

SERIAL FEATURES

Serial port usage (RS232)

The serial port on both the Xtensys switch (RJ12) and the User station (DB9) are used to update the unit's firmware.

The following procedure for establishing a connection from your standalone computer or Notebook computer to the Xtensys switch's serial port or a User station uses Windows HyperTerminal™. Refer to your user's manual if a different communication program is being used.

To access an Xtensys serial port, the following items are required:

- A serial cable (RJ12 connector and an appropriate adapter for the computer's serial port). The serial cable and adapter are provided with each Xtensys switch (Rose part number KIT-ATRX). A standard DB9 null modem cable can be used to flash user stations.
- A dedicated computer, Notebook computer with a serial port, or a display terminal. Using a display terminal will allow you to configure the Xtensys switch; however, you will not be able to upgrade new versions of firmware. The computer or Notebook must not be attached to any Xtensys switches in the system being upgraded.
- A communications program such as Windows HyperTerminal.

Connecting the Serial Cable

Attach the serial cable from the RS232 port on the Xtensys switch (RJ12 connector) to the COM1 port (DB9M) on your computer. This COM1 port must be the same communication port your communication software is configured for. If your communication software is configured for COM2 then connect the cable to this DB9M port.

Setting up Windows HyperTerminal

(The following instructions are using Windows HyperTerminal. The instructions may be different for other operating systems or communication program)

Start the Windows HyperTerminal program. The "New Connection" dialog box will display requesting a name for this session. Enter a session name like "Xtensys serial option" and click 'OK". Next, the "Connect To" dialog box will display. Click on the "Connect Using" down arrow to display the connect options. Select the COM 1 option, then click "OK". The COM1 properties dialog box will display. Using the drop-down selection boxes, select the following values for each setting.

- Bits per second 115200
- Data bits; 8
- Parity; None
- Stop bits; 1
- Flow Control; None

Click "OK" when all values have been entered. The HyperTerminal dialog box will display and information can be exchanged with the Xtensys switch properly. You can save this setup so the next time its needed, you can select the ICON with the name you gave it and these settings will already be established.

Starting a serial communication session

Verify that "Connected" appears in the bottom left corner of the HyperTerminal window. If "Connected" is not present, click on the "Call" icon. "Connected" should display in the bottom left corner.

Power on or cycle power on the Xtensys switch and press the spacebar when the message, "Hit the spacebar within 1 second to get serial options menu" appears on your screen. The serial menu will appear after the diagnostic check completes.

The serial menu enables you to perform flash upgrades.

Following explains the serial menu options:

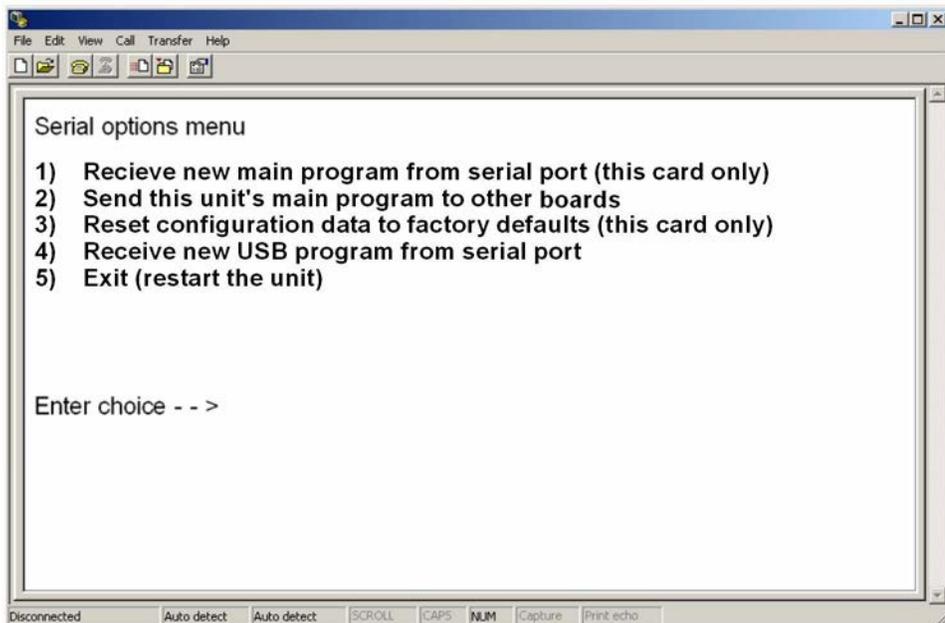


Figure 22. Serial Options

Option 1. Receive new main program from serial port (This card only)

When a new main program is available, it can be obtained from Rose Electronics or downloaded from our web site at www.rose.com. The diagnostic screen that is displayed when the Xtensys switch is first turned on shows the main program version that is presently installed.

You cannot update the flash memory using only a display terminal; you must use a standalone computer or Notebook and the new main program saved on that computer.

To load a flash upgrade file, type 1 in the Enter choice field of the serial options menu. The following message will appear:

```
Waiting for file.....
```

Send the program file from your computer to the Xtensys using ASCII text file protocol. From HyperTerminal, click on "Transfer" and select "Send Text File". The "Send Text File" dialog box will display. Enter the file name of the updated firmware file into the File Name box and click "Open". The file transfer function will start. While the file is being sent, periods are sent to indicate the copying progress. Once the file has been sent, you will see the message:

```
Receive successful
Flash programming.....
Flash programming successful
```

After the flash memory is programmed, the serial menu will display.

Updating the firmware program does not change any of the custom settings that have been made.

You may receive one of the following errors during the file transfer function: checksum error, record error, or data error. These messages are followed by:

```
Receive failed
Try again Y/N
```

These error messages may be caused by any of the following items:

- Corrupted firmware upgrade file.
- Loose or defective RS232 cable.
- RS232 protocol not configured correctly.
- Bad transmit or receive levels.
- Hardware problem on transmit or receive side.

