

Step 4

Configure Ethernet setup

NOTE: Different available IP addresses (last byte) are required for each 2701 and each network interface card connected to the 2701 network. The network ID (first three bytes) has to be the same for the PC Network Interface Card and the 2701.

Configure 2701's Ethernet

Now that the instrument is connected to the PC, check the configuration. The factory configures the 2701 with the following settings:

ADDRESS: 192.168.000.002 192 . 168 . 000 . 002
 GATEWAY: 192.168.000.001
 SUBNET: 255.255.255.000 network ID node ID
 (for a subnet mask of 255.255.255.000)

To check the address of the PC Network Interface Card(s):

1. Open a command window, click Start >>Run... type in "command", and then press ENTER or click OK.
2. At the prompt, type "ipconfig" and press ENTER.

3. Make note of the following for each Network Interface Card:

IP Address: _____
 Subnet Mask: _____
 Default Gateway: _____



4. Close the command window.

Check and modify the addresses on the 2701

1. Press SHIFT.
2. Press ETHERNET (VIEW is displayed).
3. Press the ▲ range key to display SET.
4. Press ENTER to select SET.
5. Set ETHERNET to ON using the ▲ and ▼ range keys and then press ENTER.
6. Set DHCP to OFF and then press ENTER.
7. Set the IP ADDRESS, SUBNET, and GATEWAY. Make sure:
 - The 2701's network ID (first three bytes of the IP ADDRESS) matches the Network Interface Card's network ID.
 - The 2701's last byte of the IP Address (the node) must be different than the Network Interface Card's node ID. Make a note of the 2701's IP address.
 - The Subnet mask must match the Network Interface Card's subnet mask. Use the ▲ and ▼ range keys to change values to be compatible with the desired NIC. Move the cursor with the ◀ and ▶ arrow keys. Press ENTER to set all 4 bytes of the:
 - ADDRESS (IP address)
 - SUBNET
 - GATEWAY (use 0.0.0.0 if desired – Gateway is for connection with a corporate network). Press ENTER when the desired setting is shown. When finished, the unit reboots with the new settings.

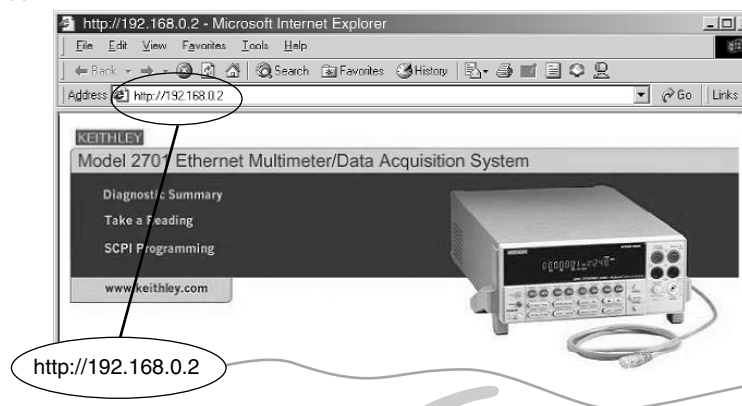
NOTES: If modifying the PC's network card configuration, the card's drivers as well as the Windows setup disks may be required. Also, after the changes have been made, you may be required to reboot your PC.

Before modifying any PC networking settings, record the old (current) values in case you want to restore them in the future. To modify the PC network adapter's settings, refer to the Model 2701 Instrument Networking Manual.

Step 5

Open the diagnostics web page. Using Internet Explorer 5.0 or higher, open the 2701 IP address as the URL (type in `http://` then the 4 byte IP address (ex. `192.168.000.002`) on the address command line). This was set in Step 4.

NOTE: The web page must be able to run and take readings before proceeding to Step 6. If using Internet Explorer 5.5, SP1 must be installed. Netscape Navigator and the Macintosh operating system are not supported.



Step 6

Install the software from the Model 2701 start-up CD. Configure the software with the same IP address (for the 2701) as in Step 4 of this sheet.

