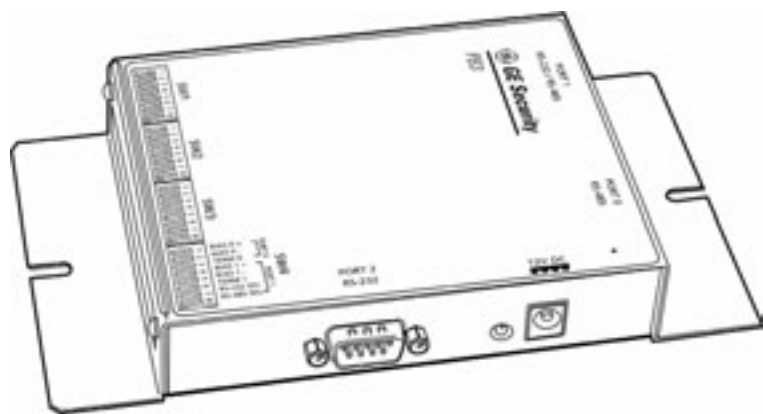


CBR-PB3-ATM ProBridge
User Manual



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FCC compliance	This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. You are cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Regulatory	Operation of this equipment in a residential area may cause interference, in which case the user is required to take all measures that are necessary, at the user's expense, to correct the interference

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Introduction

This is the *GE ATM ProBridge User Manual* for model CBR-PB3-ATM. This document includes detailed instructions explaining:

- how to setup and install the ATM ProBridge and
- how to connect to single or multiple ATM sites.

There is also information describing how to contact technical support if you have questions. To use this document effectively, you should meet the following minimum qualifications:

- a basic knowledge of CCTV systems and components; and
- a basic knowledge of electrical wiring and low-voltage electrical connections.

Read these instructions and all ancillary documentation entirely before installing or operating this product.

Note: A qualified service person, complying with all applicable codes, should perform whatever hardware installation is required.

Conventions used in this document

The following conventions are used in this document:

Bold	Menu items and buttons.
<i>Italic</i>	Emphasis of an instruction or point; special terms.
	File names, path names, windows, panes, tabs, fields, variables, and other GUI elements.
	Titles of books and various documents.
<i>Blue italic</i>	(Electronic version.) Hyperlinks to cross-references, related topics, and URL addresses.
Monospace	Text that displays on the computer screen.
	Programming or coding sequences.

Safety terms and symbols

These terms may appear in this manual:

	CAUTION:	<i>Cautions</i> identify conditions or practices that may result in damage to the equipment or other property.
	WARNING:	<i>Warnings</i> identify conditions or practices that could result in equipment damage or serious personal injury.

Overview

The CBR-PB3-ATM is a specific ProBridge unit for interfacing the DVMRe family of digital video multiplex/recorders to financial institution automated teller machines (ATMs). Single or multiple ATMs may be combined in a single system via the unit's RS-485 integrated network. The ATM ProBridge supports most ATM Modem protocols used in today's banking networks. The ATM ProBridge supports single-drop network communications.

One of the key features of this ProBridge unit is the ATM protocol **autodetect** feature that during installation, automatically detects the ATM protocol and ATM addresses.

The ATM ProBridge replaces the previous version CBR-PB2-ATM for single ATM applications and the CBR-MiniNet versions for multiple ATMs connected to a single DVMRe/Triplex unit. This product eliminates the need for interface units from Transaction Verification Systems (TVS) TC-2101ATM unit.

Note: The ATM ProBridge operates in an NTSC environment (120 VAC/60 Hz) or a PAL environment (220 VAC/50 Hz) provided the correct unit is ordered.

Compatibility

The ATM ProBridge is compatible with all of the following DVMRe products:

- DVMRe, version 3.07 and above.
- DVMRe-eZ, version 3.20 and above.
- Triplex, version 4.00 and above.
- Triplex-eZ, version 4.03 and above.
- WaveReader, version 3.6 and above.

Disclaimer

The ATM ProBridge components identified within this document provide means of capturing transaction data for use by the DVMRe family of digital video recording/transmission products. The ATM ProBridge components translate the data into a usable format by the DVMRe and permits associating transaction data with specific cameras. GE assumes no responsibility for the amount and type of information available, the operation, non-operation, or erroneous operation of these third-party transaction products.

