



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

**217.897.6600 Tel**  
**800.432.2638 Toll Free**  
**217.897.1331**  
**www.dcbnet.com**

## SE-6600 Serial Encrypter Quick Start Guide

This document guides the new user through configuration of an SE-6600 serial encrypter and demonstrates a bench setup in which a pair of devices maintain encrypted serial port communications. Connect two PCs' serial ports through two SE-6600 units with the encrypted link between them, as diagrammed in Figure 1 below.

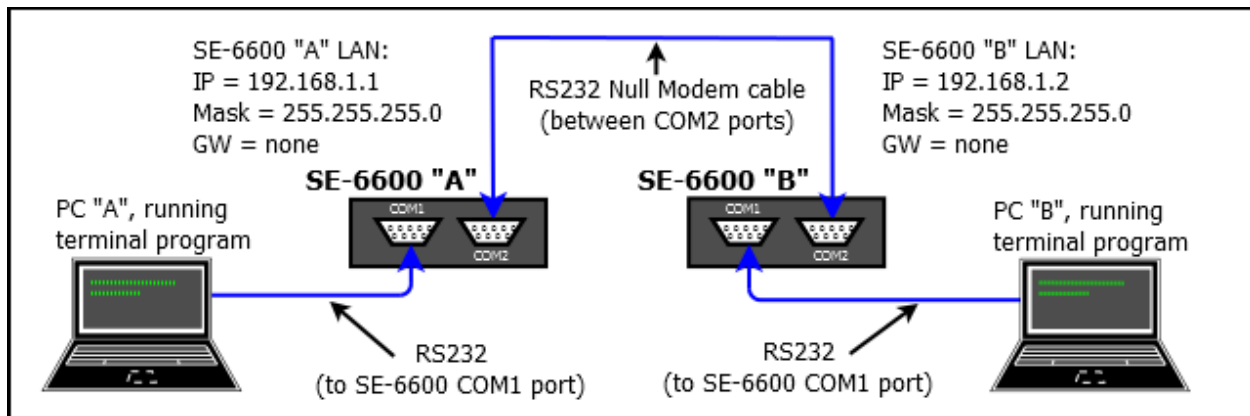


Figure 1 – Configuration for End-to-End Test (IP Addresses for Setup Only)

### Requirements

1. Two SE-6600 units and knowledge of basic TCP/IP networking
2. Two PCs with a wired ethernet connection, Serial Port (or USB-to-Serial adapter cable), terminal emulation program and any modern web browser
3. LAN cable, either straight-through or crossover, to access the LAN ports (This is a separate cable from the one provided with the SE-6600.)
4. Null modem cable, to connect the pair of SE-6600 units to each other

### Step-by-Step Procedure

**1:** Open the first box and note the contents: The SE-6600 serial encrypter, network cable, "Direct PC" and "Remote PC" adapters, power supply and CDROM containing manual and Application Notes. Power up this unit (SE-6600 "A")

**2:** Configure one of the PCs for use on the default LAN subnet of the SE-6600s. Use the IP address 192.168.1.100 with a Subnet Mask of 255.255.255.0.

**3:** Use the LAN cable to connect the PC to SE-6600 A's LAN port, open a browser (Internet Explorer, Firefox, Chrome, Safari), and enter <http://192.168.1.1> (NOTE that "http" is used, not https)

The SE-6600 Front Page screen should appear as in Figure 2:

