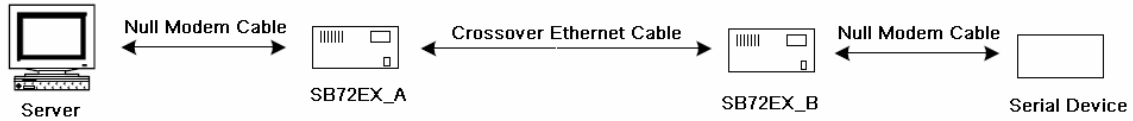




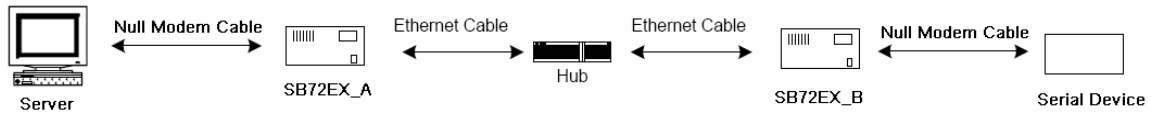
## **Using Two SB72EX Devices to Connect a Server to a Serial Device**

Revision 1.0  
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## Physical Configuration – Two Options



OR



## Network Configuration

For each SB72EX, configure a Static IP Address, Subnet Mask, and Gateway. You can use the SB72EX Factory Application Network Settings page (as shown in our screen shots), IPSetup, or MTTTY (via the setup screen) to input your device parameters.

### SB72EX\_A

- Static IP Address: 10.1.1.150
- Network Mask: 255.255.255.0
- Device Gateway: 10.1.1.1

Network			
Device Name (for DHCP)	SB72EX-588F		
	Static Settings	DHCP Assigned Values	Address Mode
Device IP Address	10.1.1.150	(10.1.1.236)	Static
Device Subnet Mask	255.255.255.0	(255.255.255.0)	
Device Gateway	10.1.1.1	(10.1.1.1)	
DNS Server	0.0.0.0	(66.75.160.15)	

### SB72EX\_B

- Static IP Address: 10.1.1.151
- Mask: 255.255.255.0
- Device Gateway: 10.1.1.1

Network			
Device Name (for DHCP)	SB72EX-581A		
	Static Settings	DHCP Assigned Values	Address Mode
Device IP Address	10.1.1.151	(10.1.1.236)	Static
Device Subnet Mask	255.255.255.0	(255.255.255.0)	
Device Gateway	10.1.1.1	(10.1.1.1)	
DNS Server	0.0.0.0	(66.75.160.15)	

## Procedure

Open up the SB72EX Factory webpage (for each SB72EX) in the browser of your choice, and scroll down to the **TCP** section to input your settings. **Note:** Your settings may be different then in our example.

Incoming **and** outgoing network connections **will** have to be established. For the incoming network connections, make sure the box for **Listen to incoming network connections** is checked (**enabled**) for **both** SB72EX devices (as shown below). Next, set your desired non-reserved **Listening network port** number on SB72EX\_A, and a **different** listening port number on SB72EX\_B. **The listening port you set on one SB72EX device will be the connect-to port number for the other SB72EX device.** For the setting **When to begin making outgoing serial connections**, set this option to **If serial data received** - for **both** SB72EX devices. In the **Connect to this address** box, **type** in the **IP Address** of the SB72EX you intend to connect to. For **SB72EX\_A** type the IP Address of **SB72EX\_B** and vice versa (as shown below). Finally, **click** the **Submit New Settings** button found at the bottom of this page. Everything else can be left at their factory default settings.