Included Software:

TestPoint Runtime Start-up Software

Use TestPoint runtime for basic datalogging (revision B01 or higher is required).

IVI (VISA-Based) Instrument Driver

Use with application development environments such as Visual Basic®, Visual C/C++®, LabVIEW™, LabWindows™/CVI, and TestPoint™ (revision B01 or higher is required).

Order separately:

ExceLINX-1A

Use this Microsoft Excel add-in to allow live data to stream into an Excel workbook ready for analysis or charting using Excel's built-in tools (revision C01 or higher is required).

TestPoint™ Application Development Package

Use to create a semi-custom solution. This package allows you to modify, enhance or extend the capabilities of the runtime application.

Visit www.keithley.com for the latest software updates and for additional information.

Connecting & Configuring Model 2701



NOTE: This quick start guide is intended to provide an easy reference to quickly get your 2701 up and running. For detailed information, refer to the Model 2701 Instrument Networking Instruction Manual.

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Start here

To connect your Model 2701, follow steps 1-6:

Step 1

Determine which connection scheme you would like to use (see the four different schemes in Step 3).

Step 2

Obtain any additional items such as cables, hubs, etc. Refer to "Additional parts needed" and "Specifications" in Step 3 for specifics.

Step 3

Choose from the following connection schemes and follow the step-by-step procedure.

Specifications

The following list contains specifications for additional items required to connect the 2701 (not all items required for all connections):

- **Network Interface Card (NIC)**
Speed: 10 / 100
Connector: RJ-45
Other specifications: As required by PC
- **Cross over cable (supplied)**
(PC to Single 2701 only)
CAT 5
Connector: RJ-45
- **Straight through cable**
(PC to many 2701s using a hub)
CAT 5
Connector: RJ-45
- **Network Hub**
10 / 100 Base T
RJ-45 Jacks

CAUTION: When connecting the Model 2701 (or any other host) to a corporate network, the sites network administrator MUST provide all network settings for the Model 2701 including IP address, subnet, and gateway. Failure to use settings provided by the sites network administrator could result in failures at other locations on the corporate network.

PC to Single 2701

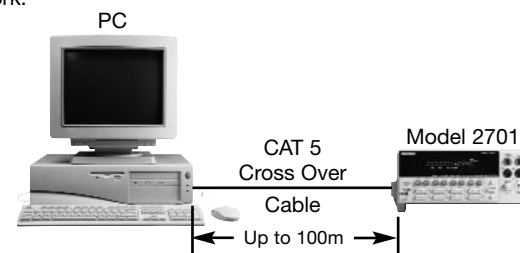
Procedure

1. Connect one end of a (supplied) CAT 5 cross over cable to the network interface card installed in the PC.
2. Connect the other end of the CAT 5 cross over cable to the ETHERNET port on the 2701 rear panel. Turn Model 2701 power on.

NOTE: Different available IP addresses are required for each 2701 and each network interface card connected to the 2701 network.

Additional parts needed

- 1 Network Interface Card (NIC)



For additional information on this connection scheme, see "Direct Connection" in the Model 2701 Instrument Networking Manual.

PC to many 2701s (using a hub)

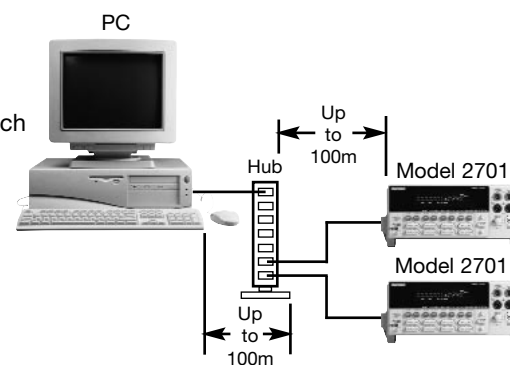
Procedure

1. Connect one end of a CAT 5 cable to the network interface card installed in the PC.
2. Connect other end of the CAT 5 cable to an available RJ-45 connector in the hub (do not connect to uplink connector).
3. Connect one end of a CAT 5 cable to the ETHERNET port on the 2701 rear panel.
4. Connect the other end of the CAT 5 cable to an available RJ-45 connector in the hub (do not connect to uplink connector).
5. Connect additional 2701(s) as desired in the same manner.