Identify and correct the transmit problem and press “Y”, then [Enter] to try again.

Press “N” and then [Enter] and the prompt "Hit enter to boot" appears. Press the [Enter] key to re-start the Xtensys switches diagnostics with the firmware unchanged.

Option 2. Send this Unit’s Main Program to other boards.

The main program updates (Option 1) updates card #1 in the unit. The firmware must be sent to all other cards using option #2.

Press 2 to send the main program to all other cards.

```
Cards to update - n
You are about to copy the firmware from this board to all other
boards in the system.
Are you sure? Y/N
```

Before responding Y, make sure that the “Cards to update” number in the message above agrees with the total number of cards in the unit minus 1 (Total cards = # RJ45 CPU connectors divided by 4). When you reply Y, the following message appears:

```
Sending flash program code to system.....
```

When complete, the system returns you to the serial options menu. Wait at least 15 seconds before restarting the Xtensys after choosing option 2 for the program to propagate and program the other cards in the system.

Option 3. Reset to Factory Defaults (This CPU card only)

Selecting option 3 restores the CPU card to its original factory configuration. The following message appears:

```
Flash programming .....
```

When the factory defaults have been restored, the following message is displayed:

```
Reset to default successful
```

The serial options menu is then displayed, indicating that this CPU board has been reset to the factory defaults.

NOTE: Resetting the unit to factory defaults will clear ALL computer and user names and assigned passwords.

Option 4. Receive new USB program from serial port

The USB input module on Xtensys is flash upgradeable to accommodate new or changes in USB input devices. When new updates are available, download the USB update program. Updating the USB module is performed the same way as updating the new program (Option 1). Follow option 1 procedure but select the USB update program to load.

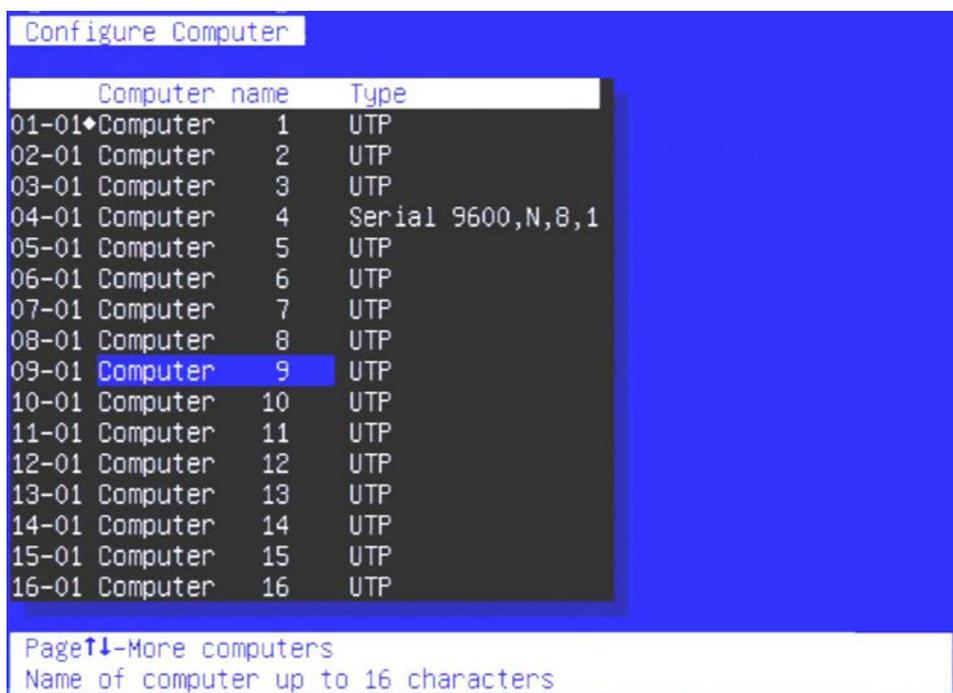
Option 5. Exit (Restart the Unit)

Selecting option 5 exits the serial option menu. The Xtensys switch will reinitialize and the diagnostic check will run. After the diagnostic check finished, the Unit is ready to use with its new configurations. If there are more configurations needed, hit the space bar within 1 seconds and the serial menu will be brought back up to use.

Serial Device Features

The serial feature of Xtensys allows you to connect a KVM station to a serial device such as the serial port on a Unix or Sun computer, a communication device, or any other supported device with a serial port. The serial device is connected to the RJ45 CPU port on the Xtensys switch with a serial cable. Any CPU port can be configured to be a serial port. When you switch to that port, you are connected to the serial device and can access it as you normally would.

To configure a CPU port for a serial application, call up the main menu ([Ctrl] – F12), and then select computer and press [Enter]. From the configure computer menu, use the up/down arrow keys to select the desired port to configure for serial, then use the right arrow key and select the type field for the selected computer and press [Enter]. A selection box will display listing the supported serial choices. Use the up/down arrow keys and select the serial baud rate to configure the CPU port for and press [Enter]. Save the changes to flash memory. Once saved, that CPU port is configured for serial support.



Computer 4 above is configured for serial support at 9600 baud.

With the CPU port configured for serial support and the appropriate serial cable connected, the KVM station can access the connected serial device the same way you would access it using a computer terminal.

When you switch to a CPU port that is configured for serial support, the powerful OSD will emulate a VT220 terminal. You can also use the KVM station in a standard TTY mode which will automatically scroll incoming data. The example below shows a typical screen from a UNIX computer. The data is shown in a standard 24 x 80 area with two status lines. The first line shows the current KVM station name, user name, connect mode, and computer name. The second line shows the command functions available.