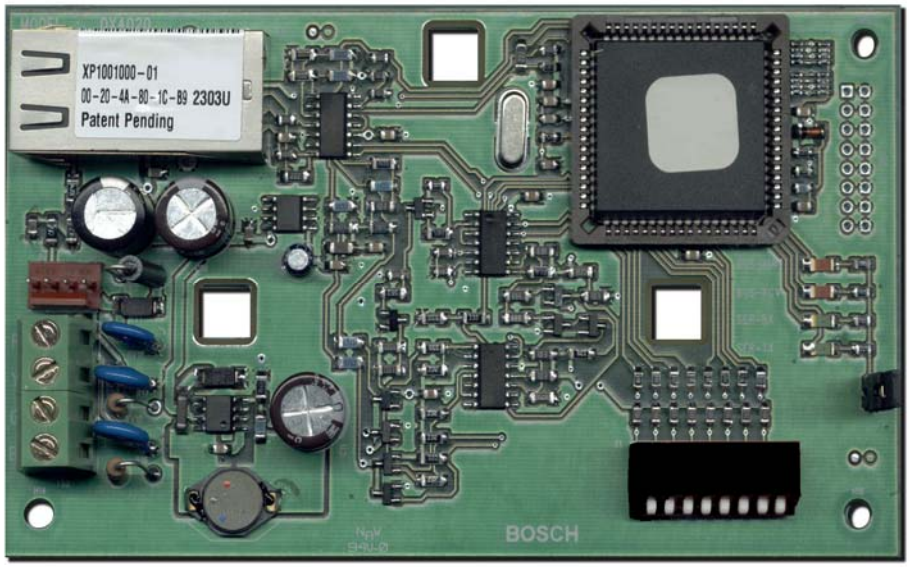
Conettix DX4020



EN

Installation Guide

Network Interface Module

Contents

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- Microsoft® and Windows® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Lantronix® is a registered trademark of Lantronix Corporation, registered in the U.S. and other countries.
- XPort™ with its patent-pending technology is a trademark of Lantronix, Inc.

UL Requirements

For Underwriters Laboratories, Inc. (UL) Listed fire Installations, ensure that the shared on-premises communications equipment is UL Listed for information technology equipment.

1. Set the parameters in the RADXAUX1 or GV2AUX section of the control panels (*Table 1*).

The GV2AUX handler is used for GV2 Series control panels. The RADXAUX1 handler is used for G Series control panels.

Table 1: Control Panel RADXAUX1 or GV2AUX UL Parameters

RADXAUX1 GV2AUX Parameter	Control Panel on Protected Premises[1]		
	UL1610 Line Security Intrusion System Installations		
	No Digital Dialer Backup	Digital Dialer Backup	UL864 Fire Systems Installations[2]
Poll Rate	75 sec	240 sec	75 sec
ACK Wait	13 sec	13 sec	13 sec
Retry Count	5	5	5

1 For local annunciation, G Series control panels require Firmware Version 6.9 or higher. GV2 Series control panels require Version 7.04 or later.

2 Install the system according to NFPA-72.

2. Add a Telnet password to the DX4020 communications protocol. To complete the configuration, refer to *Section 6.5 Using Telnet to Complete Configuration*, page 11.

Keep your password for future reference.

Certifications and Approvals

UL Standards

- UL294, Access Control Systems Units
- UL864, UL Commercial Fire Alarm signaling
- UL365, Police Station Burglar Alarm Units and Systems
- UL609, Local Burglar Alarm Units and Systems
- UL985, Household Fire Warning System Units
- UL1023, Household Burglar-alarm System Units
- UL1076, Proprietary Burglar Alarm Units and Systems
- UL1610, Central Station Burglary, Line Security

ULC Standards

- CAN/ULC-S303-M91, Local Burglar Alarm Units and Systems
- CAN/ULC-S304-M88, Central and Monitoring Station Burglar Alarm Units
- CAN/ULC-S545, Residential Fire Warning System Control Units
- ULC/ORD-C1076-M1986, Proprietary Burglar Alarm Units and Systems Communicator
- ULC-C1023-1974, Household Burglar Alarm Systems

Approvals

- CE
- CSFM
- NF A2P Type 2 Certification number: 122000076-05
- FM*

* When used with the Conettix D6600 Communications Receiver/Gateway.

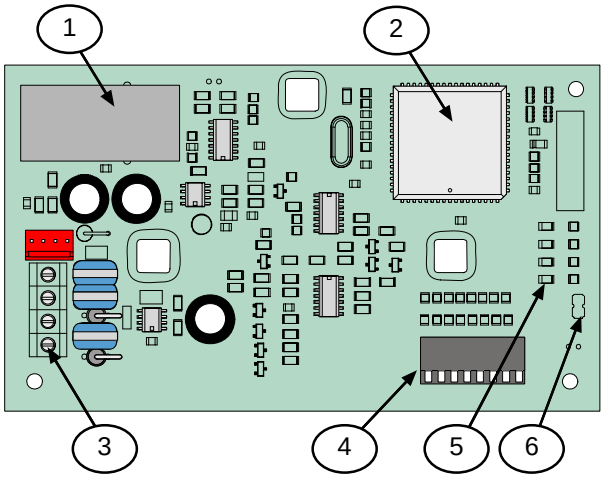
Refer to the *D6200 Software Operation and Installation Guide* (P/N: 4998154991) to configure the D6600/D6100i Communication Receiver/Gateway to receive UL Listed communications from a DX4020.

