

PN 91-529-B

Serial-to-Ethernet Device Server Kit (c/w P/S & cable)

Installation and Configuration Guide

There are two common scenarios for connecting the Serial Device Servers to Computrol C6000 and Fleet cardlock systems. Each topology requires specific configuration settings in order to maximum communications reliability.

Scenario 1:

In this simple scenario, Ethernet cable is run out to the cardlock terminal and fitted with an RJ45 connector that can be plugged into the Serial Device Server. The Device server is then connected to the serial port on the cardlock Main board with a standard 9-pin NULL modem cable (Computrol PN 91-551 or equivalent).

The Serial Device Server is programmed with the appropriate IP address and IP port settings. The COM port is configured for the same baud rate, data bits, and parity (typically 9600,8,N,1) that the cardlock uses. Flow Control on both the cardlock and the Serial Device Server should be set to NONE.

The Packet Delimiter on the Serial Device Server should be set to a Timer delimiter of 0 (zero) milliseconds as opposed to using a Character delimiter. If this setting is not done correctly, missing characters are likely to be noticed in the serial communications stream.

Scenario 2:

In this scenario, A pair of serial point-to-point radio modems are used instead of running Ethernet cable out to the cardlock. The serial Device Server is connected to the network via Ethernet cable and the device is connected to the radio modem via a standard 9-pin NULL modem cable, usually supplied with the radio modem. A paired radio modem is installed at the cardlock and connected to the Main board's serial connector, again with the supplied NULL modem cable.

As before, the Serial Device Server is programmed with the appropriate IP address and IP port settings. The COM port is configured for the same baud rate, data bits, and parity (typically 9600,8,N,1) that the cardlock uses. However, in this case, Flow Control on Serial Device Server should be set to HARDWARE.

The radio modem that is connected to the Serial Device Server must be configured with a checkmark next to RTS Enable selection. This ensures that the radio modem uses hardware flow control when communicating with the Serial Device Server.

The radio modem that is connected to the cardlock terminal should NOT have a checkmark next to the RTS Enable selection. The cardlock system.ini should ensure that flow control for the serial port is set to the equivalent of "none".

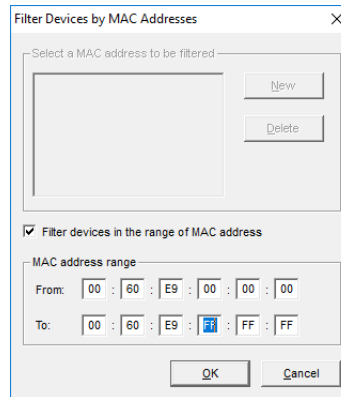
Configuration:

SE5001 series Serial Device Servers supplied by Computrol are fully tested by Computrol technicians prior to shipping. During this process, certain configuration settings are changed from the original manufacturer's default settings. This is done in part to ensure best reliability and also in order to simplify installation.

Computrol configures the devices for DHCP Ethernet connectivity. The end-user will want to assign a static IP address and make other configuration changes so as to conform to their network standards. Installers are