Product contents

The ATM ProBridge system consists of the ProBridge unit, this manual, an ATM triport cable, a PB3 to DVMRe cable, a PB3 to PC cable, and a power supply, as shown in *Figure 1*.

Figure 1. Product contents



Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

Other required equipment

You might also need the following:

- An RS-485 network cable terminated with RJ45 connectors.
- A PC to program the ATM ProBridge.

Installation environment

Power. Ensure that the installation site's AC power is stable and within the rated voltage of the external power supply. If the site's AC power is likely to have spikes or DIPs, use power line conditioning or an uninterruptible power supply.

Temperature. Observe the unit's ambient temperature specifications when choosing a location for the unit. Extremes of heat or cold beyond the specified operating temperature limits may cause the unit to fail. Do not install this unit on top of other hot equipment.

Moisture. Do not expose the unit to rain or moisture. Moisture can damage internal components. Do not install this unit near sources of water.

RS-232 limitations. Cable length between the POS device and the ATM ProBridge is limited to 50 ft. (15.24 m). Cable length between the ATM ProBridge unit and the DVMRe is also limited to 50 ft. (15.24 m). If the supplied cables are replaced by custom made cables to address distances between components, ensure the cable is manufactured to ANSI standards for RS-232 communication.

RS-485 limitations. If multiple ATM ProBridge units are connected to a single DVMRe unit, the distance between the first and last ATM ProBridge unit is limited to 3,000 feet (RS-485 communication standards).

Power specifications

The ATM ProBridge is furnished with a power supply (110 or 240 VAC). Do not use any other power supply with this product.

The manufacturer accepts no responsibility for damage caused by the use of any other power supply.

Make sure installation is complete and all connections are made before applying power to the unit.

4310-0007 120 VAC power supply

Power supply input

- Voltage: 120 VAC
- Tolerance: $\pm 10\%$
- Frequency: 60 Hz

Power supply output

- Voltage: 12 VDC
- Current: 110 mA
- Power: 1.3 watts
- Connector: 2.1 mm female barrel. Center positive.

4310-0008 220VAC power supply

Power supply input

- Voltage: 220 VAC
- Tolerance: $\pm 10\%$
- Frequency: 50 Hz

Power supply output

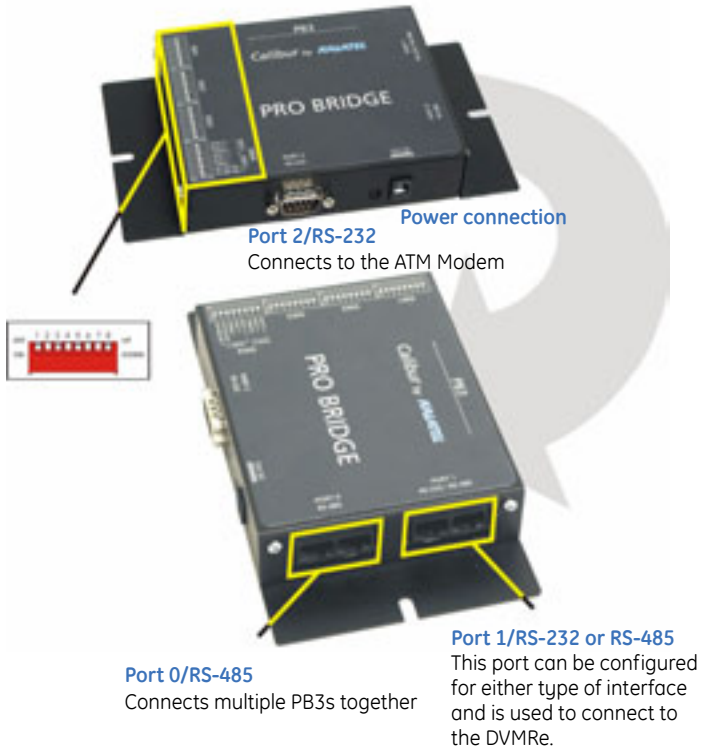
- Voltage: 12 VDC
- Current: 110 mA
- Power: 1.3 watts
- Connector: 2.1 mm female barrel. Center positive.

Installation

Before installation, please familiarize yourself with the PB3 and its typical system layout.