1.0 Introduction

Use the Conettix DX4020 Ethernet Network Interface Module (*Figure 1*) for bi-directional communications over Ethernet networks. Generally, you use the DX4020 in PC front-end software packages such as:

- Conettix D6600 Communications Receiver/Gateway reporting
- History retrieval
- Building Integration System (BIS) and PC9000
- Remote Programming Software (RPS) connection for control panel programming
- Diagnostic troubleshooting

Figure 1: DX4020 Network Interface Module



1 - Lantronix® XPort™ network interface module (NIM)
2 - Erasable programmable read only memory (EPROM)
3 - Data bus
4 - DIP switches
5 - Serial and bus LEDs
6 - P2 Jumper

Failure to follow these instructions can result in a failure to initiate alarm conditions. Bosch Security Systems, Inc. is not responsible for improperly installed, tested, or maintained devices.

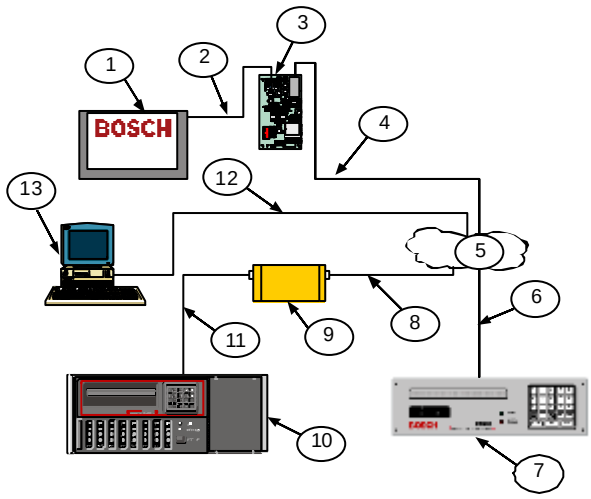
Follow these instructions to avoid personal injury and damage to the equipment.

2.0 Overview

Refer to *Figure 2* for general system connections. The main components are:

- Compatible control panel
- Conettix DX4020 Ethernet Network Interface Module
- Conettix D6600 Communications Receiver/ Gateway
- Conettix D6680 Ethernet Network Adapter
- Conettix D6100i Communications Receiver/Gateway

Figure 2: System Connections Overview



1 - Compatible control panel
2 - Compatible control panel data bus to the DX4020 data bus terminals connection
3 - DX4020 Network Interface Module
4 - DX4020 to Ethernet connection
5 - Ethernet network
6 - Ethernet network to the D6100i connection
7 - Conettix D6100i Communications Receiver/Gateway
8 - Ethernet network to the D6680/D6682 connection
9 - D6680/D6682 Ethernet Network Adapter
10 - Conettix D6600 Communications Receiver/Gateway
11 - D6680 to the D6600 COM4 Port connection
12 - Ethernet network to Host PC Ethernet network interface card (NIC) connection
13 - Host PC running D6200 Programming Administrative Software

3.0 Installation

Inform the operator and the local authority having jurisdiction (AHJ) before installing the DX4020 in an existing system.

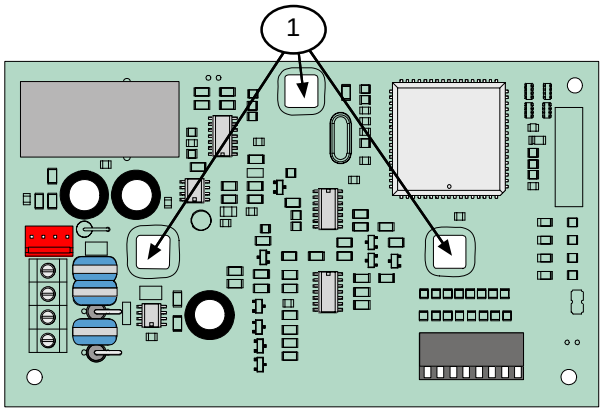
Disconnect all power to the control panel before installing the DX4020.

Before installing the DX4020, refer to *Table 7* on page 16 for control panel compatibility information.

3.1 Mounting

Mount the DX4020 inside the control panel enclosure using any of the standard three-point mounting patterns (*Figure 3*). Refer to the associated control panel documentation for complete installation instructions.

Figure 3: Mounting Holes



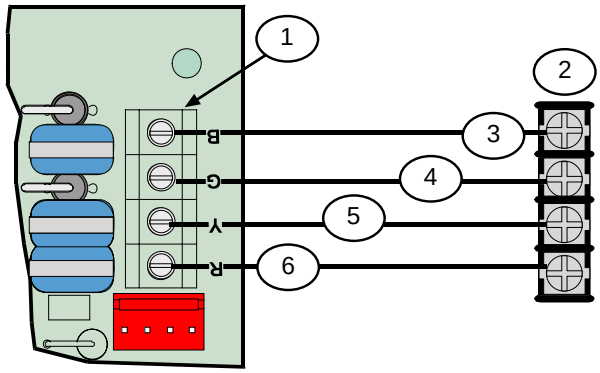
1 - Mounting holes (3)

Use an AE1 or AE2 Enclosure when mounting the DX4020 in a separate enclosure. Ensure that all external wiring between and originating from the enclosures is in a metal conduit no longer than 6 m (20 ft).

3.2 Wiring

Run the wiring connections from the DX4020 data bus terminals to the compatible control panel's data bus terminals (*Figure 4*). Refer to the associated control panel documentation for complete wiring instructions.