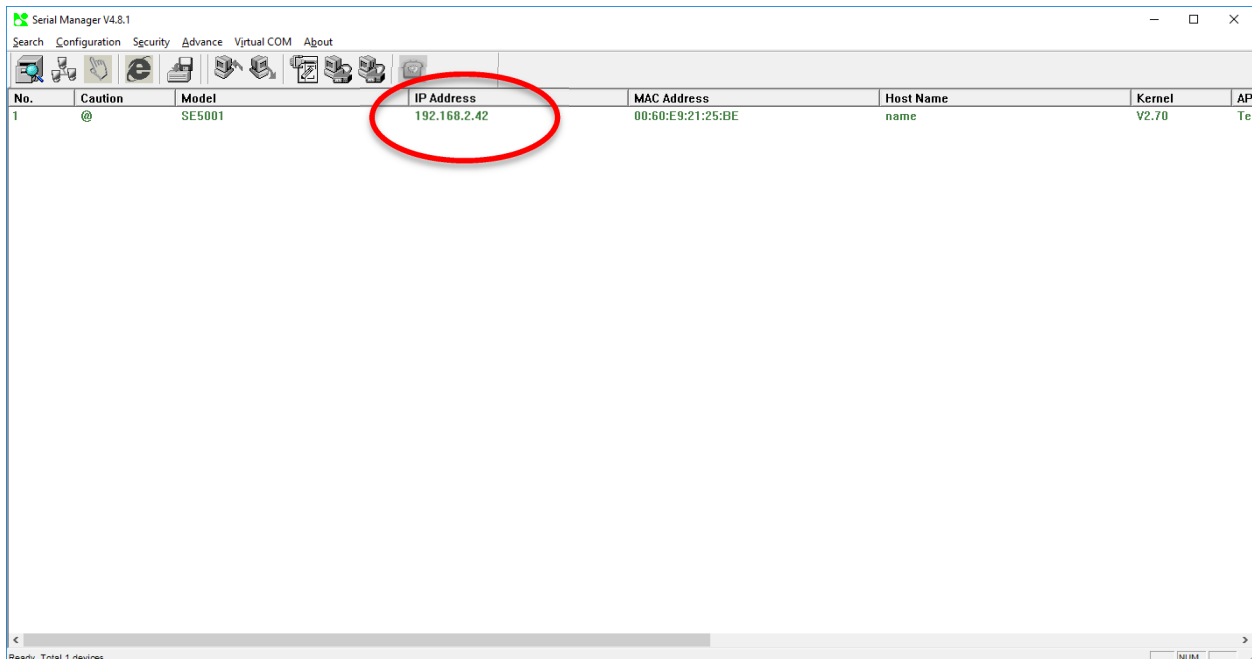
advised to review the installation parameters ahead of time with the end-user or their authorized I.T. provider to avoid network conflicts.

Each Serial Device Server kit comes with an OEM CD-ROM upon which may be found a program called "Serial Manager". Installing this program on a technician or I.T. personnel's computer is strongly recommended. Once the program is installed, start it, then choose Search → Search by MAC Address (shortcut: CTRL-M) and select "Filter devices by range of MAC address" starting with 00:60:E9:00:00:00 and ending with 00:69:E9:FF:FF:FF.



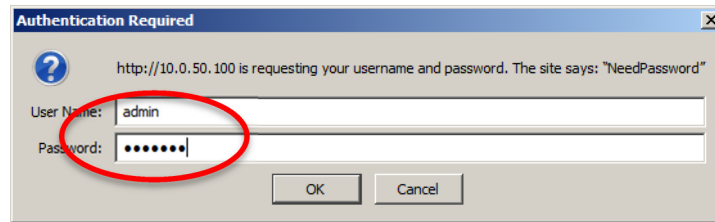
Press OK when done.

Now connect the SE5001 device to the local area network and plug in the power supply. Once the LAN indicator lamp shows a regular pattern of flashing, press the Search button in Serial Manager. Within a few seconds the device should be found and the IP address should be displayed:

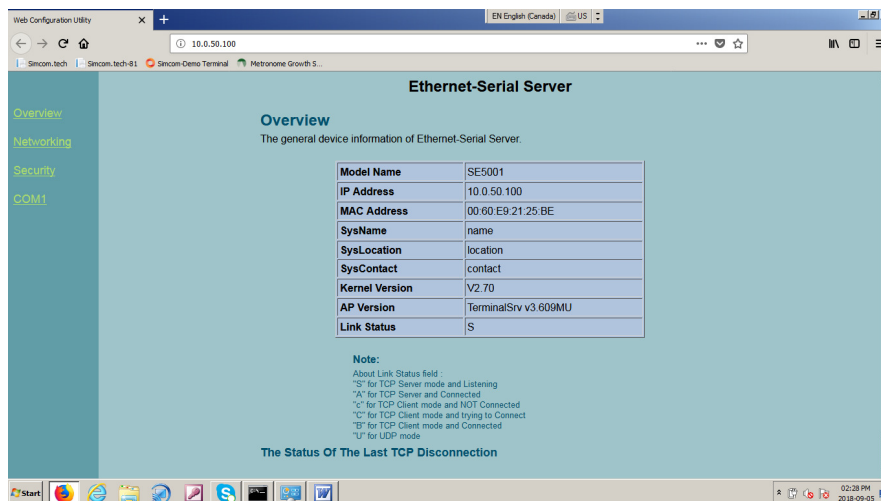


If the device is not found, the network may not be configured to allow new devices to use DHCP. Contact the network administrator to correct this.

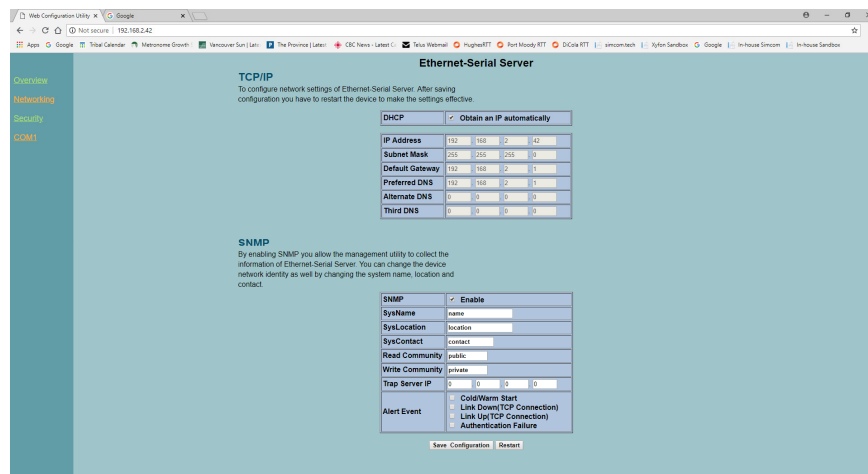
Once the IP address is identified, you can use a web-browser to connect to it and reconfigure it to suit the network administrator's requirements. Simply type the IP address into the Address Bar of the browser and then log in using the default username "admin" and password "default" (without the quotes).



Once logged in, you will see the main setup screen:



Click on "Networking" and change the settings as directed by the end-user or network administrator.

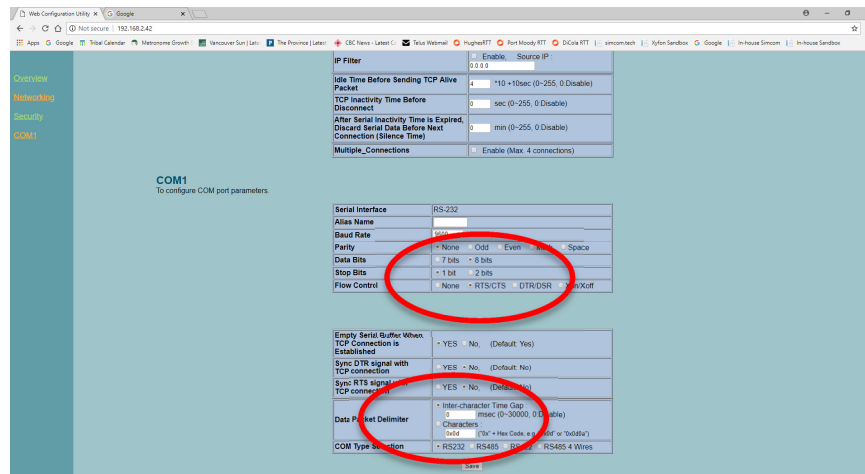


Once all desired networking changes have been made, click on the "Save Configuration" button.