NOTE: Different available IP addresses are required for each 2701 and each network interface card connected to the 2701 network.

Additional parts needed

- 1 Network Interface Card (NIC)
- 2 CAT 5 straight through cables (add one additional cable for each additional 2701 connected through the hub)
- 1 Hub



For additional information on this connection scheme, see "Hub Connection" in the Model 2701 Instrument Networking Manual.

PC with Two Network Cards

Use this configuration to isolate the corporate network from the 2701 instrumentation network. This setup can be installed and configured without the IS/IT department.

NOTES: This scheme requires a second network interface card installed in the PC (the instrument Ethernet card). The LAN Ethernet card will remain connected (email and other network resources will still be accessible on the same PC).

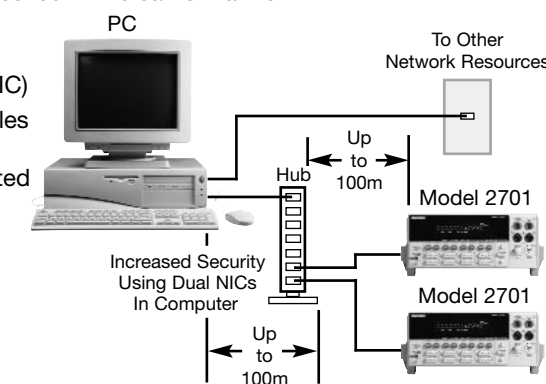
Different available IP addresses are required for each 2701 and for each network interface card connected to the 2701 network.

Procedure

1. Connect one end of a CAT 5 cable to a second network interface card installed in the PC.
2. Connect the other end of the CAT 5 cable to an available RJ-45 connector in the hub (do not connect to uplink connector).
3. Connect one end of a CAT 5 cable to the ETHERNET port on the 2701 rear panel.
4. Connect the other end of the CAT 5 cable to an available RJ-45 connector in the hub (do not connect to uplink connector).
5. Connect additional 2701(s) as desired in the same manner.

Additional parts needed

- 2 Network Interface Cards (NIC)
- 4 CAT 5 Straight through cables (add one additional cable for each additional 2701 connected through the hub).
- 1 Hub



For additional information on this connection scheme, see "Dual Interface Card Connection" in the Model 2701 Instrument Networking Manual.

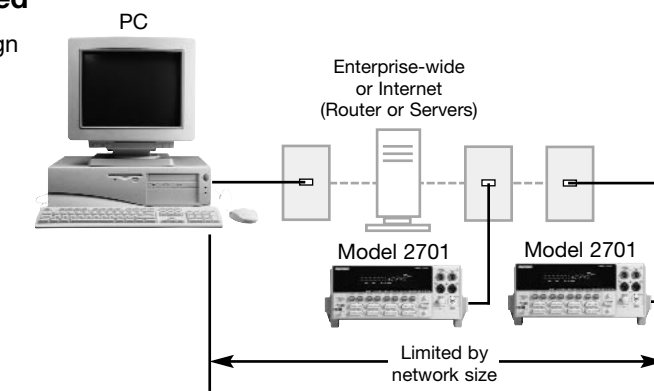
2701 to Corporate LAN

This commonly used Ethernet connection scheme requires IT/IS support to implement it.

Use this scheme to connect one or more Model 2701(s) using an Ethernet hub or switch that is part of a larger local area network (LAN). The LAN administrator must be consulted for the correct settings. Connections require Ethernet straight through cables.

Additional parts needed

Dependent on network design



For additional information on this connection, see "Corporate network connection" in the Model 2701 Instrument Networking Instruction Manual.



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