Installation Guide

1.0 Introduction

The Radionics D6680 Network Adapter is a two-channel network adapter. The D6680 includes a cable for connecting to DB25 Channel 1 Port. For most NetCom installations, only one channel needs to be used and configured.

⚠ **WARNING** *These instructions should be followed to avoid the possibility of physical damage to the operator, program and/or equipment.*

1.1 Network Interface

Figure 1: Network Interface

Note: *Do not attempt to connect both Ethernet ports simultaneously. The D6680 does not have routing capabilities.*

The D6680 has the following items on the Network Interface end of the unit.

1. 10BASE-T Ethernet Port (refer to Figure 2)
2. 10BASE-FL Ethernet Port (Transmit) – Not Used
3. 10BASE-FL Ethernet Port (Receive) – Not Used
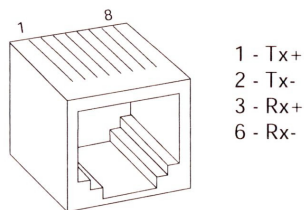4. Network LEDs
5. Power Plug

1.1.1 RJ-45 10BASE-T Ethernet Port


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1 - Tx+
2 - Tx-
3 - Rx+
6 - Rx-
```

Figure 2: RJ-45 Ethernet Jack Pinouts

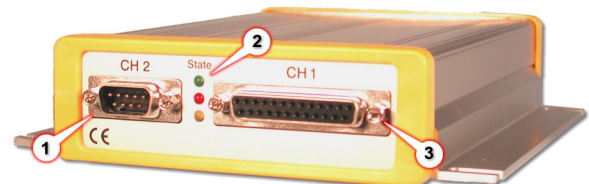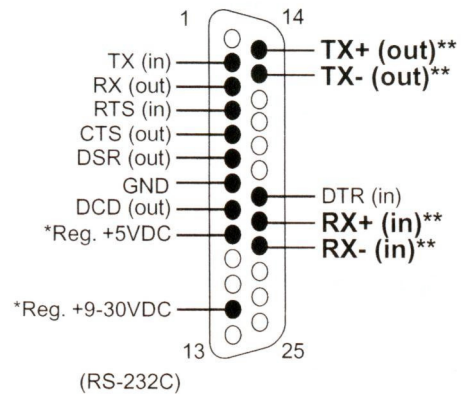## 1.2 Serial Interface

Figure 3: Serial Interface

The D6680 has the following items on the Serial Interface end of the unit.

1. DB9 Serial Port (DTE) – Not Used
2. Serial LEDs
3. DB25 Serial Port (DCE)

1.2.1 DB25 Serial Port (DCE)

*The Device Server can alternately be powered up via the serial port using one of these pins.

**The minus sign (-) is sometimes represented as A (e.g., TXA). The plus sign (+) is sometimes represented as B (e.g., TXB).

Figure 4: 25-pin Serial Port

2.0   Specifications

Protocols Supported		ARP, UPD, TCP, Telnet, ICMP, SNMP, DHCP, TFTP, HTTP, BootP and ECHO
Connectors	**Serial:**	DB25 RS-232/RS-322/RS-485 serial port with DCE configuration DB9 RS232 serial port with DTE configuration
	Network:	10BASE-T or 10BASE-FL LAN/WAN: 'RJ-45' Modular Jack (Ethernet)
Cables	**Ethernet**	Category 3 or better unshielded twisted pair Max Length: 328 ft. (100 m)
	RS-232	Max Length: 50 ft.
Data Rates		Serial speed ranging from 300 bps to 115.2 kbps
Serial Line Formats	**Characters:**	7 or 8 data bits
	Stop bits:	1 or 2
	Parity:	Odd, even, none
Modem Controls		RTS, CTS, DSR, DCD, DTR
Flow Control		XON/XOFF CTS/RTS
Management		HTTP (internal web server) SNMP (read only) Serial login Telnet login
System Software		Flash ROM standard: downloadable from a TCP/IP host (TFTP) or over serial port
Diagnostic LEDs		Network Transmit, Network Receive, Good Link, Collisions, Channel 1 Status, Channel 2 Status, Diagnostic