ATM ProBridge components

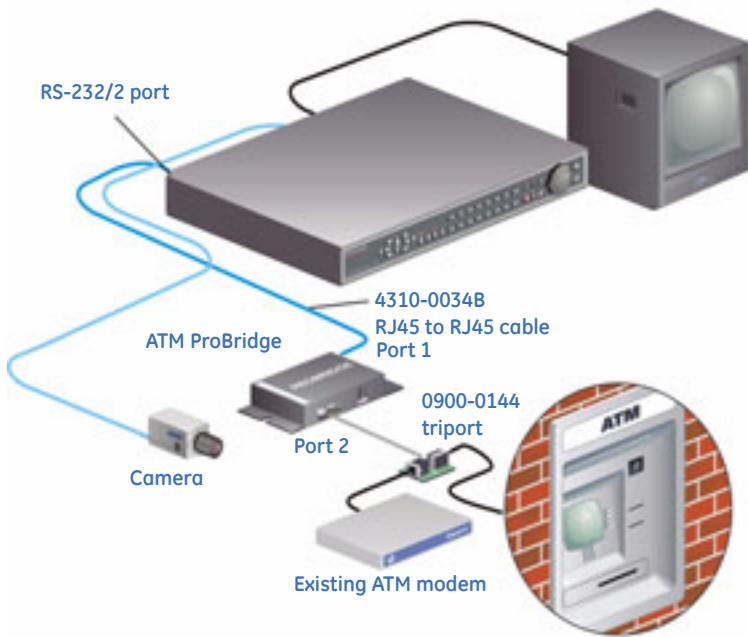
Figure 2. ATM ProBridge landmarks



Typical system layouts

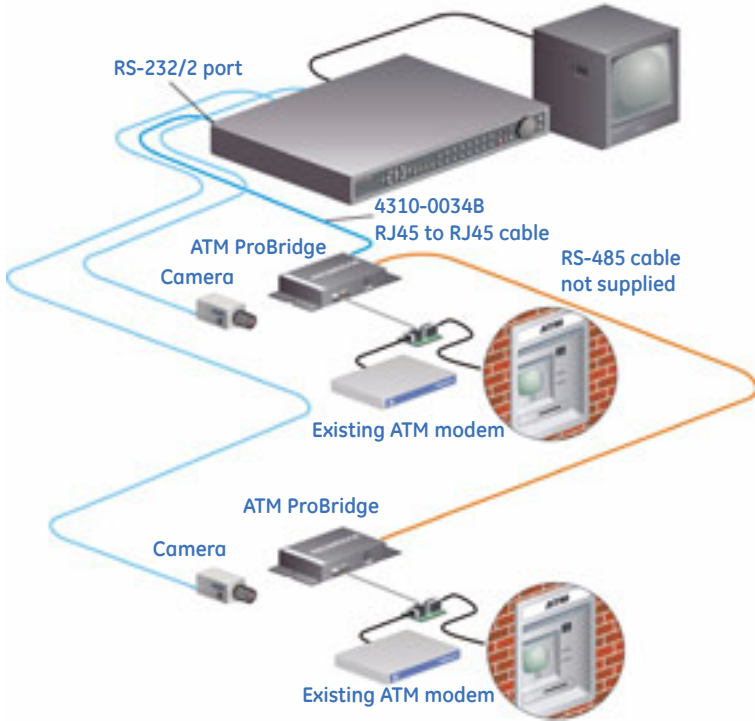
The following two figures show typical single and multiple ATM layouts.

Figure 3. Single ATM system layout



Note: We recommend that one unique camera is associated with each ATM.

Figure 4. Multi-site ATM system layout



Note: Where multiple ATMs are to be connected, one ATM ProBridge is required per ATM. The individual ATM ProBridges are daisy-chained through an installer provided RS-485 cable. One of the ATM ProBridges is wired to the text insertion port (RS-232) of the DVMRe. If the distance between any ATM ProBridge exceeds 2000 ft. (609.6 m), then the first ATM ProBridge (closest to the DVMRe) and the last ATM ProBridge in the line need to have termination turned on. All other ATM ProBridges must have their termination turned off for the RS-485 network to operate properly.