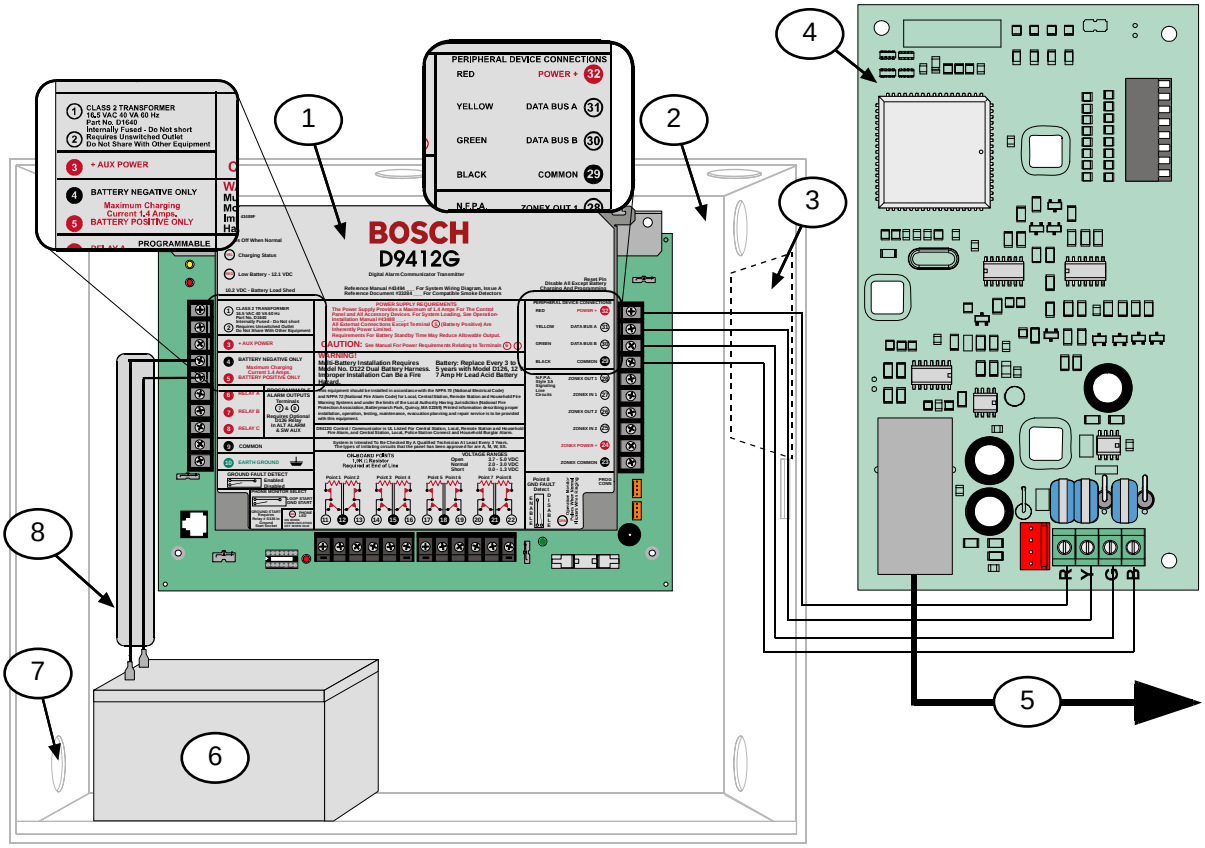
Figure 4: DX4020 to Control Panel SDI, Option, and Data Bus Wiring



1 - DX4020 data bus terminals
2 - Compatible control panel SDI, option, and data bus terminals
3 - Black (-) wire
4 - Green (G) data wire
5 - Yellow (Y) data wire
6 - Red (+)wire

Figure 5 shows an example of wiring the DX4020 to a control panel.

Figure 5: Wiring the DX4020 to a Control Panel



*1 - D9412G Control Panel**
2 - D8103 or D8109 Enclosure
3 - DX4020 location in control panel enclosure
4 - DX4020 (not in scale with control panel)
5 - To Ethernet network
6 - Battery
7 - To AC transformer
8 - Non-power limited area. Keep all power wiring out of this area

* The D9412G is used as an example.

Table 2 lists the connection sequences.

Table 2: Wiring Connections (DX4020 to Control Panels)

Sequence Number	DX4020 Connection		Control Panel Connection	Other
1	XPort Ethernet	to		Local-area network (LAN)/wide-area network (WAN)
2	R Terminal	to	POWER + (Terminal 32)	
3	Y Terminal	to	DATA BUS A (Terminal 31)	
4	G Terminal	to	DATA BUS B (Terminal 30)	
5	B Terminal	to	COMMON (Terminal 29)	

4.0 DIP Switch Settings

Use the DIP switch settings in *Sections 4.1* through *4.4* for the DX4020 network communication.

4.1 GV2 Series, G Series, and 9000 Series Control Panels

The GV2 Series consists of the following control panels:

- D9412GV2
- D7412GV2
- D7212GV2

The G Series consists of the following control panels:

- D9412G
- D7412G
- D7212G

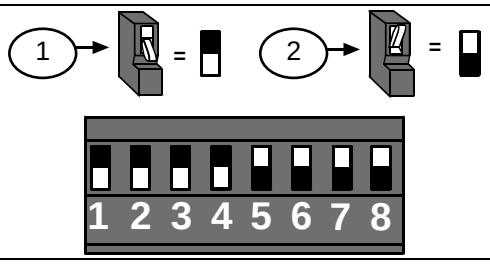
The 9000 Series consists of the following control panels:

- D9412
- D7212
- D7212
- D9112

For proper network communication between the DX4020 and the control panel, the D9412G, D7412G, D7212G, D9412, D7412, D7212, and D9112 require firmware revision 6.3 or later.

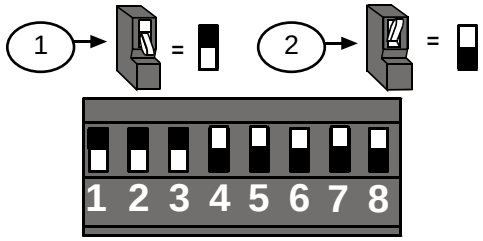
Use SDI Bus Address 80 (*Figure 6*) with the DX4020 and PC9000. Use SDI Bus Address 88 (*Figure 7*) with the DX4020 and RPS, or for network communication.

