HIGAIN-ETSI

EMU-830 LIST 1 AND LIST 3 FIRMWARE UPGRADE KIT INSTALLATION INSTRUCTIONS

Model	Part Number
MSU-830	150-1491-01

PAIRGAIN TECHNOLOGIES, INC.
ENGINEERING SERVICES TECHNICAL PRACTICE

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SECTION 190-800-121-01

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Revision History of This Practice

Revision	Release Date	Revisions Made
01	September 14, 1998	Initial Release

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USING THIS MANUAL

Two types of messages, identified by icons, appear in the text.

Notes contain information about special circumstances.

Cautions indicate the possibility of equipment damage or the possibility of personal injury.

OVERVIEW

The HiGain®-ETSI Exchange Office Management Unit (EMU-830) is designed to allow the field upgrade of firmware through either flash download or PROM replacement.

When the existing EMU-830 firmware is Version 1.13 or earlier, the firmware upgrade must be performed by PROM replacement, as described in this document.

> **EMU-830s running Version 2.0 and later firmware may be upgraded by performing a firmware download. For more information, see "Internet Access" on page 7**.

When HDSL line cards (both local and remote units) are running firmware version 1.13 or earlier, they too must be upgraded for compatibility with the upgraded EMU-830 firmware. Furthermore, HDSL cards running firmware version 2.x should also be upgraded for full compatibility with new features of the latest EMU firmware.

> **The latest HDSL line unit firmware can be downloaded from the PairGain® FTP server or Web site**. **For more information, see "Internet Access" on page 7**.

UPGRADE KIT CONTENTS

Table 1 lists the contents of the MSU-830 firmware upgrade kit.

Table 1.   *MSU-830 Firmware Upgrade Kit*

Qty	Item
2	EMU-830 Firmware Upgrade PROMs
1	EMU-830 Technical Practice
1	SNMP MIB Diskette
1	PROM Extraction Tool

PROM REPLACEMENT INSTRUCTIONS

The firmware for the EMU-830 unit is contained in two replaceable PROM devices. These devices may be factory upgraded and replaced in the field to support new features or implement bug fixes. The two PROM devices reside on the EMU-830 card at the locations shown in Figure 1.

EMU-830 (component side)

U21 → Leave unpopulated
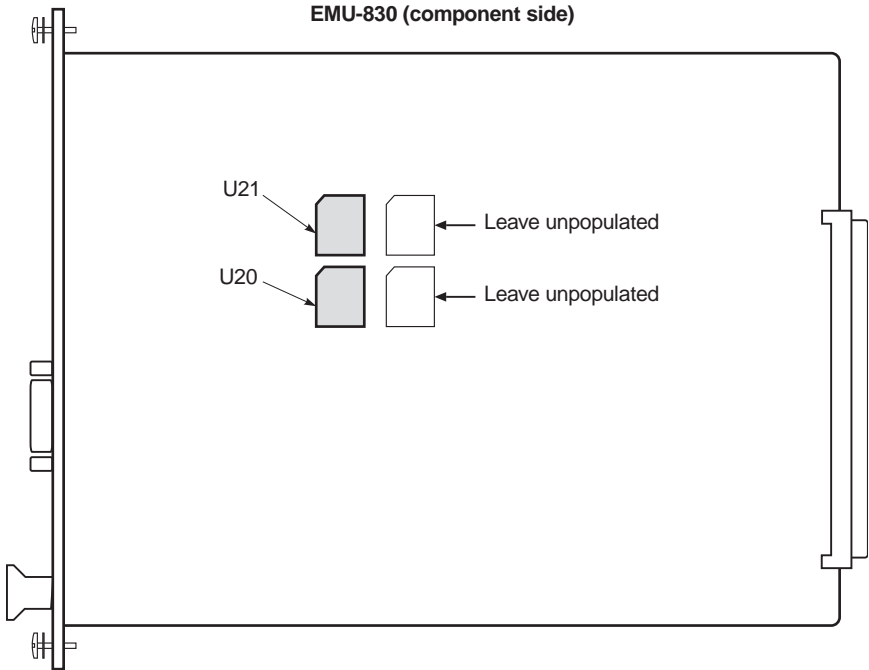
U20 → Leave unpopulated

Figure 1.   *EMU-830 PROM Locations U20, U21*

PROM IDENTIFICATION LABELS

The labeling that identifies each PROM is shown in Figure 2.
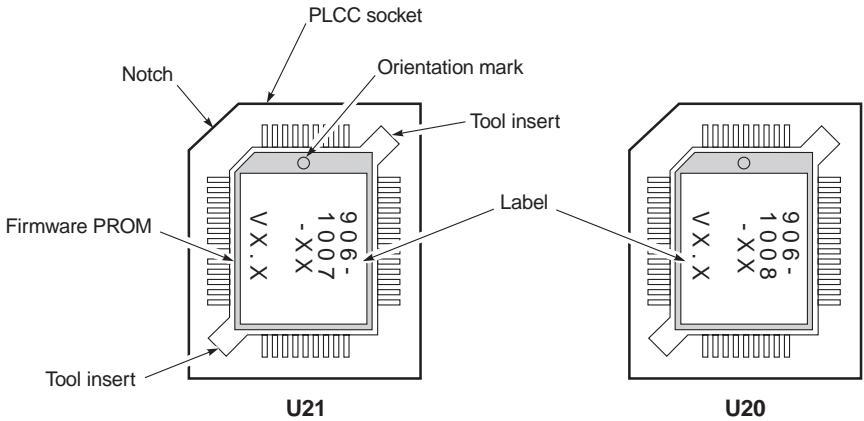

Figure 2.   EMU-830 PROM Labeling

PROM REPLACEMENT PROCEDURE

1 Use a flat-blade screwdriver to loosen the two screws securing the EMU-830 to Slot 17 of the shelf, then remove the EMU-830 from the shelf.

