

3-FIB Fiber Optic Interface Module Installation Sheet

Description

The 3-FIB fiber optic interface module gives a panel the ability to network to other panels. The module is used with a 3-CPU1 or later and consists of two cards: the interface adapter card and the electronics card.

The 3-FIB supports copper wire connections so the network data and audio communications format can be easily changed to and from optical fiber and copper.

Installation

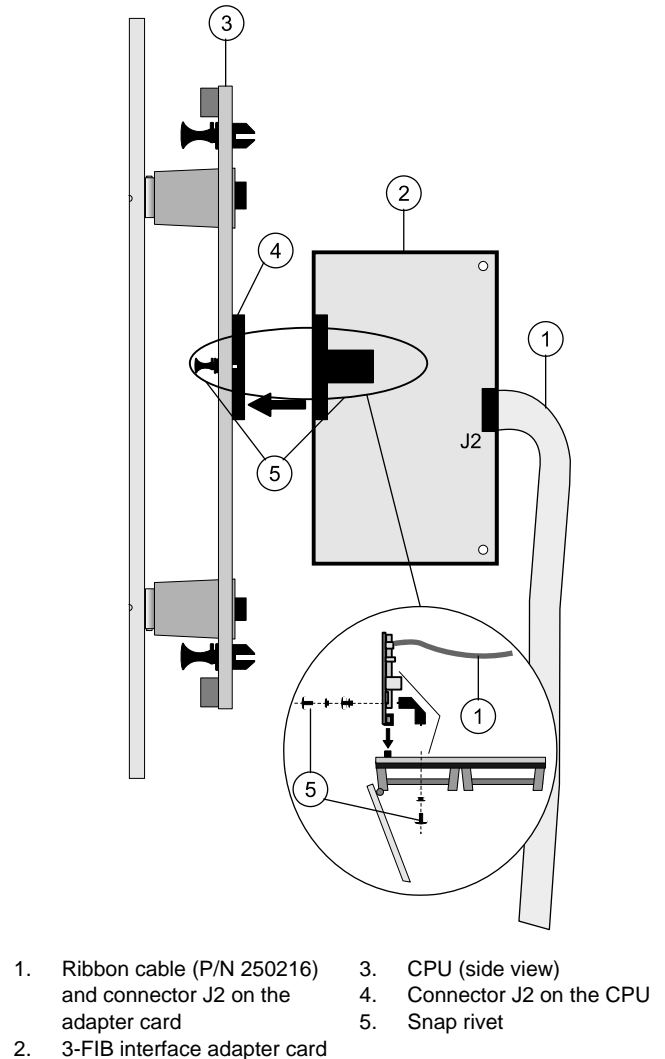
WARNING: Electrocution hazard. To avoid personal injury or death from electrocution, remove all sources of power and allow stored energy to discharge before installing or removing equipment.

Caution: Circuit boards are sensitive to electrostatic discharge (ESD). To avoid damage, follow ESD handling procedures.

To install the 3-FIB interface adapter card:

1. Connect the ribbon cable end to connector J2 on the 3-FIB interface adapter card (see Figure 1, item 1). Use the cable end that allows it to exit at a right angle.
2. Plug the 3-FIB interface adapter card (item 2) into connector J2 (item 4) on the CPU controller.
3. Firmly seat the card and then secure it by pressing the snap rivet (item 5) on the front side of the CPU.
4. Route the ribbon cable to the bottom of the chassis.
5. Install the 3-FIB electronics card as instructed below for either a 3-CHAS7 or 3-CAB5.

Figure 1: Installing the 3-FIB interface adapter card



To install the 3-FIB electronics card for a 3-CHAS7:

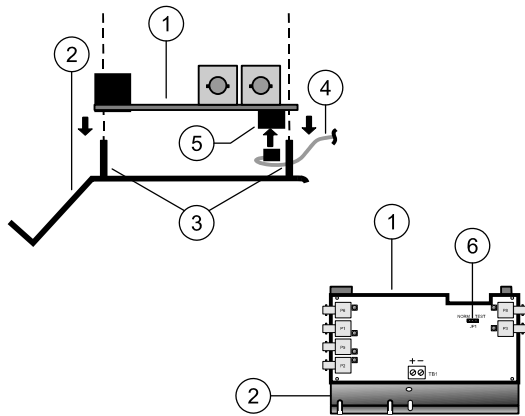
1. Mount the 3-FIB electronics card onto the four standoffs on the 3-FIB mounting bracket. See Figure 2, items 1 to 3.
2. Connect the loose end of the ribbon cable to connector J1 (item 5) on the 3-FIB electronics card.
3. Place the JP1 jumper (item 6) in the NORM position.