### SB72EX\_A (Port 0)

- Listen for incoming network connections: **checked** (enabled)
- Listening network port: **23**
- When to begin making outgoing serial connections: **If serial data received**
- Connect on network port: **25** (i.e. the listening network port of SB72EX\_B)
- Connect to this address: **10.1.1.151** (i.e. the IP Address of SB72EX\_B)

The screenshot shows the configuration page for SB72EX\_A (Port 0). At the top, it says "System is set to TCP mode" with a link to "Switch to UDP mode". The page is titled "Port 0". The "Listen for incoming network connections" checkbox is checked. The "Listening network port" is set to 23. The "Timeout and disconnect after this many seconds of inactivity" is set to 60. The "Allow new connection if the existing connection has been idle for this many seconds" is set to 30. The "When to begin making outgoing serial connections" dropdown is set to "If serial data received". The "Connect on network port" is set to 25. The "Connect to this address" is set to 10.1.1.151. The "Timeout and disconnect after this many seconds of inactivity" is set to 60. The "Retry failed outgoing connections after this many seconds" is set to 600.

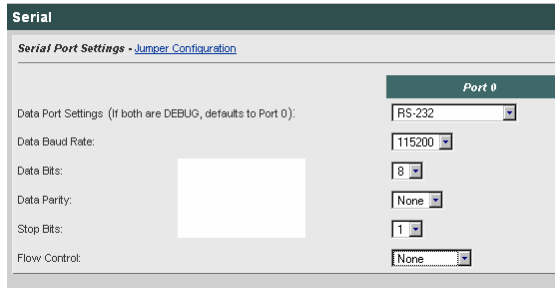
### SB72EX\_B (Port 0)

- Listen for incoming network connections: **checked** (enabled)
- Listening network port: **25**
- When to begin making outgoing serial connections: **If serial data received**
- Connect on network port: **23** (i.e. the listening network port of SB72EX\_A)
- Connect to this address: **10.1.1.150** (i.e. the IP Address of SB72EX\_A)

The screenshot shows the configuration page for SB72EX\_B (Port 0). At the top, it says "System is set to TCP mode" with a link to "Switch to UDP mode". The page is titled "Port 0". The "Listen for incoming network connections" checkbox is checked. The "Listening network port" is set to 25. The "Timeout and disconnect after this many seconds of inactivity" is set to 60. The "Allow new connection if the existing connection has been idle for this many seconds" is set to 30. The "When to begin making outgoing serial connections" dropdown is set to "If serial data received". The "Connect on network port" is set to 23. The "Connect to this address" is set to 10.1.1.150. The "Timeout and disconnect after this many seconds of inactivity" is set to 60. The "Retry failed outgoing connections after this many seconds" is set to 600.

## Serial Configuration

To access the Serial settings for each SB72EX, **click** the **Serial** hyperlink at the top-right section of the configuration web page. The port to be configured depends on which serial port you intend to connect to for each, as well as setting your desired baud rate, data bits, parity mode, stop bits, and flow control.



The screenshot shows a web interface for serial configuration. The title is "Serial" and the sub-page is "Serial Port Settings - Jumper Configuration". On the right, a tab for "Port 0" is selected. The settings are as follows:

Setting	Value
Data Port Settings (If both are DEBUG, defaults to Port 0):	RS-232
Data Baud Rate:	115200
Data Bits:	8
Data Parity:	None
Stop Bits:	1
Flow Control:	None

For this example, we used RS-232 on port 0 for each SB72EX device, so changing the jumpers (by opening up your SB72EX) should **not** be necessary. For **both** SB72EX\_A and SB72EX\_B using **Port 0** we used the factory default setting.

Data Port Settings: **RS-232**  
Data Baud Rate: **115200**  
Data Bits: **8**  
Data Parity: **None**  
Stop Bits: **1**  
Flow Control: **None**

Don't forget to select the **Submit New Settings** button at the **bottom** of this page when finished.

**Note:** You can also use Port 1 in place of Port 0 if you wish to retain using Port 0 for Debug purposes, and vice versa.

## Hardware Setup and Testing

If you intend to **directly** connect the two SB72EXs together using an Ethernet cable, then you will need to use an Ethernet **Crossover** cable. If you do not have **or** do not intend to use a crossover cable, then you can use an Ethernet hub or switch to link both SB72EX devices together using a standard Ethernet cable.

In order to test all physical connections, we used the following configuration **Note:** PC-COM1 and PC-COM2 refers to the **same** computer, but connection via **two** serial communication ports (i.e. COM1 and COM2).

