

Host Communication Cabling

This chapter describes how to cable Ethernet communication links between a host computer and a VCO/4K system.

VCO/4K systems provide Ethernet socket connections to use as host links. You must provide cables, transceivers, and other link components to implement Ethernet links. The optional Ethernet Communications Package is available from Cisco Systems. The *Cisco VCO/4K Ethernet Guide* explains Ethernet implementation strategies.

General Wiring Practices

The following general practices apply to host communication link cables:

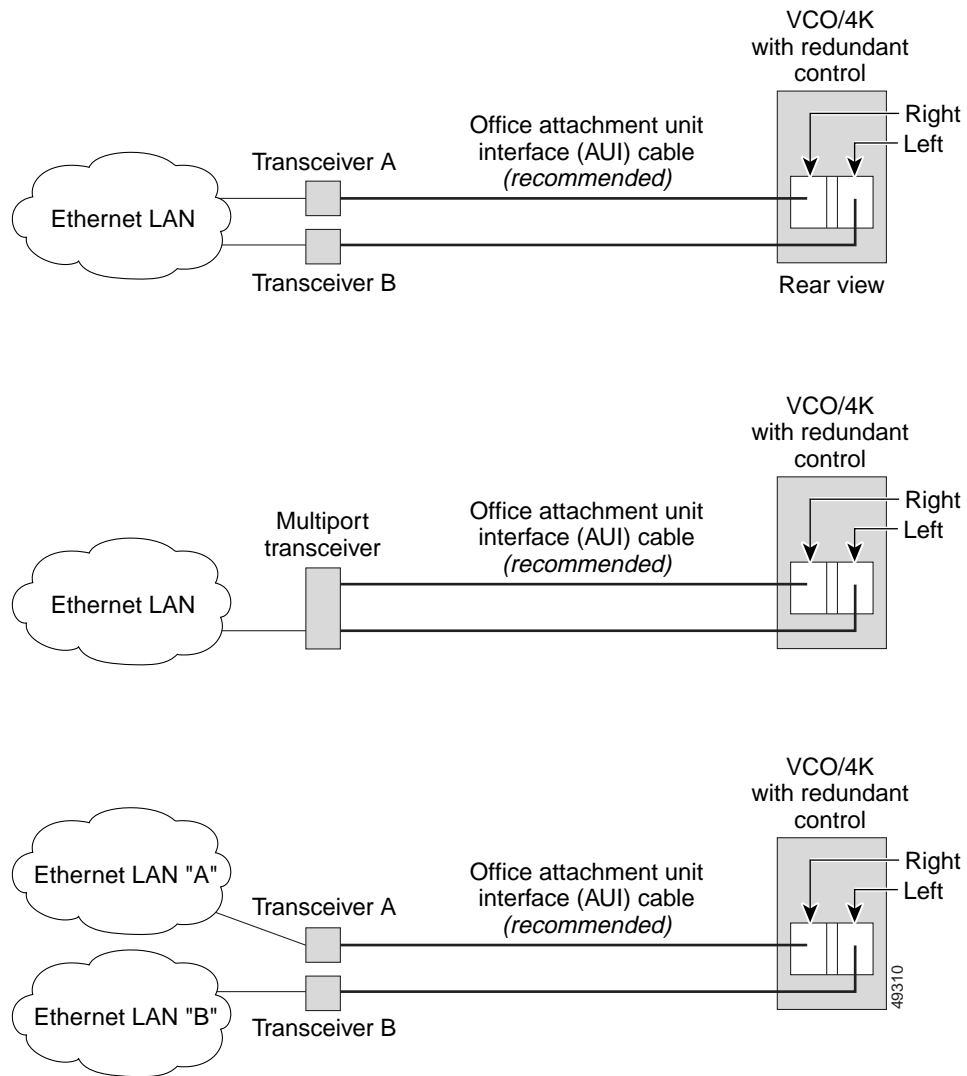
- Prepare a cabling diagram for the host computer-to-VCO/4K communication configuration. This diagram determines the number and length of cables required for the installation.
- Use shielded cabling and connectors for all cabling between the host computer and the VCO/4K.
- Route cables away from EMI and RFI sources and secure the cables to prevent damage caused by passersby or other equipment.
- Connections on the VCO/4K end of the cable require DB-15 male connectors for Ethernet links. Connector requirements on the opposite end are dictated by the I/O connections on the host and the network on which it operates.

Figure 4-1 shows two Storage/Control I/O Modules on the back of a redundant VCO/4K system. If your host requires an Ethernet communication link, connect it to the Ethernet port on the Storage/Control I/O Module.

Figure 4-1 Storage/Control I/O Modules

Figure 4-2 shows some possible Ethernet cabling configurations for communication links using the recommended cables and transceivers.

Figure 4-2 General Ethernet Host Communication Link Cabling Diagrams



Wiring Practices for Serial Connections

Table 4-1 shows the pinouts of each serial EIA/TIA-232 DB-25 connector on the Storage/Control I/O Module.

Table 4-1 EIA/TIA-232 DB-25 Serial Connector Pinouts

Pin	Signal	Description
2	TxD	Transmit Data
3	RxD	Receive Data
4	RTS ¹	Not used
5	CTS ¹	Clear To Send

Table 4-1 EIA/TIA-232 DB-25 Serial Connector Pinouts (continued)

Pin	Signal	Description
6	DSR ¹	Data Set Ready
7	SGR	Signal Ground
8	DCD ¹	Data Carrier Detect
15	TxC ²	Transmit Clock
17	RxC ²	Receive Clock
20	DTR ¹	Data Terminal Ready
24	TxC ²	Transmit Clock

1. Modem support only.
2. Supported on serial port 4 only.

Jumpers on the Storage/Control I/O Module allow you to configure these ports as modem (DCE) terminations for connection to a terminal, or as DTE terminations for connection to a modem.