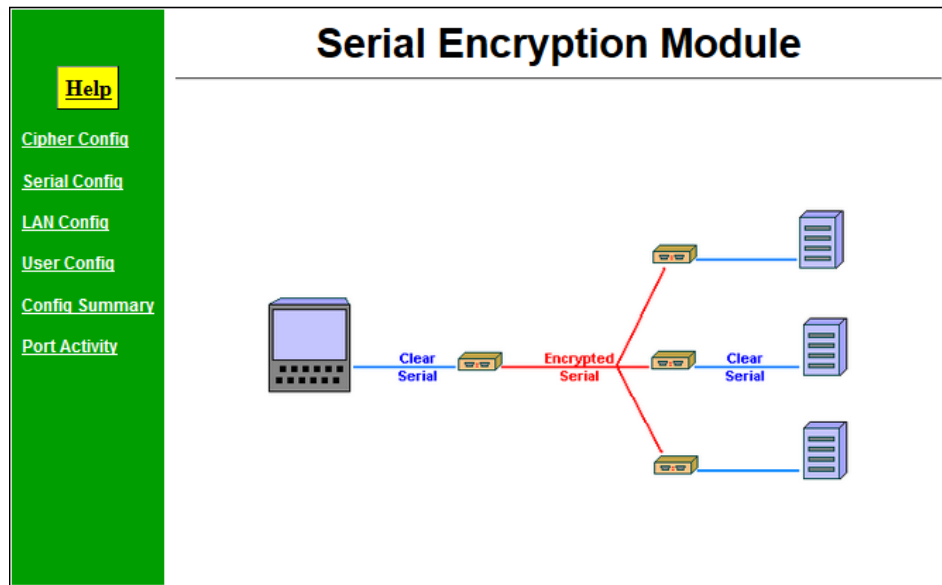


Figure 2 – SE-6600 Front Page Screen

4: Click on **Cipher Config** from the menu. Select the radio button for “**Block Mode Clear**” and enter a Passphrase (e.g. “abc123”), as shown in Figure 3 below.

The screenshot shows the 'Cipher Configuration' screen. The left sidebar is identical to Figure 2. The main content area has a title 'Cipher Configuration' and a red-bordered box containing the following fields: 'Operational Mode:' with two radio buttons, 'Block Mode Cipher' (unselected) and 'Block Mode Clear' (selected); and 'Passphrase :' with a text input field containing 'abc123'. Below these fields are 'Save' and 'Cancel' buttons. At the bottom of the screen, there is a message: 'Press the following button to switch local and remote units to **Block Mode Cipher**.' followed by a red-bordered button labeled 'Enable Block Mode Cipher'.

Figure 3 – SE-6600 **Cipher Config** Screen, Showing Entries Prior to **Save**

To make these changes active on SE-6600 A, click the **Save** button. A **Server Status Message** screen will appear to notify of the saved changes. **Note: The passphrase will no longer display, but it has been saved.**

5: Disconnect the LAN cable from SE-6600 A. In a command terminal on the PC (run as Administrator), clear the ARP cache entry for 192.168.1.1 by using the command **arp -d 192.168.1.1**. (Alternatively, PC B's LAN connection could be used to configure the second SE-6600, as long as its IP address is set to the same LAN subnet described in Step 2.)

6: Open the second box and power up that unit (SE-6600 “B”). Repeat steps 3 and 4 above to access the Front Page and to configure the **Cipher Config** as before. **Make sure to use the same passphrase as on SE-6600 A.**

7: Click on **LAN Config** from the menu. Change the IP Address of SE-6600 B to 192.168.1.2 and leave all other parameters at defaults, as shown in Figure 4.

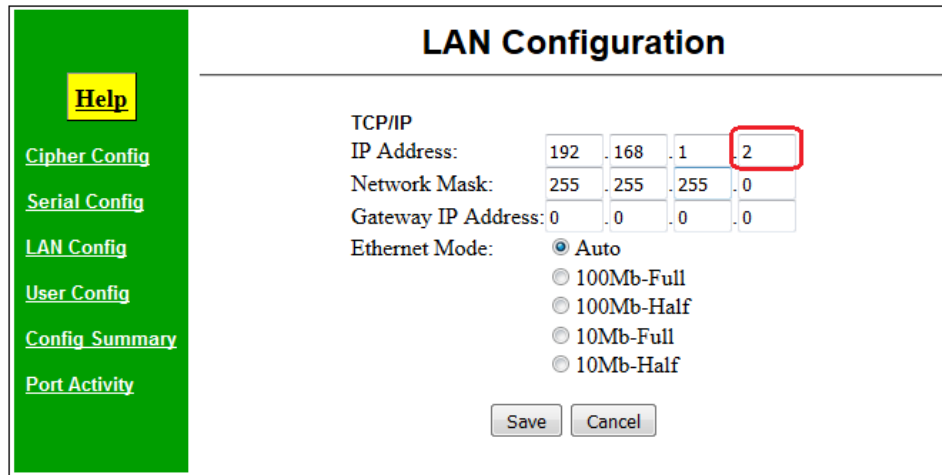


Figure 4 – SE-6600 LAN Config Screen, Showing New IP Address

Click the **Save** button. A **Server Status Message** screen will appear and the unit will reboot. (Allow several seconds for this.)

8: Using items from inside the box of SE-6600 A, install the **Direct PC** adapter on one end of the supplied LAN cable and the **Remote PC** adapter on the other end. This combination creates an RS-232 crossover (null modem) cable that may be used to connect the serial port of PC A to the COM1 port of SE-6600 A. Do the same with the cable and adapters from the box of SE-6600 B and use that assembly to connect PC B to the COM1 port of SE-6600 B.

9: Connect a null modem cable between the COM2 ports of SE-6600 A and SE-6600 B. With the PCs running terminal emulation programs, it should be possible for each PC to send characters to the terminal of the other across the link, as shown in Figure 5 below. You will not see the characters being typed on the local screen unless “Local Echo” is enabled.

