

Ethernet-Based Strain Gage Measurement System



Before you get started

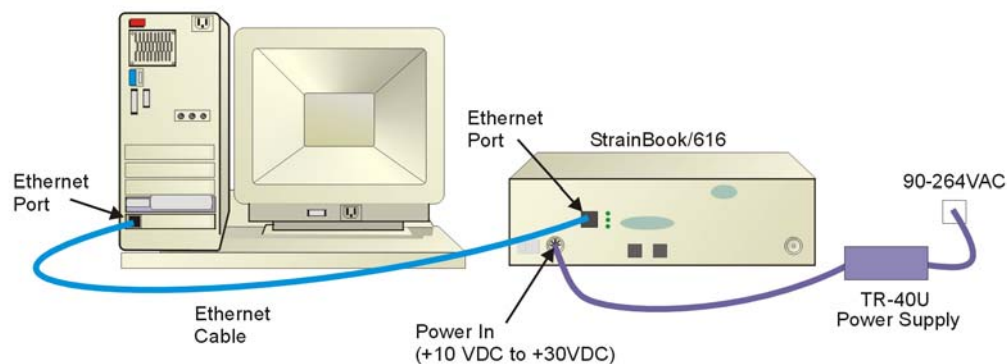
Verify that you have the following items.

- StrainBook/616
- TR-40U Power Supply
- Ethernet Patch Cable
- Ethernet jack [on PC or on a hub connected to the Ethernet]
- Data Acquisition CD
- Monitor: SVGA, 1024 x 768 screen resolution
- Windows 2000 and Windows XP users:
PC with Intel™ Pentium, 1 GHz or equivalent;
512 MB memory; 10 GB disk space
- Windows Vista users:
PC must be *Windows Vista Premium Ready*

Step 1 - Install Software

1. Close all running applications on the host PC.
2. Insert the Data Acquisition CD into your CD-ROM drive and wait for the CD to auto-run. An *Opening Screen* will appear. As an alternative, you can download software from: www.iotech.com/ftp.html
3. Click the <ENTER SETUP> button.
Note: If you are downloading software from our website, follow instructions provided there.
4. From the hardware selection screen [which follows a licensing agreement], select **StrainBook/616** from the drop-down list and follow the on-screen instructions.

Step 2 - Connect the StrainBook/616 to the Ethernet



In this scenario a StrainBook/616 is connected directly to an Ethernet port on a host computer. Please consult your user's manual (located in PDF format on the CD) should you need information regarding other network types.

1. Connect the Ethernet cable to the Ethernet jack on the StrainBook/616.
2. Connect the other end of the Ethernet cable to the Ethernet jack on the host computer or network hub.

Step 3 - Connect the StrainBook/616 to Power

1. Connect the power supply cable from the TR-40U to the StrainBook/616 Power In DIN5 connector.
2. Connect the TR-40U plug to a standard AC outlet. Power-on the unit. The Power LED will light up.

Step 4 - Configure Computer Network Settings

Applies to “dedicated networks” only. See user’s manual in regard to other network types.



We recommend that you discuss this procedure with your Network Administrator before proceeding. Note that the StrainBook/616 Ethernet port typically requires 30 seconds after power-up [to configure] before the unit can be accessed via the network.

1. Open the Control Panel by navigating from the Windows Desktop: **Start Menu** ⇒ **Settings** ⇒ **Control Panel**.
2. Double-click the “Network Connections” icon.
3. Double-click the icon for the network that the StrainBook/616 is connected to.
4. In the “Local Area Connection Status” box, click on the <Properties> button. The “Local Area Connection Properties” box will appear.
5. Double-click the “Internet Protocol (TCP/IP)” component. The “Internet Protocol (TCP/IP) Properties” box will appear.
6. Select the “Use the following IP Address” radio button. (See figure at left).
7. Set the IP address field to 10.0.0.x , where x is some number from 1 to 254. **Make sure that each computer and each device on the dedicated network has a unique IP address.**
8. Set the Subnet mask to 255.0.0.0. Note that the remaining fields can be left as is.
9. Click <OK> on follow-up screens to exit.

<input type="radio"/> Obtain an IP address automatically	
<input checked="" type="radio"/> Use the following IP address:	
IP address:	10 . 0 . 0 . 1
Subnet mask:	255 . 0 . 0 . 0
Default gateway:	. . .

Internet Protocol (TCP/IP) Properties
(Partial View)

Step 5 - Configure & Test the System Using the Daq Configuration Applet

1. Open the Daq Configuration Applet.
 - a. Navigate from the Windows’ Desktop: **Start Menu** ⇒ **Settings** ⇒ **Control Panel**
 - b. From the Control Panel, double-click the *Daq Configuration* icon.
2. Add the StrainBook/616 to the list of installed devices.
 - a. Click the <Add Device> button. The “Select Device Type” box will appear.
 - b. Select the **StrainBook/616** from the list of devices.
 - c. Click the <OK> button. The “Properties” box will appear for the selected StrainBook/616.
 - d. Enter the unit’s **Serial Number**.
 - e. Select the “**Auto IP Setting**” radio button. The IP Address of the StrainBook/616 will be calculated automatically and displayed in the IP Address field.
3. Test the System.
 - a. Click the “**Test Hardware**” tab.
 - b. Click the <TCP/IP Test> button. This tests the Transmission Control Protocol / Internet Protocol.
 - c. Upon completion of the TCP/IP test, click the <Resource Test> button.
When testing, if the unit does not respond within 30 seconds perform the following steps:
 - 1) reboot the system, 2) upon power-up, re-open the Daq Configuration applet,
 - 3) select another configuration setting, 4) reinitiate the test.



Step 6 - Connect Data Acquisition Signal Lines

Prior to making signal connections review the *Specifications* chapter of your user’s manual to ensure that your intended signal inputs do not exceed the specified limits. The manual is included in PDF format on your CD.



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