2 Locate PROM U21 on the EMU circuit board (see Figure 1).

3 Insert a PROM extraction tool into the Tool insert slots on the U21 socket (see Figure 2).

4 Gently pry the PROM out of the socket using the PROM extraction tool.

5 Locate the U21 replacement PROM shipped with your kit. It is labeled as shown in Figure 2.

6 Insert the replacement PROM into the U21 socket.

> ⚠ **There is a notch on both the PROM and the socket. Make sure these notches are aligned with each other before inserting the PROM.**

7 Press the PROM into the socket until it seats firmly.

8 Locate PROM U20 on the EMU circuit board (see Figure 1).

9 Repeat steps 3 through 7 to replace PROM U20.

10 Align the EMU-830 circuit board with the black guide lines on the top and bottom edges of shelf-slot 17, then push the EMU board into the slot until the EMU front panel is flush with the front of the shelf.

11 Secure the EMU-830 to the shelf with the two retaining screws on the EMU front panel.

PAIRGAIN REGIONAL SALES OFFICES

Customer assistance, sales, and product information is available at PairGain's regional sales offices. Contact the PairGain regional sales office at the location serving your area.

Table 2. *PairGain Regional Sales Offices*

Region	Location	Hours	Telephone Number	Fax Number
United States and Canada	Tustin, California USA	24-hours-a-day, 7-days-a-week	800.638.0031 +714.832.9922	+714.832.9924
Latin America	Miami Beach, Florida USA	Monday - Friday, 9:00AM to 5:00PM	+305.949.2474	+305.949.5804
Europe	Switzerland	Monday - Friday, 8:00AM to 5:30PM	+41.56.483.4400	+41.56.483.4401
Middle East and Africa	Dubai, U.A.E.	Sunday - Thursday, 9:00AM to 6:00PM	+971.4.499665	+971.4.499656
Asia Pacific and China	Hong Kong (N.E. Asia)	Monday - Friday 9:00AM to 5:00PM	+852.2802.2918	+852.2802.2789
	Beijing (N. China)	Monday - Friday 8:30AM to 5:00PM	+86.10.6846.1122 Ext. 5008	+86.10.6847.6856
	Guangzhou (S. China)	Monday - Friday 8:30AM to 5:00PM	+86.20.8338999 Ext. 719	+86.20.83873011

ORDERING PROCEDURE

Orders may be placed through PairGain regional sales offices by telephone, fax or, mail. A fax is preferred.

When placing an order, please provide the following information:

- Customer purchase order number
- Ship-to and bill-to addresses
- Part numbers and quantity required
- Requested delivery date
- Preferred method of shipment.

After receiving your order, PairGain will send an Order Acknowledgment to the bill-to and ship-to addresses (unless directed otherwise).

PRODUCT SUPPORT

This section contains product support and warranty information.

TECHNICAL SUPPORT

PairGain Technical Assistance is available 24 hours a day, 7 days a week by contacting PairGain Customer Service Engineering group at:

Telephone:	(800) 638-0031 or (714) 832-9922
Fax:	(714) 832-9924

During normal business hours (8:00 AM to 5:00 PM, Pacific Time, Monday through Friday, excluding holidays), technical assistance calls are normally answered directly by a Customer Service Engineer. At other times, a request for technical assistance is handled by an on-duty Customer Service Engineer through a callback process. This process normally results in a callback within 30 minutes of initiating the request.

In addition, PairGain maintains a computer bulletin board system for obtaining current information on PairGain products, product troubleshooting tips and aids, accessing helpful utilities, and for posting requests or questions. This system is available 24 hours a day by calling (714) 730-2800. Transmission speeds up to 28.8 kbps are supported with a character format of 8-N-1.

WARRANTY

PairGain Technologies warrants this product to be free of defects and to be fully functional for a period of 60 months from the date of original shipment, given correct customer installation and regular maintenance. PairGain will repair or replace any unit without cost during this period if the unit is found to be defective for any reason other than abuse or incorrect use or installation.

Do not try to repair the unit. If it fails, replace it with another unit and return the faulty unit to PairGain for repair. Any modifications of the unit by anyone other than an authorized PairGain representative voids the warranty.

If a unit needs repair, call PairGain for a Return Material Authorization (RMA) number and return the defective unit, freight prepaid, along with a brief description of the problem, to:

> PairGain Technologies, Inc.
> 14352 Franklin Avenue
> Tustin, CA 92780
> ATTN: Repair and Return Dept.
> (800) 638-0031

PairGain continues to repair faulty modules beyond the warranty program at a nominal charge. Contact your PairGain sales representative for details and pricing.

INTERNET ACCESS

PairGain firmware updates and SNMP Management Information Bases (MIBs) for HiGain-ETSI products are available from two sources on the Internet:

• From our FTP Site at ftp.pairgain.com/etsi:

  Enter "ANONYMOUS" as the User Name and your e-mail address as the Password.

• From our Web Site at http://www.pairgain.com:

  Click the "Firmware" icon on our home page, enter your user name and password, and select the type of firmware you wish to download.

COMPLIANCE

The shelf, enclosure, and desktop units within the PairGain HiGain-ETSI product line have been affixed with the CE mark. This is based on compliance of the complete PairGain HiGain-ETSI product line with directive 89/336/ EEC as amended by directive 93/68/EEC.

ISO 9001

DNV Certification, Inc.
Certificated Firm

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