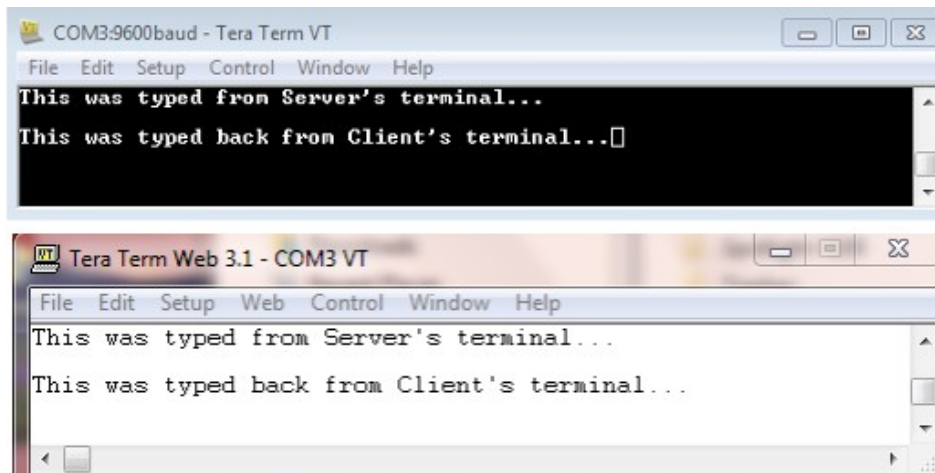


Figure 5 – Sample Terminal Output for PC A and PC B

In this configuration, the communications between the two PCs are taking place “in the clear”, without encryption enabled. (The “**Encrypting**” LEDs on the SE-6600 units will be off.) The next step will turn link encryption on.

**10:** With the LAN cable still connected to SE-6600 B, open the web browser and enter <http://192.168.1.2> (the new IP address from Step 7). Click on **Cipher Config** from the menu of SE-6600 B to display the screen shown in Figure 3, and this time, click on the red rectangle which reads, “**Enable Block Mode Cipher**”. *This not only activates the encryption on the SE-6600 B unit, but also sends a message to SE-6600 A to do the same.* An **Enabling Block Mode Cipher** screen will appear, with a message to wait while the action takes place. (Note that SE-6600 A could have been used to send the message to SE-6600 B instead.)

Now the “**Encrypting**” LEDs on the SE-6600 units will be lit, and the terminal-to-terminal communications described in Step 9 should once again be possible.

Clicking on **Port Activity** from the menu displays a screen similar to that shown in Figure 6 below. Whenever either PC sends terminal messages to the other, the **Serial** counters will increase, but the **Network** counters will also increment due to the SE-6600 units communicating with each other, even in the absence of terminal activity.

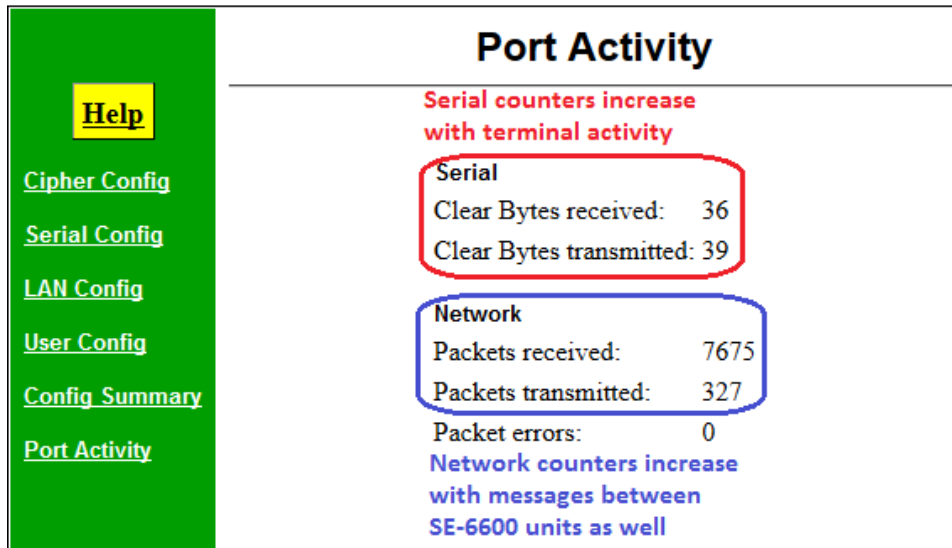


Figure 6 – SE-6600 **Port Activity** Screen, Showing Byte Counters