The factory settings for the Storage/Control I/O Module support the following configurations:

- Straight-through cables connecting the VCO/4K to a modem (DTE to DCE)
- Crossover (null modem) cables connecting the VCO/4K to a terminal (DTE to DTE)

If other cable types or terminations are required, modify the jumper settings on the Storage/Control I/O Module. Refer to the *Cisco VCO/4K Card Technical Descriptions* for more information on jumper settings.

Figure 4-3 shows straight-through cables.

Figure 4-3 Straight-Through Cable Wiring Diagram

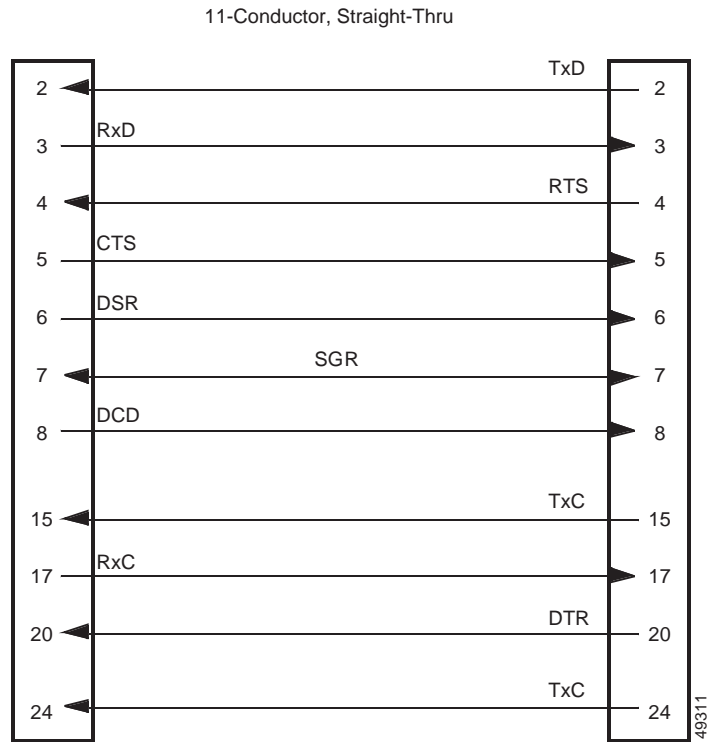
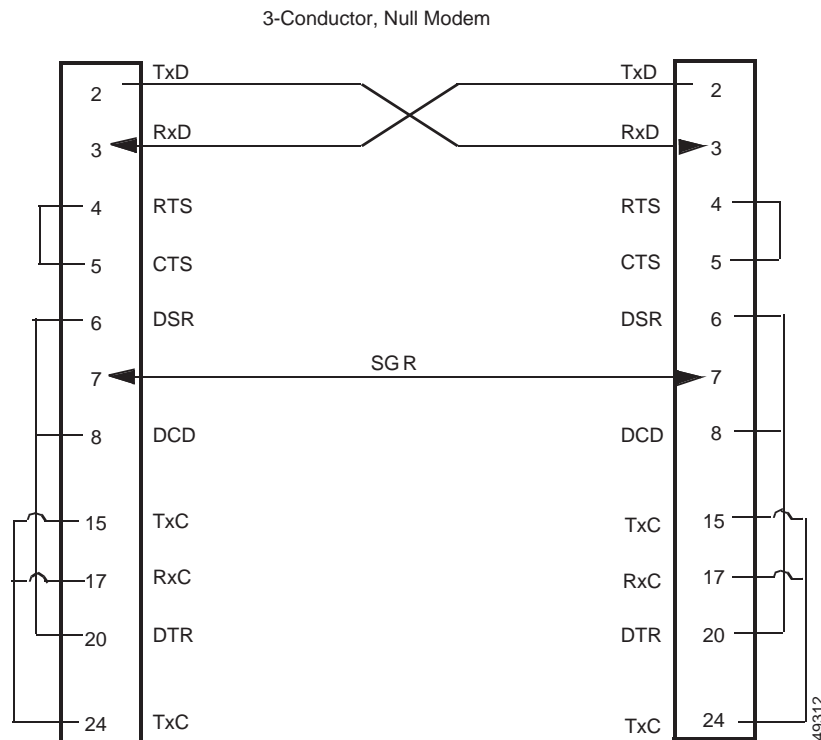


Figure 4-4 shows crossover (null modem) cables.

Figure 4-4 Crossover (Null Modem) Cable Wiring Diagram



Wiring Practices for Ethernet Links

Table 4-2 shows the pinouts of the DB-15 Ethernet interface connector on the Storage/Control I/O Module.

Table 4-2 EIA/TIA-232 DB-15 Serial Connector Pinouts

Pin	Signal	Description
2	C+	Collision + (Input)
3	T+	Transmit + (Output)
5	R+	Receive + (Input)
6	GND	Ground
9	C-	Collision - (Input)
10	T-	Transmit - (Output)
12	R-	Receive - (Input)
13	+12VF	+12 VDC Power

Cisco recommends that you use an office Attachment Unit Interface (AUI) cable between the Storage/Control I/O Module and a transceiver. You can order this cable from Cisco. The requirements of the physical Ethernet network determine the choice of transceiver type. For additional information on Ethernet networks, refer to the *Cisco VCO/4K Ethernet Guide*.