Conettix DX4020

EN

Installation Guide
Network Interface
Module
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- 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

<table>
<thead>
<tr>
<th>RADXAUX1 GV2AUX Parameter</th>
<th>Control Panel on Protected Premises’ UL1610 Line Security Intrusion System Installations</th>
<th>UL864 Fire Systems Installations*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Digital Dialer Backup</td>
<td>Digital Dialer Backup</td>
</tr>
<tr>
<td>Poll Rate</td>
<td>75 sec</td>
<td>240 sec</td>
</tr>
<tr>
<td>ACK Wait</td>
<td>13 sec</td>
<td>13 sec</td>
</tr>
<tr>
<td>Retry Count</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

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.

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-C1023-1974, Household Burglar Alarm Systems

Approvals

- c
- 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

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

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.
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.

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 3: Mounting Holes

1 - Mounting holes (3)

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

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).
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)

<table>
<thead>
<tr>
<th>Sequence Number</th>
<th>DX4020 Connection</th>
<th>Control Panel Connection</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>XPort Ethernet</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>R Terminal</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Y Terminal</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>G Terminal</td>
<td>to</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>B Terminal</td>
<td>to</td>
<td></td>
</tr>
</tbody>
</table>

Local-area network (LAN)/wide-area network (WAN)
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.

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.
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  3 - LED enabled LEDs  2 - P2 jumper  4 - LED disabled LEDs

Table 3: Bus and Serial Status LEDs

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

**Table 4: XPort LEDs**

<table>
<thead>
<tr>
<th>Link LED</th>
<th>Activity LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Indicates</td>
</tr>
<tr>
<td>Off</td>
<td>No link</td>
</tr>
<tr>
<td>Amber</td>
<td>10 Mbps</td>
</tr>
<tr>
<td>Green</td>
<td>100 Mbps</td>
</tr>
</tbody>
</table>

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**: Cxxxxxxx, where 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*).

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**

```
arp - s xxx.xxx.xxx.xxx zz-zz-zz-zz-zz-zz
```

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.
3. At the DOS command line, type `arp -s 172.17.10.70 00-20-4a-12-04-0e` and press [Enter].
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.

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

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].[][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.

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>
<thead>
<tr>
<th>Table 5: Netmask Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Host Bits</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>16</td>
</tr>
</tbody>
</table>

When using DHCP, the following message appears:

*Change DHCP device name (Y)?(N) _*

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.**

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 (?00)?**
24. Press [Enter] to accept CC as the default ConnectMode. If CC is not the default, type cc and press [Enter] to change it.

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

<table>
<thead>
<tr>
<th>Control Panel Type</th>
<th>Do Step:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS7240V2/DS7220V2</td>
<td>25a</td>
</tr>
<tr>
<td>FPD-7024</td>
<td>25a</td>
</tr>
<tr>
<td>D9412GV2/D7412GV2/D7212GV2 with firmware version 7.06 or later</td>
<td>25a</td>
</tr>
<tr>
<td>D9412G/D7412G with firmware version 7.00 or later</td>
<td>25a</td>
</tr>
<tr>
<td>D7212G with firmware version 7.01 or later</td>
<td>25a</td>
</tr>
<tr>
<td>D9412/D7412/D7212/D9112/D9124 with firmware version 7.00 or later</td>
<td>25a</td>
</tr>
<tr>
<td>Easy Series with firmware version 3.0 or later</td>
<td>25a</td>
</tr>
<tr>
<td>DS7400XV4+</td>
<td>25b</td>
</tr>
<tr>
<td>D9412GV2/D7412GV2/D7212GV2 with firmware version 7.05 or earlier</td>
<td>25b</td>
</tr>
<tr>
<td>D9412G/D7412G with firmware version 6.90 or earlier</td>
<td>25b</td>
</tr>
<tr>
<td>D7212G with firmware version 6.91 or earlier</td>
<td>25b</td>
</tr>
<tr>
<td>D9412/D7412/D7212/D9112/D9124 with firmware version 6.90 or earlier</td>
<td>25b</td>
</tr>
</tbody>
</table>

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
   - Disable Web Server (O) O
   - Disable ECHO ports (Y) Y
   - Disable Encryption (O) O Y
   - Key length in bits (128) 128
   - Change Key (O) O
   - Enter Key: ____________________________
   - Disable Enhanced Password (O) O

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

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.

![Telnet Connection to host lost](image)

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.

![Command Prompt - telnet](image)

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

![Command Prompt - telnet](image)

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`.

![Command Prompt](image)

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 Section 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>
<thead>
<tr>
<th>Control Panel</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>D9412GV2/D7412GV2</td>
<td>D9412GV2/D7412GV2 Program Entry Guide (P/N: F01U003636)</td>
</tr>
<tr>
<td>D7212GV2</td>
<td>D7212GV2 Program Entry Guide (P/N: F01U003804)</td>
</tr>
<tr>
<td>D9412G/D7412G</td>
<td>D9412G/D7412G Program Entry Guide (P/N: 47775)</td>
</tr>
<tr>
<td>D7212G</td>
<td>D7212G Program Entry Guide (P/N: 4998138538)</td>
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<tr>
<td>D9112</td>
<td>D9112 Program Entry Guide (P/N: 74-06145-000)</td>
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<tr>
<td>DS7200V2/DS7220V2</td>
<td>DS7200V2-EXP Installer's Guide (P/N: 4998153893)</td>
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<tr>
<td>DS7400Xi</td>
<td>DS7400Xi V4-EXP Release Notes (P/N: 4998154793)</td>
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<tr>
<td>FPD-7024</td>
<td>FPD-7024 Operation and Installation Guide (P/N: F01U008458)</td>
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<tr>
<td>Easy Series V3+</td>
<td>Easy Series System Reference Guide (P/N: F01U087885)</td>
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8.0 Specifications

Table 8: Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
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<tbody>
<tr>
<td>Dimensions</td>
<td>7.6 cm x 12.7 cm (3 in. x 5 in.)</td>
</tr>
<tr>
<td>Current Draw</td>
<td>110 mA, maximum, 10 Base-T</td>
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<tr>
<td></td>
<td>135 mA maximum, 100 Base-T</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>12 VDC nominal</td>
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<tr>
<td>Connectors</td>
<td>Control Panel: Option or data bus terminal strip</td>
</tr>
<tr>
<td></td>
<td>LAN/WAN: RJ-45 Modular Jack (Ethernet)</td>
</tr>
<tr>
<td>Ethernet Cable</td>
<td>Category 3 or better unshielded twisted pair</td>
</tr>
<tr>
<td></td>
<td>Maximum Length: 100 m (328 ft)</td>
</tr>
<tr>
<td>Interface</td>
<td>IEEE 802.3</td>
</tr>
<tr>
<td>Compatibility</td>
<td>Control Panel</td>
</tr>
<tr>
<td>GV2 Series</td>
<td>D9412GV2, D7412GV2, D7212GV2</td>
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<tr>
<td>G Series</td>
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<tr>
<td>9000 Series</td>
<td>D9412, D7412, D7212, D9112</td>
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<td>DS7220V2, DS7240V2</td>
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<td></td>
<td>DS7400XV4-EXP</td>
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<td>FPD-7024</td>
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<td>Easy Series V3+</td>
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<tr>
<td>Default IP Address</td>
<td>0.0.0.0 (DHCP Mode)</td>
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<td>Firmware</td>
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Notes