Compatibility		Ethernet: Version 2.0/IEEE 802.3 D6600
Power Requirements		9 to 30 VDC or 9 to 25 VAC (External adapter included) Power Consumption: 3 W
AC Current Required		*UPS Standby Current: 35 mA*
Power Input		AC nominal operating range 120 or 240 VAC AC maximum operating range 100 to 240 VAC ~ 50/60 Hz 0.2 Amp maximum
Standby Power		An Uninterrupted Power Supply is required for use with the D6680, when used for UL FIRE Protective Signaling Systems. A 60-hour minimum UPS standby power supply is required for UL Certification.
Environmental	**Operating Temperature**	+41°F to +122°F (+5°C to +49°C)
	Storage Temperature	-40°F to +151°F (+40°C to +66°C)
Dimensions	**Unit**	6.5 in. x 4.46 in. x 1.39 in. (16.5 cm x 11.3 cm x 36 mm)
	Enclosure (H x W x D)	The enclosure is manufactured from 20 Gauge (1.0 mm), cold-rolled steel. A keyed lock is included. 12.5 in. x 14.5 in. x 3 in. (31.8 cm x 36.8 cm x 76 mm)
Weight		1.1 lbs. (0.48 kg)

Table 1: D6680 Specifications

3.0   Installation

3.1   All Installations

Install the D6600 Communications Receiver/Gateway in accordance with NFPA 70, NFPA 72 and the local Authority Having Jurisdiction (AHJ).

3.2   UL Installations Fire Alarm Applications

The D6680 Ethernet Adapter is suitable for Central Station Protective Signaling when it is installed and used in compliance with NFPA 72 and ANSI/NFPA 70. Installation limits for Digital Alarm Communicator Receivers (DACR) are under the jurisdiction of your local authority.

Note: *For UL Listed Fire Installations, equipment between Ethernet Interface Modules and the D6680 is required to be UL Listed Information Technology Equipment.*

3.3   Mounting in a Separate Enclosure

Required for UL Central Station Protective Signaling, the D6680 must be mounted in a separate enclosure like the AE1 (grey) or the AE2 (red).

Before installing the D6680 in the AE1 or AE2 enclosure, the correct mounting holes must be found on the back wall of the enclosure. Only these holes line up correctly to allow the D6680 to be secured with two screws.

Once the holes are found, proceed to mount the D6680:

1.   Place the D6680 against the back wall of the enclosure.
2.   Line up the side mounting holes on the D6680 with the enclosure mounting holes indicated in Figure 5.
3.   Insert the two screws provided and slowly tighten them down until the D6680 is securely mounted to the enclosure (refer to Figure 6).

Note: *It is recommended the enclosure be mounted on a vertical surface, BEFORE installing the module. All wires within the enclosure are power limited and supervised.*