Installation overview

The basic steps required to install the ATM ProBridge are:

1. Get the ATM addresses and ATM protocol information from the customer's ATM/IT group. See *Required information* on page 11.
2. Physically connect the ATM ProBridge interface to the ATM and the DVMRe. Set the proper termination on the ATM ProBridge. See *SW4 switch 3* on page 41.
3. Program the camera number to be associated with each ATM's transaction data to the ATM ProBridge. See *SW1 switches 5 to 8* on page 26.
4. Place the ATM ProBridge in autodetect mode and run some ATM transactions at the ATM so the units can "lock in" on the ATM protocol and addresses. See *SW2 switch 1* on page 27.

Note: Manual configuration is available should the unit not "autodetect" the protocol and addresses.

5. Program the DVMRe to record in the way desired for your specific site.

Required information

The following information is required for a successful ATM ProBridge installation. This information is used to configure the ATM ProBridge. You will need to contact the customer's ATM network administrator for answers to these questions.

ATM interface type

- ATM generic SDLC
- ATM generic ASYNC/SYNC
- TC500 native
- IBM 3624 ATM
- IBM 473X native
- Interbold (BPP)
- NCR 508X camera interface
- Serial data analyzer

Network communication protocol

- Synchronous (Bi-sync)
- Asynchronous
- SDLC-NRZ
- Synchronous (Mono)
- SDLC-NRZI

Character set (code)

- EBCDIC
- 7-bit ASCII
- 8-bit ASCII

Parity

- None
- Odd
- Even

ATM baud rate

- 1200
- 2400
- 4800
- 9600
- 19200
- 38400

Required DIP switch information

Important switch assignments

Table 1. Important switch assignments

SW1	1-4 Special functions and ATM device
	5-8 Camera assignment
SW2	1 autodetect
	2-4 Baud rate
	5-8 ATM protocol
SW3	1-8 ATM address
SW4	3 Termination

Default switch settings

Table 2. Default switch settings

SW1		SW2		SW3		SW4	
1	Up	1	Up	1	Down	1	Up
2	Up	2	Down	2	Down	2	Up
3	Up	3	Down	3	Down	3	Up
4	Up	4	Down	4	Down	4	Up
5	Up	5	Down	5	Down	5	Up
6	Up	6	Down	6	Down	6	Up
7	Up	7	Down	7	Down	7	Down
8	Up	8	Down	8	Down	8	Up

Installation steps

1. Select the camera number (1-16) on the DVMRe on which to associate the ATM transaction text. This is done by setting switches 5-8 on SW1. See *SW1 switches 5 to 8* on page 26.
2. Make sure that the interface type for port 1 is correct. Normally this should be set for RS-232 (SW4 switch 7 down and 8 up).
3. Install the triport cable to the back of the ATM modem by disconnecting the modem cable and connecting the DB25 connector to the modem. Quickly reconnect the modem cable to the other DB25 connector on the triport cable.

Note: Disrupting the modem connection from the modem for more than 15 seconds can cause a network

communication failure to the ATM. Before installing the triport adapter cable, make sure you are familiar with physical layout and ports that you will be working with.

4. Connect the DB9 end of the triport cable to port 2 of the ATM ProBridge.

Note: If only one ATM is connected, skip to step 7.

5. Repeat steps 1-4 for each additional ATM.
6. Connect each ATM ProBridge together using a user supplied RS-485 cable with RJ45 connectors. Connect to either receptacle at port 0 on the ATM ProBridge using an in and out approach.
7. Connect the nearest ATM ProBridge to the DVMRe using the supplied 4310-0034 cable. Plug one end into port 1 of the ATM ProBridge and the other end into the RS-232/2 port of the DVMRe.
8. Set the termination on the ATM ProBridges if required. Termination is set using SW4 switch 3. The default is SW4 switch 3 in the up position or **OFF**. The only time termination needs to be turned on is when the distance between the last ATM ProBridge and the first one is over 2000 ft. (609.6 m). In this case, the first and the last ATM ProBridge should have their termination enabled. The remaining ATM ProBridges would keep their termination disabled or in the off position.
9. Program the DVMRe for the desired recording functions based upon the presence of transaction text. In addition, make sure the RS-232/2 port is set for a 57600 baud rate. See the DVMRe manual for more information.
10. Apply power to the ATM ProBridges.