4. Mount the 3-FIB bracket mounting holes on the two mounting studs located at the bottom of the chassis. See Figure 3, item 3.

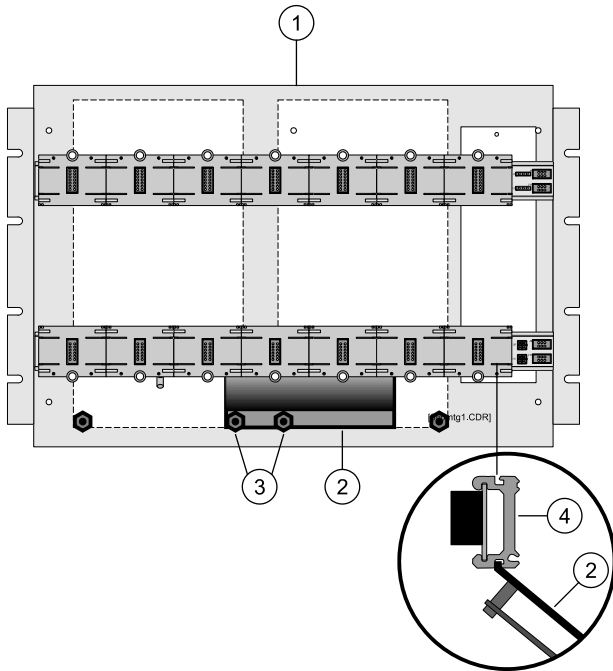
The top of the bracket fits in the slot at the bottom of the lower rail extrusion as detailed in the inset of Figure 3.

Figure 2: Mounting the 3-FIB electronics card on the mounting bracket



- | | |
|---------------------------|---|
| 1. 3-FIB electronics card | 5. Connector J1 on the 3-FIB electronics card |
| 2. 3-FIB mounting bracket | 6. JP1 jumper |
| 3. Standoffs | |
| 4. Ribbon cable | |

Figure 3: Installing the 3-FIB mounting bracket on the 3-CHAS7



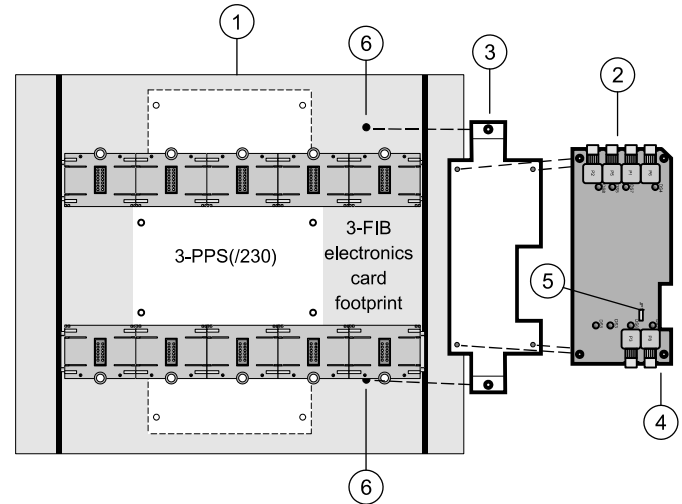
- | | |
|---------------------------|-----------------------------|
| 1. 3-CHAS7 chassis | 3. 3-FIB mounting holes |
| 2. 3-FIB mounting bracket | 4. Top of the 3-FIB bracket |

To install the 3-FIB electronics card for a 3-CAB5:

1. Snap the 3-FIB electronics card on the 3-MPFIB mounting bracket studs. See Figure 4, items 2 and 3.
2. Connect the loose end of the ribbon cable to connector J1 (item 4) on the 3-FIB electronics card.

3. Place the JP1 jumper (item 5) in the NORM position.
4. Mount the 3-MPFIB bracket on the mounting studs located on the right side of the 3-CAB5 backbox, under the rails (item 6).