3.4   D8004 Transformer Enclosure

The D8004 Transformer Enclosure protects the AC plug-in transformer and ensures that it remains securely fixed to the AC wall outlet. The D8004 Transformer Enclosure may be required for certain applications, the most common being fire alarms. Consult your AHJ for installation requirements.

The D8004 is a direct replacement for the AE-TR16.
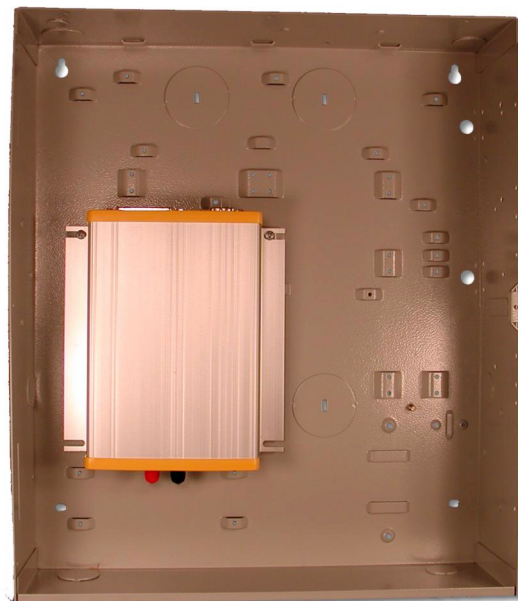

Figure 5: Mounting Holes for D6680

Figure 6: D6680 in an AE1/AE2 Enclosure

3.4.1 Installation Instructions

DANGER HIGH VOLTAGE

Remove AC power and lock out the circuit breakers prior to installation.

1. Mount the gang box to the wall or supporting structure.
2. Insert a gang box partition into the gang box. The partition will divide the gang box into two sections. The large section contains the high voltage wiring; the small section contains the low voltage wiring.
3. Punch out a conduit knockout in the high voltage side of the gang box. Bring the 110 VAC wiring through the knockout hole and into the gang box as required by the local Authority Having Jurisdiction, NFPA and the NEC.
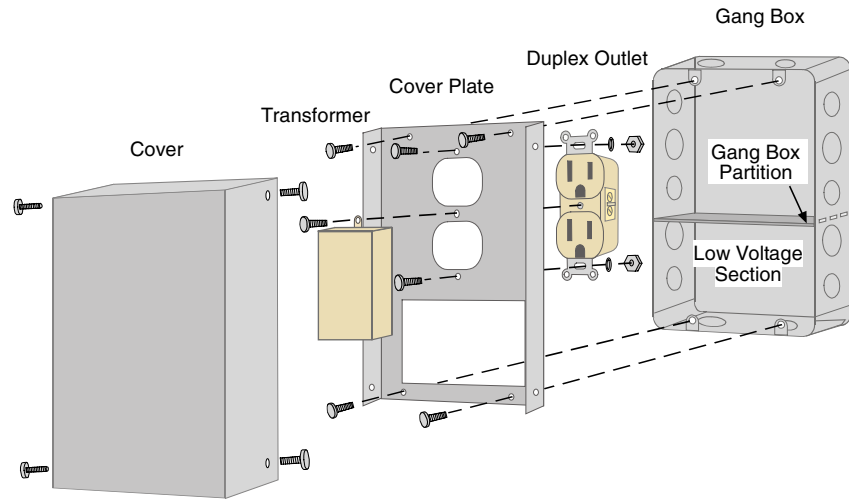
Figure 7: D8004 Installation

4. Connect the isolated 110 VAC wiring to the duplex outlet.
5. Mount the duplex outlet to the cover plate using the #6 machine screws, nuts and lockwashers provided. Mount the cover plate to the gang box with the #10 screws provided with the gang box.
6. Energize the power to the circuit(s) and, using a voltmeter, test the duplex outlet for proper voltage.
7. Punch out a conduit knockout in the low voltage side of the gang box. Bring the low voltage wiring through the knockout hole and into the gang box as required by the local Authority Having Jurisdiction, NFPA and the NEC.
8. Connect the low voltage wiring to the transformer.
9. Plug the transformer into the bottom outlet of the duplex outlet. Secure the transformer to the duplex outlet using the screw provided.
10. Attach the cover to the cover plate with the four #6 self-tapping screws provided.

4.0 Programming

Refer to the *D6600 NetCom System Guide* (P/N: 46542) for information on how to program the D6680.

5.0 Additional UL Requirements

The D6680 must be installed in the same room as the D6600 Central Station Receiver and within 50 ft. (15.2 m) of the D6600 Central Station Receiver.

5.1 UL 864 Fire System Installations

The D6680 must be installed in accordance with NFPA 72.

5.1.1 Required Accessories

- AE1 or AE2 Enclosure
- D8004 Transformer Housing