Programming

After you install the ATM ProBridge, you need to program the ProBridge for operation. There are two methods to accomplish this; autodetect mode and manually using the DIP switches. The preferred method is autodetect mode. The ATM ProBridge should be manually programmed only if autodetect fails.

autodetect mode

autodetect mode tries to automatically detect all the parameters that the ATM ProBridge needs to operate. To run autodetect mode, do the following with each of the ATM ProBridges:

1. Select full-screen view on the DVMRe front panel.
2. Press the camera number button on the DVMRe front panel that is associated with the ATM ProBridge that you want to program until the text box appears.
3. Activate autodetect mode by setting switch 1 on SW2 in the **DOWN** (on) position.
4. The text box will display a status message showing the progress in detecting the ATM network protocol and ATM address.
5. If successful the following message should display.

```
Configured to ATM  
Release AutoDetect Switch
```

Note: If any units fail to display this message please go the troubleshooting section of this manual.

6. Turn **off** the autodetect mode by setting switch 1 on SW2 in the **UP** (off) position.

Note: When autodetect is turned off, all the settings detected are saved to non-volatile memory. Should the ProBridge lose power and subsequently have power restored all of the settings will be used automatically.

7. Repeat this process for each ATM ProBridge in the system.

Manual configuration

You should only use manual configuration if autodetect mode fails to properly detect the ATM network message format or the ATM address.

There are two methods available for manually configuring the ProBridge unit. They are:

- By running HyperTerminal on a connected PC or laptop.
- By manually setting the DIP switches.

HyperTerminal configuration

You will need the following equipment to program the ATM ProBridge using HyperTerminal:

- A PC or laptop computer with a COM port and Windows 98/NT/200/XP installed and operational.
- The supplied 4310-0047B PB3 to PC (DB9F to RJ45) cable.

To program the ATM ProBridge with HyperTerminal, do the following:

1. Remove power and disconnect the ATM ProBridge from the DVMRe.
2. Plug the 4310-0047B cable into Port 1 of the ATM ProBridge and a free COM port on your PC, typically COM1.
3. Launch HyperTerminal, found in *Start\Programs\Accessories\Communications\HyperTerminal*.

Figure 5. Laptop connected to ATM ProBridge



4. The *Connection Description* dialog box will display. Type in a name for this session (ATM) and click **OK**.
5. The *Connect To* dialog box display. Select the COM port you are connected to in the *Connect Using* drop-down list.
6. The *COMx Properties* dialog box will display. Select the following settings to complete the HyperTerminal setup:
 - Bits per second = 57600
 - Data bits = 8
 - Parity = none

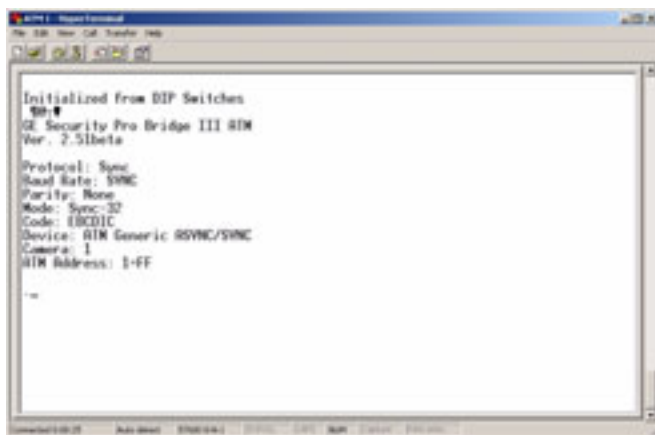
- Stop bits = 1
- Flow control = none

7. Click **OK**.

To program the ATM ProBridge do the following:

1. Power up the ATM ProBridge by plugging in the power supply. *Figure 6* will appear confirming that you are in HyperTerminal programming mode.

Figure 6. HyperTerminal programming mode



2. Press the **Enter** key twice to bring up the *Main Menu*.
3. Select option **#2 Port #2** and press **Enter**.

4. Select option #7 **Device: ATM** and press **Enter**.
Figure 7 will appear showing the selectable ATM type.

Figure 7. Device selection menu

```
*** DEVICE LIST ***
1. ATM Generic SDLC
2. ATM Generic ASYNC/SYNC
3. TC500 Native
4. I.B.M. 3624 ATM
5. I.B.M. 473K Native
6. Interbold (BPP)
7. NCR 508X Camera Interface
8. Generic Interface
9. Serial Data Analyzer

Enter Device Choice:
```

5. Select the ATM type from the list and press **Enter**.
6. Select 1 and press **Enter** to return to the *Main Menu*.
7. Select 4 and press **Enter** to go to the *Backup* menu.
8. Select 2 and press **Enter** to **Save** your selections.
9. Exit HyperTerminal.
10. Remove the RS-232 cable and reconnect the ATM ProBridge to the DVMRe.

