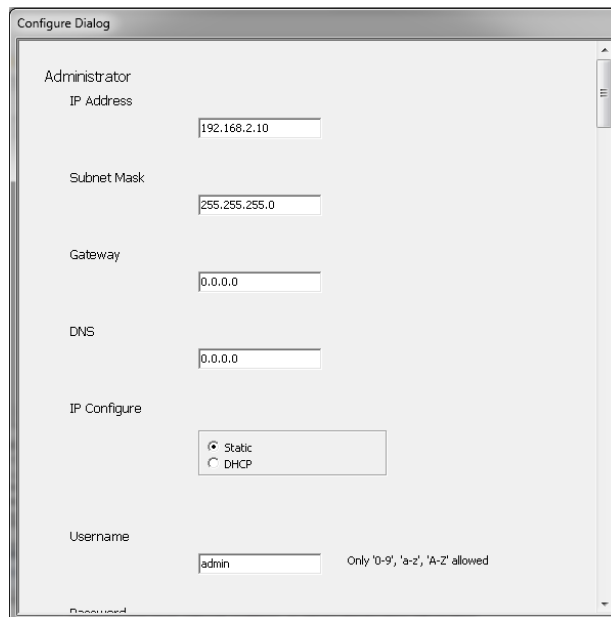The current device parameters will be displayed in a window similar to Figure 11 below.

Figure 11 - Configure dialog

Please ensure that all settings are set as per the list below:

Administrator settings
- IP Address: Set the IP address of the TCP/IP converter to the desired value.
- Subnet Mask: Usually a subnet mask of "255.255.255.0" is sufficient for general application.
- Gateway: Leave at "0.0.0.0".
- DNS: Leave at "0.0.0.0".
- IP Configure: Ensure that "STATIC" is selected.
- User name: The user name of the TCP/IP converter can be changed if required. Default is "admin".
- Password: The password of the TCP/IP converter can be changed if required. Default is "system".
- Nickname: This is used to identify the TCP/IP converter on the Local Area Network and is very useful if more than one device is connected to the network. Free text can be entered into the text box in order to distinguish between different converters on the network.

UART Settings
- Mode: RS232, RS422 or RS485 can be selected. Usually RS232 is required to communicate to PolyComp displays. (Note the RS232 is using the DB9 connector, while RS422/RS485 use the green 6 pin Molex connector.
- Baudrate: PolyComp displays are usually operating at a baudrate of 9600. The baudrate of the display can be verified during the display start-up routine.
- Character bits: PolyComp displays are usually operating with 8 character bits. The character bits of the display can be verified during the display start-up routine.
- Parity Control: PolyComp displays are usually operating with no parity. The parity setting of the display can be verified during the display start-up routine.
- Stop bits: PolyComp displays are usually operating with 1 stop bits. The stop bits of the display can be verified during the display start-up routine.
- Hardware Flow Control: PolyComp displays are usually operating without flow control.
- Delimiter: Enable/Disable. Ensure that none are selected.
- Delimiter: Drop Delimiter Enable/Disable. Ensure that none are selected.
- Delimiter: Character 1 Value: Ensure that it is set to "00".
- Delimiter: Character 2 Value: Ensure that it is set to "FF".
- Delimiter: Silent time value: Ensure that it is set to "5".

TCP Mode

- Telnet Server / Client: Ensure "Server" is selected.
- Data Port Number: Configure to appropriate port as per LAN architecture. Default value 8000.
- Remote Server IP Address: Leave at "0.0.0.0".
- Client mode inactive timeout: Ensure that it is set to "0".
- Server mode protect timeout: Ensure that it is set to "0".
- Control Port Number: Leave at default.
- Support Protocol: Ensure that it is set to "None".
- CLI Mode: Ensure that it is not selected.

UDP Mode

- Status: Ensure that it is set to "Disable".
- Leave all the settings at default values.

Click on the OK button at the bottom of the page once done.

Change the PC IP Address back to the original value as per Figure 8 above once done.

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