Figure 6: DIP Switch Setting for Address 80



1 - ON (down) 2 - OFF (up)

Figure 7: DIP Switch Setting for Address 88



1 - ON (down) 2 - OFF (up)

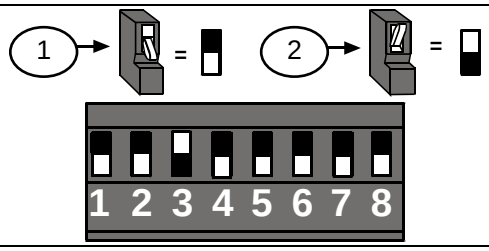
4.2 DS7240V2, DS7220V2, and Easy Series V3+ (ICP-EZM2) Control Panels

For proper network communication between the DX4020 and the control panel:

- The DS7240V2 and DS7220V2 require firmware revision 2.xx or later.
- The Easy Series (ICP-EZM2) control panel requires firmware version 3.0 or later, and the DX4020 requires firmware version 2.23 or later.

For network communication, set the DIP switches on the DX4020 to Address 134 (*Figure 8*) when using the DS7240V2, DS7220V2, or Easy Series V3+ control panels.

Figure 8: DIP Switch Setting for Address 134

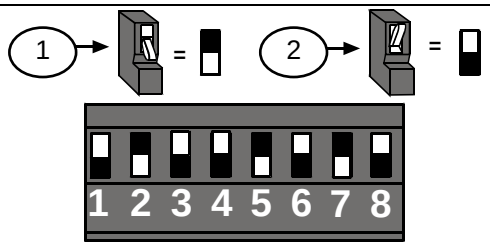


1 - ON (down) 2 - OFF (up)

4.3 DS7400Xi Control Panel

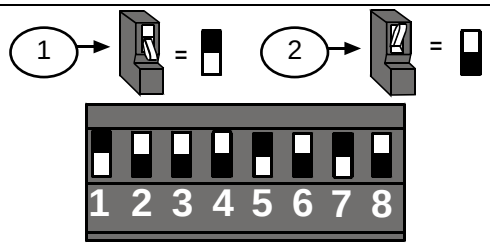
Use Option Bus Addresses 13 and 14 (*Figure 9* and *Figure 10*) to send reports. Use Option Bus Address 13 to connect to the RPS for remote programming.

Figure 9: DIP Switch Setting for Address 13



1 - ON (down) *2 - OFF (up)*

Figure 10: DIP Switch Setting for Address 14



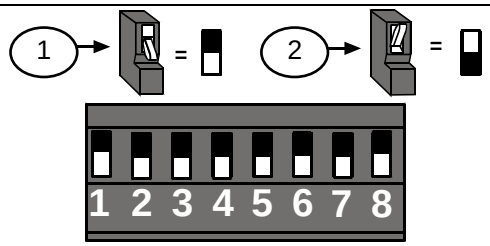
1 - ON (down) *2 - OFF (up)*

4.4 FPD-7024 Control Panel

For proper network communication between the DX4020 and the FPD-7024 Control Panel, the DX4020 requires firmware revision 2.21 or later.

Use Option Bus Address 250 (*Figure 11*) when using the DX4020 with an FPD-7024 Control Panel.

Figure 11: DIP Switch Setting for Address 250



1 - ON (down) *2 - OFF (up)*

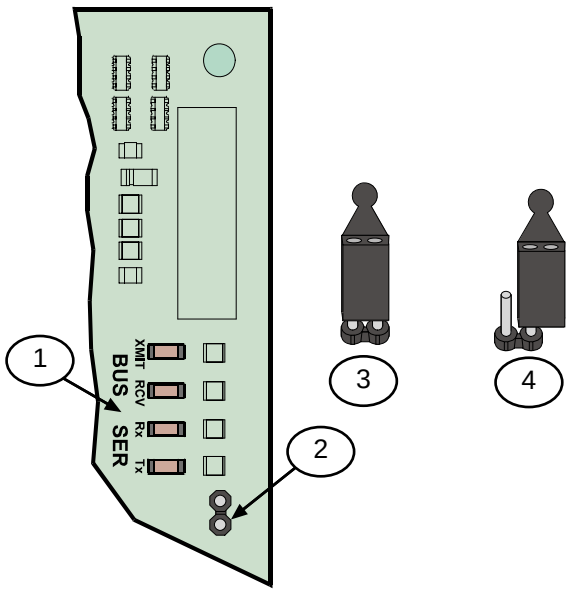
5.0 LEDs

5.1 Ethernet and Serial

Figure 12 and in *Table 3* identify and describe the DX4020's four bus and serial status LEDs.

Use the P2 jumper to enable (jumper on) or disable (jumper off) LED operation.

Figure 12: Ethernet and Serial LEDs



1 - Ethernet and serial LEDs
2 - P2 jumper
3 - LED enabled
4 - LED disabled

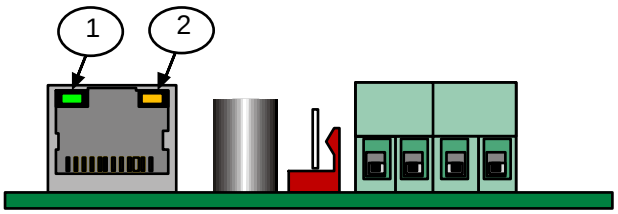
Table 3: Bus and Serial Status LEDs

LED	Name	Color	Function
1	BUS-XMIT	Red	Flashes when the data bus sends a message.
2	BUS-RCV	Red	Flashes when the data bus receives a message.
3	SER-RX	Green	Flashes every time a message is received from the Ethernet port.
4	SER-TX	Green	Flashes when a message is sent to the Ethernet port.