For Scenario 1, (direct between Ethernet and Serial), you will generally only need to change the networking settings as described above and ProFuel 2 settings as described further in this document.

For Scenario 2, (using the device in conjunction with Laird radio modems) the networking configuration (described above) is the same, as are the ProFuel 2 settings, but you must make an additional changes to Flow Control between the Serial Device Server and the attached radio modem:

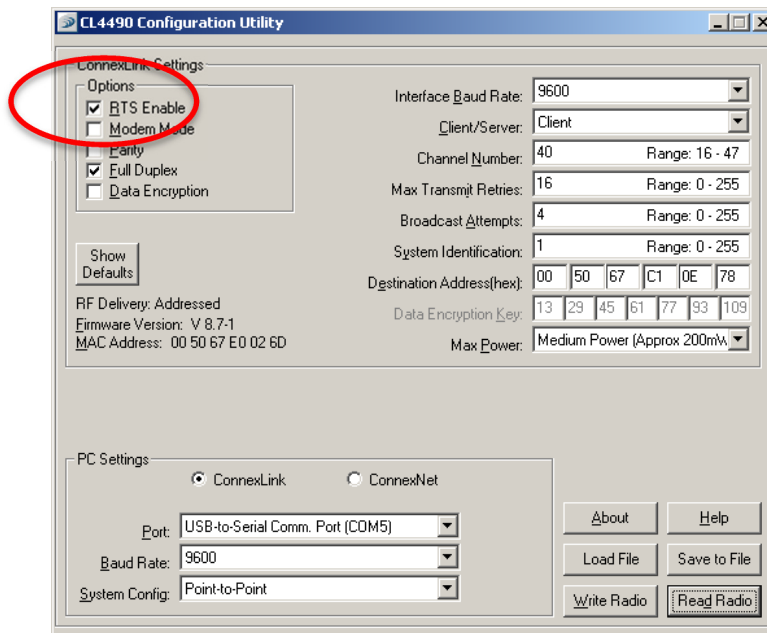
For the Serial Device Server, click on “Com1” in the left-side panel. When the new Com1 settings are shown, scroll down to Flow Control and select RTS/CTS.



The Data Packet Delimiter is set by Computrol to use an “Inter-character Time Gap” of 0 (zero) milliseconds. It is most important that this setting NOT be changed or communications reliability may be affected.

Once the above changes are made, click on the Save button at the bottom of the page.

You must also change the Options on the Laird Radio modem to use "RTS Enable". Do this ONLY for the Radio modem that will be connected to the SE5001; the radio modem at the cardlock terminal should NOT use "RTS Enable".



ProFuel 2 Configuration:

Observe the following PCU settings on the Communications Tab:

The screenshot shows the 'Pump Controller Unit' configuration window. The 'Communication Setup (6)' tab is active. The 'Communication Using' section has 'TCP/IP' selected. The 'Physical Connection' is set to '3Wire'. The 'COM Port' is '4', 'Data Bits' is '8', 'Baud Rate' is '1200', 'Stop Bits' is '1', 'Parity' is 'None', and 'Flow Control' is 'None'. The 'Modem' section has 'Init. String' set to 'ATZ'. The 'Automatic Data Switch' section has 'Arming Char' and 'Arming Code' both set to '0'. The 'Login' section has 'User' set to 'talk' and 'Password' masked with 'xxxx'. The 'Network Settings' section has 'Server' set to 'None' and 'TCP Port' set to '4660'. The 'Host Address' is '192.168.2.25' and the 'TCP Port' is '4660'. The 'Console Idle Timeout (Minutes)' is set to '5'.

Note that the “Host Address” is the IP address of the SE5001 Serial Device Server.

Note that “TCP Port” must be set to match the configuration on the SE5001 Serial Device Server.

Be sure to check the “Ethernet to Serial connection” checkbox.

Click the “Save” button before attempting to test the communications.