Figure 4: Installing the 3-FIB electronics card in a 3-CAB5



- | | |
|---|----------------------------------|
| 1. 3-CAB5 | 5. JP1 jumper |
| 2. 3-FIB electronics card | 6. 3-CAB5 backbox mounting studs |
| 3. 3-MPFIB mounting bracket | |
| 4. Connector J1 on the 3-FIB electronics card | |

Wiring

All wiring and fiber optic cable are supervised and power-limited.

Figure 5: 3-FIB Class B network and audio fiber optic connections

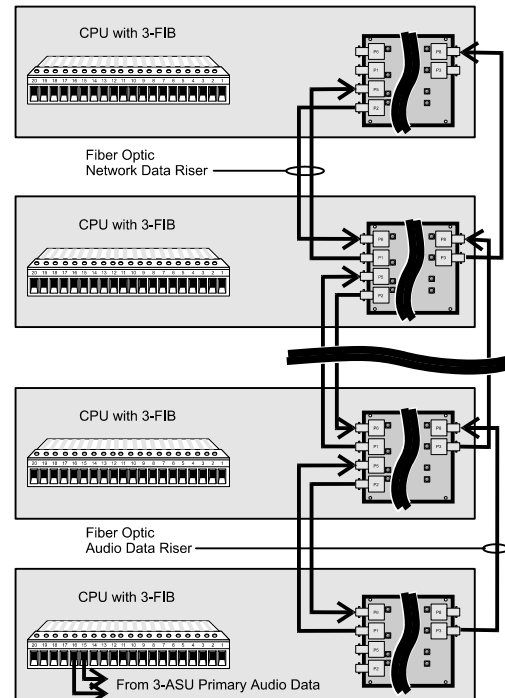


Figure 6: Class B hybrid fiber optic/copper wire network and audio connections

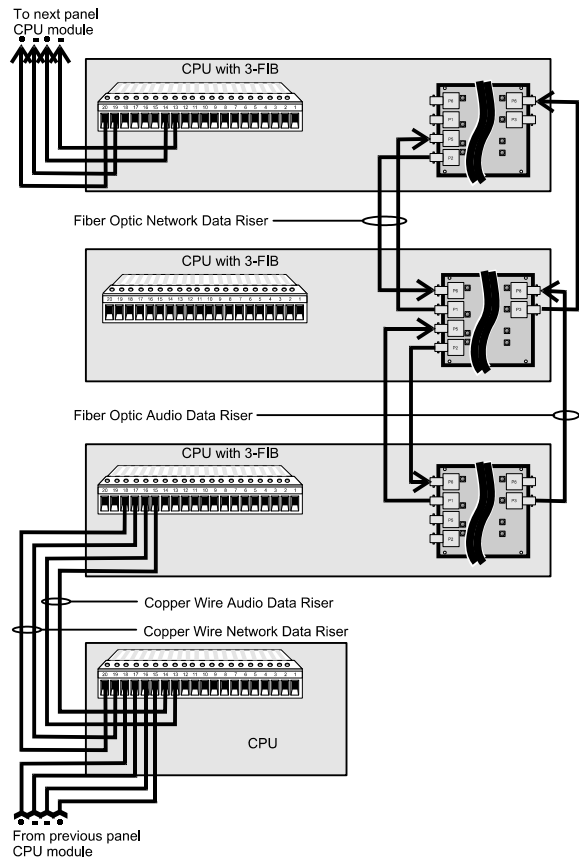


Figure 7: CPU Class A network and Class B audio fiber optic connections

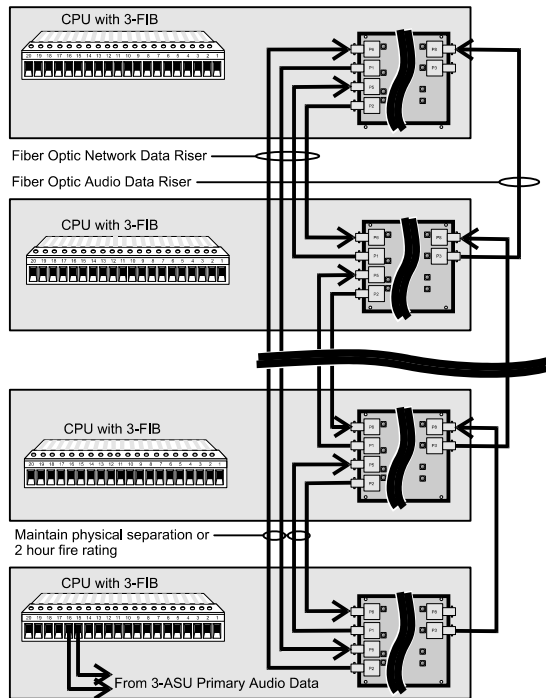
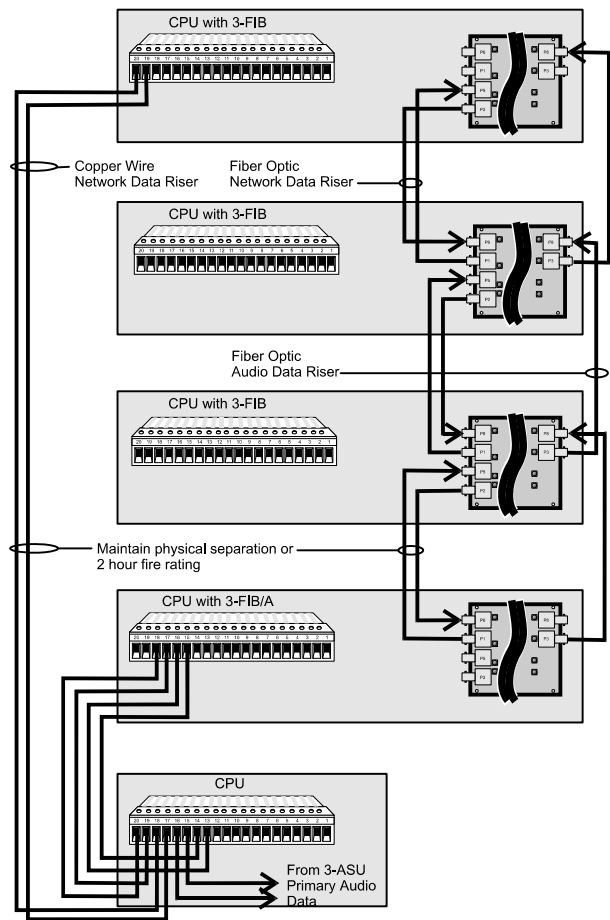


Figure 8: CPU hybrid fiber optic/copper wire network and Class B fiber optic/copper wire audio connections



Testing

The 3-FIB will transmit a constant signal that can be used for fiber optic budget measurements and troubleshooting.

To test the fiber optic connection:

1. Place the JP1 jumper in the TEST position.
2. Return JP1 to the NORM position when testing is finished.

Specifications

Voltage	24 VDC
Current	
Standby	105 mA at 24 VDC
Alarm	105 mA at 24 VDC
Fiber optics network and audio	
Budget	14 dB between two interfaces
Cable type	62.5/125 or 100/140 multimode
Connectors	Type ST
Network data circuit	