5.2 XPort

Figure 13 and *Table 4* identify and describe the DX4020's two bi-color LEDs that are built into the front of the XPort connector.

Figure 13: XPort LEDs



1 - Link LED *2 - Activity LED*

Table 4: XPort LEDs

Link LED		Activity LED	
Color	**Indicates**	**Color**	**Indicates**
Off	No link	Off	No activity
Amber	10 Mbps	Amber	Half duplex
Green	100 Mbps	Green	Full duplex

6.0 IP Address Programming

Use this section to configure the DX4020 with a network IP address. Use resident commands and programs such as the **ARP** and **ping** commands, and the telnet program available in the Microsoft Windows® operating system.

The IP, MAC address, and port number used in this document are for demonstration only.

A working knowledge of DOS commands, Windows, networks, and their operation is required.

If your installation uses Dynamic Host Configuration Protocol (DHCP) to obtain an IP address and Port 7700 for communication, refer to the associated control panel documentation for instructions unless you plan to use RPS over the network through the DX4020. If using RPS, proceed to *Section 6.1 Factory-Programmed IP Configuration.*

6.1 Factory-Programmed IP Configuration

The DX4020 is shipped with the following default IP settings:

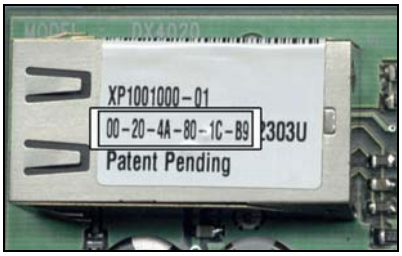
- **Default IP Configuration Number:** DHCP
- **Default Port:** 7700
- **Default DHCP Device Name:** Cxxxxxx
  xxxxxx = last six digits of the MAC address

6.2 Identifying the MAC Hardware Address

The MAC address is hard-coded into the DX4020 during its manufacture and cannot be changed. This address is six bytes (twelve digits) long.

The MAC address label is affixed to the XPort connector (*Figure 14*).

Figure 14: MAC Address Location



6.3 Obtaining an IP Address

Give the network administrator the MAC address. He or she assigns an IP address to your DX4020.

An IP address is an identifier for a computer or device on a transmission control protocol/internet protocol (TCP/IP) network. Networks using TCP/IP route messages based on the destination's IP address. The IP address format is a 32-bit numeric address written as four numbers separated by periods ranging from 0 to 255, such as **`172.17.10.70`**. Within an isolated network, you can assign IP addresses at random providing each address is unique. To avoid duplicate addresses, use registered IP addresses (Internet Protocol addresses) when connecting a private network to the Internet.

6.4 Assigning the Initial IP Address

Before proceeding, read this entire section. Ensure that the DX4020 has power and the Ethernet Network RJ-45 connection is in place.

Ensure that the PC used to configure the DX4020 and the DX4020 itself are on the same gateway (the device connecting the LAN to the WAN).

Use Telnet to configure the DX4020's communications parameters.

When the DX4020 is configured and has an IP address, you can use Telnet from anywhere on the network to change the configuration parameters.

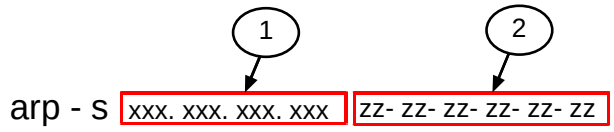
6.4.1 ARP Command Overview

When you have received a valid IP address from the network administrator, open the DOS prompt (from Windows) on any PC connected to the network you are using.

Temporarily assign the DX4020 IP address to its hardware address on the Host PC using **ARP**. During installation, the ARP is installed by default in the \WINDOWS directory (Windows 98, Windows Millennium) or the \WINNT directory (Windows 2000 and Windows XP).

At the DOS prompt (usually C:\windows) use the command syntax shown in *Figure 15*.

Figure 15: ARP.EXE Command Syntax



1 *xxx.xxx.xxx.xxx (The IP address assigned to the DX4020 by the network administrator.)*

2 *zz-zz-zz-zz-zz-zz (The MAC hardware address on the DX4020 XPort NIM.)*

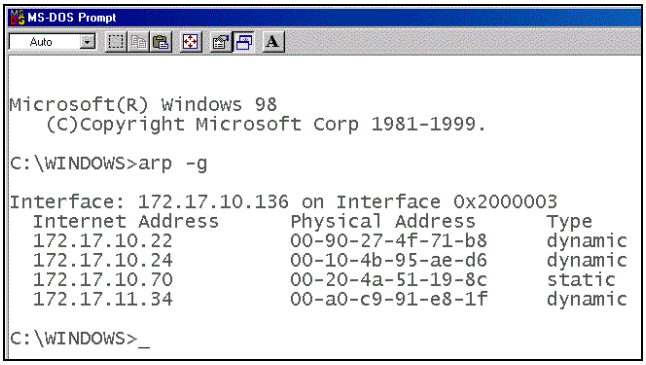
Section 6.4.2 describes how to assign an IP address to a DX4020 NIM using the **ARP** command.

6.4.2 Using the ARP Command

1. From the Start Menu, select **Start → Run** to open a DOS window.
2. At the Run dialog box, type **COMMAND** and click [OK].
   A DOS window appears.
1. At the DOS command line, type **arp –s 172.17.10.70 00-20-4a-12-04-0e** and press [Enter].
3. In this example, 172.17.10.70 is the IP address from the network administrator and 00-20-4a-12-04-0e is the DX4020 MAC hardware address.

The system does not indicate that the operation was properly performed. The absence of an error message indicates the function is correct.

4. Verify that the IP address was correctly entered in the ARP table by typing **arp -g** and pressing [Enter].
   The following message appears.



This message shows the Internet address (IP address) and the corresponding physical address (MAC hardware address). The third line in the table shows the **arp** MAC address of 00-20-4a-51-19-8c is temporarily linked to IP address 172.17.10.70.