HyperTerminal reference

The following HyperTerminal information is provided for reference.

Menu Selection 2 - Protocol options

- SDLC
- Asynchronous
- Synchronous

Menu Selection 3 - Baud rate

Baud rate is only used if protocol option selected is asynchronous.

- 1200
- 2400
- 4800
- 9600
- 14.4K
- 19.2K
- 38.4K

Menu Selection 4 - Parity

If the protocol option selected is synchronous or asynchronous you can select from any of the options below. If the protocol option selected is SDLC, only a selection of none is available.

- None
- Odd
- Even

Menu Selection 5 - Mode

The available selections are:

- Sync NRZ
- NRZI
- 1-Stop (bit)
- 2-Stop (bit)
- Sync-16
- Sync-32

Menu Selection 6 - Code (character)

The available selections are:

- EBCDIC
- 7-Bit ASCII
- 8-Bit ASCII

Menu Selection 7 - Device type

- ATM generic SDLC
- ATM generic ASYNC/SYNC
- TC500 native
- IBM3624 ATM
- IBM 473X native
- Interbold (BPP)
- NCR 508X camera interface
- Generic interface
- Serial data analyzer

Manual DIP switch configuration

The following parameters must set by DIP switch for this setup method to work.

- ATM network address (See *SW3 switches 1 to 8* on page 29)
- ATM device type (See *SW1 switches 1 to 4* on page 24)
- Baud rate for port 2 (See *SW2 switches 2 to 4* on page 27)
- ATM message potocol (See *SW2 switches 5 to 8* on page 28)

After obtaining the information, above do the following:

1. Disconnect the ATM ProBridge from the DVMRe.
2. Set the DIP switches per the tables in , on page 24 to match the system information.

Note: autodetect (SW2 switch 1) should be in the off (up) position.

3. Reconnect the ATM ProBridge to the DVMRe.
4. Reapply power to the ATM ProBridge.

DIP switch settings

This chapter deals in detail with the DIP switch settings. The ATM ProBridge must be reinitialized before any changes to the switch settings will be recognized.

SW1 switches 1 to 4

The first four switch positions on SW1 are for selecting the ATM device type and can be programmed to provide special functions on the ATM ProBridge for display and troubleshooting.

Table 3. SW1 switches 1 to4 - ATM device type

SW1				
Switch function	1	2	3	4
ATM generic SDLC	U	U	U	D
ATM generic ASYNC/SYNC	U	U	D	U
TC500 native	U	U	D	D
Interbold BPP	U	D	D	U
NCR 508X camera interface	U	D	D	D
Generic interface	D	U	U	U
IBM 3624	U	D	U	U
IBM native (473X)	U	D	U	D
Serial data analyzer	D	U	U	D

Table 4. SW1 switches 1 to 4 - special functions

SW1				
Switch function	1	2	3	4
Display mode	D	D	U	U
Demo mode	D	D	U	D
Reset (clear memory)	D	D	D	D
Automatic line feed	D	U	D	D

Display mode

This setting displays all internal memory settings through port 1 on the text box window of the selected camera on a DVMRe Triplex. This allows you to quickly check what settings are in your unit.

Demo mode (simulated message)

This setting permits the ATM ProBridge to send a simulated POS transaction message to the DVMRe. This is useful for troubleshooting or for demonstrating ATM ProBridge functionality without having a POS device connected. As a troubleshooting tool, this element allows you to verify that the ATM ProBridge is able to send messages and have the DVMRe correctly capture data coming from the ATM ProBridge.

Reset (clear memory)

This is primarily a troubleshooting tool that allows you to clear the nonvolatile memory of all settings. This will restore all factory defaults as a first step to reconfiguring the unit.

Automatic line feed

This option has been added to allow the insertion of line feeds when a new line character is detected in generic mode.

SW1 switches 5 to 8

Switches 5 to 8 on SW1 are for associating a specific camera to the ATM ProBridge.