Circuit configuration	Class B, Style 4 or Class A, Style 7
Data rate	9.6, 19.2, and 38.4 Kbaud
Isolation	From previous CPU using copper, total isolation using fiber optics

Digitized audio data circuit	
Circuit configuration	Class B, Style 4
Data rate	327 Kbaud
Isolation	From previous CPU using copper, total isolation using fiber optics
Copper wired network data circuit segment	
Circuit length	5,000 ft. (1,524 m) max. between any three panels
Circuit resistance	90 Ω max.
Circuit capacitance	0.3 μ F max.
Wire type	Twisted pair, 18 AWG (0.75 mm ²) min.
Copper wired audio data circuit	
Circuit length	5,000 ft. (1,524 m) max. between any three panels
Circuit resistance	90 Ω max.
Circuit capacitance	0.09 μ F max. [1]
Wire type	Twisted pair, 18 AWG (0.75 mm ²) min.
CPU compatibility	3-CPU1 and later
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93% noncondensing

[1] Includes shield capacitance, if required

Regulatory information

Manufacturer	GE Security, Inc.
	HQ and regulatory responsibility: GE Security, Inc., 8985 Town Center Parkway, Bradenton, FL 34202, USA
Year of manufacture	EU authorized manufacturing representative: GE Security B.V., Kelvinstraat 7, 6003 DH Weert, The Netherlands
	The first two digits of the product serial number (located on the product identification label) are the year of manufacture.

Contact information

For contact information see our Web site: www.gesecurity.com.