The network uses this table to identify devices and route signals. The number of devices and other types, such as dynamic, depends on the network and the number and type of devices the PC communicated with. You must identify the MAC address of the device you are installing and verify it has an IP address linked to it.

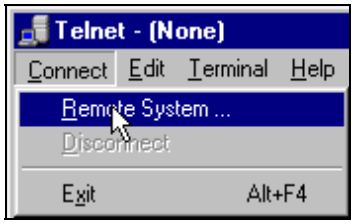
6.5 Using Telnet to Complete Configuration

Refer to *Section 6.5.1 Using Windows 98 Telnet* when using Windows 98.

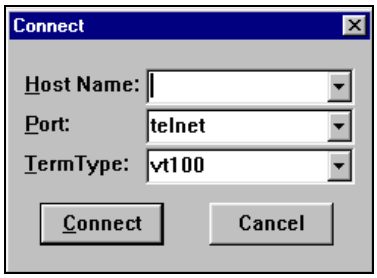
Refer to *Section 6.5.2 Using Windows 2000/XP Telnet* beginning on page 15 when using Windows 2000/XP.

6.5.1 Using Windows 98 Telnet

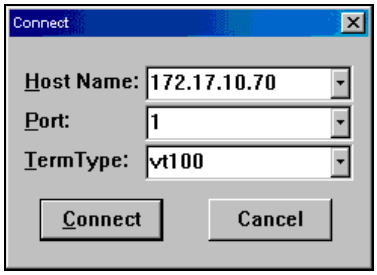
1. At the Start Menu, select **Start → Run** to open a DOS window.
2. At the Run dialog box, type **telnet** and press [Enter] to start the telnet application.



3. Select **Connect → Remote System...** The Connect window opens.

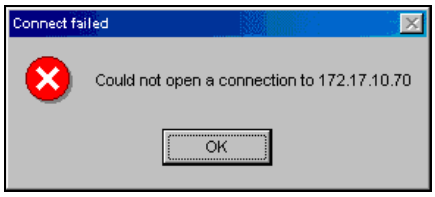


4. At the Host Name field, type the DX4020 IP address assigned in the previous section.

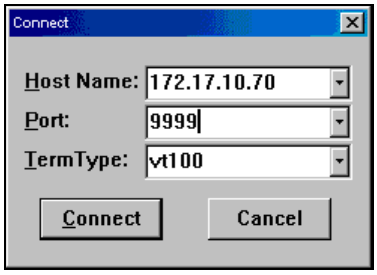


In this example, the IP address is 172.17.10.70.

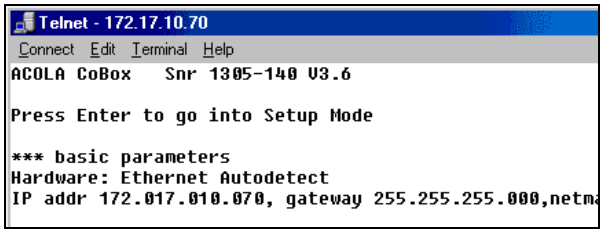
5. At the Port field, type **1** and leave the TermType field at **vt100**.
6. Click **Connect** and wait a few seconds for the following failed message to appear.



7. Click **OK** to open the Telnet window again.
8. Repeat *Step 3* in *Section 6.4.2 Using the ARP Command*, on page 10.
9. This time, leave all but the Port field the same. Type **9999** in the Port field.

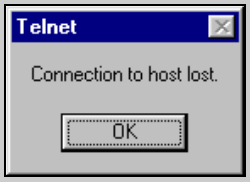


10. Click **Connect**.



11. Press [Enter].

If you do not press [Enter] within 5 sec of seeing the "Press Enter to go into Setup Mode" message, the system disconnects you and the following message appears.



If you press [Enter] within 5 sec. of seeing the "Press Enter to go into Setup Mode" message, the following screen appears.

```
MAC address 00204A801E5C
Software version 01.3 (030612) XPTE

Press Enter to go into Setup Mode


*** basic parameters
Hardware: Ethernet TPI
IP addr 172.30.3.186, no gateway set

**************** Security ****************
SNMP is               enabled
SNMP Community Name: public
Telnet Setup is       enabled
TFTP Download is      enabled
Port 77FEh is         enabled
Web Server is         enabled
ECHO is               disabled
Encryption is         disabled
Enhanced Password is disabled

**************** Channel 1 ***************
Baudrate 9600, I/F Mode 4C, Flow 00
Port 07700
Datagram Type 00
Pack Cntrl:   00

**************** Expert ******************
TCP Keepalive    : 45s
ARP cache timeout: 600s

**************** E-mail ******************
Mail server: 0.0.0.0
Unit       :
Domain     :
Recipient 1:
Recipient 2:

*** Trigger 1
Serial Sequence: 00,00
CP1: X
CP2: X
CP3: X
Message :
Priority: L
```

12. Press [0] then [Enter] to set up the basic Server configuration.

```
Change Setup  : 0 Server configuration
                1 Channel 1 configuration
                2 Channel 2 configuration
                5 Expert settings
                6 Security
                7 Factory defaults
                8 Exit without save
                9 Save and exit                 Your choice ? 0
```

    If the DX4020 was previously programmed with an IP address, it appears in parentheses. For example, if the DX4020 was originally programmed to IP address 172.30.3.36, change it to 190.200.128.219.

13. Press [1][9][0][.][2][0][0][.][1][2 [8][.][2][1][9][Enter] to program IP Address 190.200.128.219.
14. When using DHCP, press [0][.][0][.][0][.][0][Enter].
15. When prompted to set the Gateway address:
    - If the Gateway address is not required or if using DHCP, type **N** and press [Enter].
    - If the Gateway address is required, type **Y** and the Gateway IP address 190.200.128.1. Then press [Enter].