Table 5. SW1 switches 5 to 8 - Camera number selection

SW1				
Camera number	5	6	7	8
1	U	U	U	U
2	U	U	U	D
3	U	U	D	U
4	U	U	D	D
5	U	D	U	U
6	U	D	U	D
7	U	D	D	U
8	U	D	D	D
9	D	U	U	U
10	D	U	U	D
11	D	U	D	U
12	D	U	D	D
13	D	D	U	U
14	D	D	U	D

Table 5. SW1 switches 5 to 8 - Camera number selection (continued)

SW1				
Camera number	5	6	7	8
15	D	D	D	U
16	D	D	D	D

SW2 switch 1

Switch 1 on SW2 is for the autodetect mode. Enable autodetect by setting the switch in the **DOWN** position. Disable autodetect by setting the switch in the **UP** position

SW2 switches 2 to 4

Switches 2 to 4 on SW2 are for setting the baud rate. Check with your IT/ATM group for the correct setting.

Table 6. SW2 switches 2 to 4 - Baud rate

SW2			
Port 2 baud rate	2	3	4
1200	U	U	U
2400	U	U	D
4800	U	D	U
9600	U	D	D
14.4k	D	U	U
19.2k	D	U	D
38.4k	D	D	U

SW2 switches 5 to 8

Switches 5 to 8 on SW2 define the ATM communication protocol of the transaction data across the modem connection. These switches select the protocol, parity, character code, and mode of operation.

Table 7. SW2 switches 5 to 8 - Communication protocol

SW2				
Protocol description	5	6	7	9
Asynchronous, none, 7-bit ASCII, 1 stop bit	U	U	U	U
Asynchronous, odd, 7-bit ASCII, 1 stop bit	U	U	U	D
Asynchronous, even, 7-bit ASCII, 1 stop bit	U	U	D	U
Asynchronous, none, 8-bit ASCII, 1 stop bit	U	U	D	D
Asynchronous, odd, 8-bit ASCII, 1 stop bit	U	D	U	U
Asynchronous, even, 8-bit ASCII, 1 Stop bit	U	D	U	D
Synchronous, odd, 7-bit ASCII, SYNC 16	U	D	D	U
Synchronous, even, 7-bit ASCII, SYNC 16	U	D	D	D
Synchronous, odd, 8-bit ASCII, SYNC 16	D	U	U	U
Synchronous, even, 8-bit ASCII, SYNC 16	D	U	U	D
Synchronous, none, EBCDIC, SYNC 32	D	U	D	U
SDLC, none, EBCDIC, NRZ	D	U	D	D
SDLC, none, EBCDIC, NRZI	D	D	U	U

SW3 switches 1 to 8

Switches 1 to 8 on SW3 define the ATM address. For BSC-3270 (synchronous) ATMs, this would be the poll/select address. For SDLC protocols, this is the actual network address contained in the first 8-bits of the SDLC SNA frame. The values that can be set with SW3 have the range of 1 to 254 (0x01 to 0xFE).

Table 8. SW3 switches 1 to 8 - ATM address

SW3								
ATM ID	1	2	3	4	5	6	7	8
1	U	U	U	U	U	U	U	D
2	U	U	U	U	U	U	D	U
3	U	U	U	U	U	U	D	D
4	U	U	U	U	U	D	U	U
5	U	U	U	U	U	D	U	D
6	U	U	U	U	U	D	D	U
7	U	U	U	U	U	D	D	D
8	U	U	U	U	D	U	U	U
9	U	U	U	U	D	U	U	D
A	U	U	U	U	D	U	D	U
B	U	U	U	U	D	U	D	D
C	U	U	U	U	D	D	U	U
D	U	U	U	U	D	D	U	D
E	U	U	U	U	D	D	D	U
F	U	U	U	U	D	D	D	D

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
10	U	U	U	D	U	U	U	U
11	U	U	U	D	U	U	U	D
12	U	U	U	D	U	U	D	U
13	U	U	U	D	U	U	D	D
14	U	U	U	D	U	D	U	U
15	U	U	U	D	U	D	U	D
16	U	U	U	D	U	D	D	U
17	U	U	U	D	U	D	D	D
18	U	U	U	D	D	U	U	U
19	U	U	U	D	D	U	U	D
1A	U	U	U	D	D	U	D	U
1B	U	U	U	D	D	U	D	D
1C	U	U	U	D	D	D	U	U
1D	U	U	U	D	D	D	U	D
1E	U	U	U	D	D	D	D	U
1F	U	U	U	D	D	D	D	D
20	U	U	D	U	U	U	U	U
21	U	U	D	U	U	U	U	D
22	U	U	D	U	U	U	D	U
23	U	U	D	U	U	U	D	D
24	U	U	D	U	U	D	U	U