The Gateway IP is required only when using a WAN. In a LAN, the Gateway IP is generally not required.

    The following message appears.

```
Netmask: Number of Bits for Host Part (0=default) (08)
```

16. If the Netmask requires changing from the default, enter the number of bits that corresponds to the Netmask your network is using (*Table 5*). Press [Enter] when using DHCP.
    See your network administrator for more information.

17. Press [Enter] after entering the correct number of bits for the Netmask.

Table 5: Netmask Addresses

Host Bits	Netmask	Host Bits	Netmask
1	255.255.255.254	17	255.254.0.0
2	255.255.255.252	18	255.252.0.0
3	255.255.255.248	19	255.248.0.0
4	255.255.255.240	20	255.240.0.0
5	255.255.255.224	21	255.224.0.0
6	255.255.255.192	22	255.192.0.0
7	255.255.255.128	23	255.128.0.0
8	255.255.255.0	24	255.0.0.0
9	255.255.254.0	25	254.0.0.0
10	255.255.252.0	26	252.0.0.0
11	255.255.248.0	27	248.0.0.0
12	255.255.240.0	28	240.0.0.0
13	255.255.224.0	29	224.0.0.0
14	255.255.192.0	30	192.0.0.0
15	255.255.128.0	31	128.0.0.0
16	255.255.0.0		

When using DHCP, the following message appears:

```
Change DHCP device name ()?(N) _
```

To assign a device name for use on a LAN, type **Y**, enter up to 16 characters, and press [Enter]. Otherwise, only press [Enter].

When using the DX4020 to communicate to RPS over a network, enter a unique name known to the person programming the control panel.

If you do not enter a DHCP device name, the default Cxxxxxx is used (where xxxxxx is the last six digits of the MAC address).

18. Change the Telnet password by pressing [Y] and entering a password or press [Enter] to leave the default telnet password.

```
Change telnet config password (N) _
```

This screen shows the Setup Mode screen you previously saw.

Keep your password in a secure place. If you forget or lose the password, you cannot use Telnet again to configure the DX4020 until the DX4020 is returned to the factory for reconditioning.

```
  1 Channel 1 configuration
  3 E-mail settings
  5 Expert settings
  6 Security
  7 Factory defaults
  8 Exit without save
  9 Save and exit              Your choice ?
6

Disable SNMP (N) N

SNMP Community Name (public):

Disable Telnet Setup (N) N

Disable TFTP Firmware Update (N) N

Disable Port 77FEh (N) N

Disable Web Server (N) N

Disable ECHO ports (Y) Y

Enable Encryption (N) N

Enable Enhanced Password (N) N


Change Setup:
  0 Server configuration
  1 Channel 1 configuration
  3 E-mail settings
  5 Expert settings
  6 Security
  7 Factory defaults
  8 Exit without save
  9 Save and exit              Your choice ?
```

19. Press [1] and [Enter] to access the setup Channel 1 configuration.
20. Press [Enter] to accept 9600 as the default baud rate. If 9600 is not the default, type **9600** and press [Enter] to change it.
21. Press [Enter] to accept 4C as the default I/F Mode. If 4C is not the default, type **4c** and press [Enter] to change it.

```
I/F Mode (4C) ?
```

22. Press [Enter] to accept 00 as the default flow. If 00 is not the default, type **00** and press [Enter] to change it.

```
Flow (00) ?
```

23. Type a unique port number for the LAN the device is connected to and press [Enter].

```
Port No (7700) ?
```

24. Press [Enter] to accept CC as the default ConnectMode. If CC is not the default, type **cc** and press [Enter] to change it.

```
ConnectMode (CC) ?
```

25. Enter the appropriate Datagram value based on the type of control panel. Refer to *Table 6*.

Table 6: Entering Datagram Values

Control Panel Type	Do Step:
DS7240V2/DS7220V2	25a
FPD-7024	25a
D9412GV2/D7412GV2/D7212GV2 with firmware version 7.06 or later	25a
D9412G/D7412G with firmware version 7.00 or later	25a
D7212G with firmware version 7.01 or later	25a
D9412/D7412/D7212/D9112/D9124 with firmware version 7.00 or later	25a
Easy Series with firmware version 3.0 or later	25a
DS7400XiV4+	25b
D9412GV2/D7412GV2/D7212GV2 with firmware version 7.05 or earlier	25b
D9412G/D7412G with firmware version 6.90 or earlier	25b
D7212G with firmware version 6.91 or earlier	25b
D9412/D7412/D7212/D9112/D9124 with firmware version 6.90 or earlier	25b

a. Type **02** and go to *Step 28*.

Datagram 02 on the 9000, G, or GV2 Series control panels requires RPS version 5.5 or later.

b. If the unique port number previously entered is the same as the D6680 or D6100i, type **00** and go to *Step 28*. Otherwise, type **07** and go to *Step 26*.

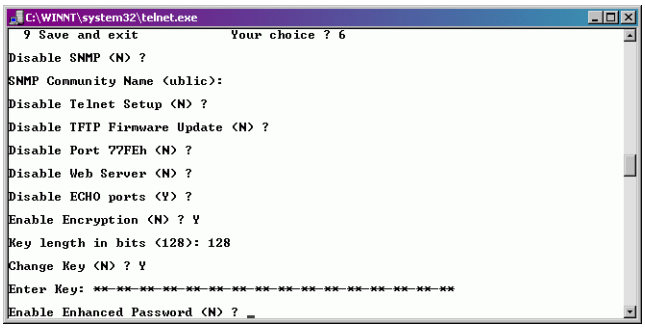
To use Datagram 02 or 07, you must have Bosch firmware version 1.5d or later in the XPort Module. Public versions of the Lantronix firmware, including version 1.8, are not compatible with these datagrams. Refer to the *DeviceInstaller Operation and Installation Guide* (P/N: 4998138688) for more information.

Refer to the *Conettix D6600 System Guide* (P/N: 4998122712) for more information on datagram types.

26. Press [Enter] four times to specify 0.0.0.0 for remote IP address.
27. Enter the same port number used for the D6680/D6682 or D6100i.
28. To enable encryption, select **6- Security** from the Main Menu and follow *Steps 29* through *33*.

If encryption is enabled on the DX4020 it must be enabled at the D6680/D6682 or D6100i-E120 with the same key.

The software revision of the NIM attached to the DX4020 must be 1.5d or later. Check the version by starting a Telnet session with the unit and allowing the version to appear for 5 sec before pressing [Enter].



29. Press [Enter] after the each of the following prompts:
    - **Disable SNMP (N) N**
    - **Disable SNMP Community Name ( ):**
    - **Disable Telnet Setup (N) N**
    - **Disable Port 77FEh (N) N**

Disabling both the telnet and port 77FE prevents you from accessing the set-up menu for future changes.

    - **Disable Web Server (N) N**
    - **Disable ECHO ports (Y) Y**
30. At Enable Encryption (N), press [Y].
31. At Key length in bits (0), type 128 and press [Enter].
32. At Change keys (N), press [Y].
33. Enter the bytes programmed in the D6680. These 16 bytes (32 characters) should match. The default value is 01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16.
34. At Enable Enhanced Password (N), press [Enter].

35. At the Main Menu, select **9** to save and close the telnet session.
    The following message appears.

36. Click **OK** to close the telnet window.
37. To verify that the IP address is properly configured, ping the IP address and check for a response.
    - At the C:\> prompt, type **PING <IP Address>** and press [Enter].
    - Four reply messages appear, verifying the DX4020 is communicating with the network.
    - DX4020 configuration is complete. Perform this procedure for additional DX4020s.

6.5.2 Using Windows 2000/XP Telnet

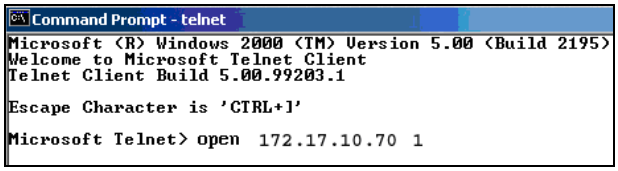
To complete the DX4020 IP address configuration, you must launch a telnet session.

> Ensure that you are logged into Windows 2000 or XP with an administrator privilege level.
>
> The following example uses the IP address of 172.17.10.70 and the MAC Address of 00-20-4a-72-04-0e.

1. At the Start Menu, select **Start → Run** to open a DOS window.
2. At the Run dialog box, type **COMMAND** and click [OK].
   A command prompt window appears.

3. At the C:\> prompt, type **telnet** and press [Enter].

4. At the Microsoft Telnet> prompt, type **open** (space) **IP ADRESS** (space) **PORT NUMBER**, such as **open 172.17.10.70 1**.



   The connection fails the first time. This is normal.

5. Enter the same sequence at the prompt, but use port 9999 instead of 1, such as **open 172.17.10.70 9999**.

> Pressing [F3] shows the last line typed, Backspace over the port entry, and change it to **9999**.

6. Press [Enter] to return to the DX4020 Setup Menu.
7. To program a device, follow *Steps 11* through *35* in S*ection 6.5.1 Using Windows 98 Telnet*, starting on page 11.
8. Close Telnet by clicking the  icon in the upper right-hand corner.

7.0 Control Panel Programming

Table 7 lists available documentation for DX4020 to control panel programming.

Table 7: Compatible Control Panel Documentation

Control Panel	Documentation
D9412GV2/D7412GV2	*D9412GV2/D7412GV2 Program Entry Guide* (P/N: F01U003636)
D7212GV2	*D7212GV2 Program Entry Guide* (P/N: F01U003804)
D9412G/D7412G	*D9412G/D7412G Program Entry Guide* (P/N: 47775)
D7212G	*D7212G Program Entry Guide* (P/N: 4998138538)
D9112	*D9112 Program Entry Guide* (P/N: 74-06145-000)
DS7240V2/DS7220V2	*DS7200V2-EXP Installer's Guide* (P/N: 4998153893)
DS7400Xi	*DS7400Xi V4-EXP Release Notes* (P/N: 4998154793)
FPD-7024	*FPD-7024 Operation and Installation Guide* (P/N: F01U008458)
Easy Series V3+	*Easy Series System Reference Guide* (P/N: F01U087835)

8.0 Specifications

Table 8: Specifications

Dimensions	7.6 cm x 12.7 cm (3 in. x 5 in.)	
Current Draw	110 mA, maximum, 10 Base-T 135 mA maximum, 100 Base-T	
Operating Voltage	12 VDC nominal	
Connectors	Control Panel: Option or data bus terminal strip LAN/WAN: RJ-45 Modular Jack (Ethernet)	
Ethernet Cable	Category 3 or better unshielded twisted pair Maximum Length: 100 m (328 ft)	
Interface	IEEE 802.3	
Compatibility	**Control Panel**	**Firmware**
	GV2 Series: D9412GV2, D7412GV2, D7212GV2	All versions
	G Series: D9412G, D7412G, D7212G,	6.3 or later
	9000 Series: D9412, D7412, D7212, D9112	6.3 or later
	DS7220V2, DS7240V2	2.xx or later
	DS7400XiV4-EXP	4.10 or later
	FPD-7024	All versions
	Easy Series V3+	3.0 or later
Default IP Address	0.0.0.0 (DHCP Mode)	

Notes

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F01U045288-05

BOSCH