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
25	U	U	D	U	U	D	U	D
26	U	U	D	U	U	D	D	U
27	U	U	D	U	U	D	D	D
28	U	U	D	U	D	U	U	U
29	U	U	D	U	D	U	U	D
2A	U	U	D	U	D	U	D	U
2B	U	U	D	U	D	U	D	D
2C	U	U	D	U	D	D	U	U
2D	U	U	D	U	D	D	U	D
2E	U	U	D	U	D	D	D	U
2F	U	U	D	U	D	D	D	D
30	U	U	D	D	U	U	U	U
31	U	U	D	D	U	U	U	D
32	U	U	D	D	U	U	D	U
33	U	U	D	D	U	U	D	D
34	U	U	D	D	U	D	U	U
35	U	U	D	D	U	D	U	D
36	U	U	D	D	U	D	D	U
37	U	U	D	D	U	D	D	D
38	U	U	D	D	D	U	U	U
39	U	U	D	D	D	U	U	D

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
3A	U	U	D	D	D	U	D	U
3B	U	U	D	D	D	U	D	D
3C	U	U	D	D	D	D	U	U
3D	U	U	D	D	D	D	U	D
3E	U	U	D	D	D	D	D	U
3F	U	U	D	D	D	D	D	D
40	U	D	U	U	U	U	U	U
41	U	D	U	U	U	U	U	D
42	U	D	U	U	U	U	D	U
43	U	D	U	U	U	U	D	D
44	U	D	U	U	U	D	U	U
45	U	D	U	U	U	D	U	D
46	U	D	U	U	U	D	D	U
47	U	D	U	U	U	D	D	D
48	U	D	U	U	D	U	U	U
49	U	D	U	U	D	U	U	D
4A	U	D	U	U	D	U	D	U
4B	U	D	U	U	D	U	D	D
4C	U	D	U	U	D	D	U	U
4D	U	D	U	U	D	D	U	D
4E	U	D	U	U	D	D	D	U

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
4F	U	D	U	U	D	D	D	D
50	U	D	U	D	U	U	U	U
51	U	D	U	D	U	U	U	D
52	U	D	U	D	U	U	D	U
53	U	D	U	D	U	U	D	D
54	U	D	U	D	U	D	U	U
55	U	D	U	D	U	D	U	D
56	U	D	U	D	U	D	D	U
57	U	D	U	D	U	D	D	D
58	U	D	U	D	D	U	U	U
59	U	D	U	D	D	U	U	D
5A	U	D	U	D	D	U	D	U
5B	U	D	U	D	D	U	D	D
5C	U	D	U	D	D	D	U	U
5D	U	D	U	D	D	D	U	D
5E	U	D	U	D	D	D	D	U
5F	U	D	U	D	D	D	D	D
60	U	D	D	U	U	U	U	U
61	U	D	D	U	U	U	U	D
62	U	D	D	U	U	U	D	U
63	U	D	D	U	U	U	D	D

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
64	U	D	D	U	U	D	U	U
65	U	D	D	U	U	D	U	D
66	U	D	D	U	U	D	D	U
67	U	D	D	U	U	D	D	D
68	U	D	D	U	D	U	U	U
69	U	D	D	U	D	U	U	D
6A	U	D	D	U	D	U	D	U
6B	U	D	D	U	D	U	D	D
6C	U	D	D	U	D	D	U	U
6D	U	D	D	U	D	D	U	D
6E	U	D	D	U	D	D	D	U
6F	U	D	D	U	D	D	D	D
70	U	D	D	D	U	U	U	U
71	U	D	D	D	U	U	U	D
72	U	D	D	D	U	U	D	U
73	U	D	D	D	U	U	D	D
74	U	D	D	D	U	D	U	U
75	U	D	D	D	U	D	U	D
76	U	D	D	D	U	D	D	U
77	U	D	D	D	U	D	D	D
78	U	D	D	D	D	U	U	U

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
79	U	D	D	D	D	U	U	D
7A	U	D	D	D	D	U	D	U
7B	U	D	D	D	D	U	D	D
7C	U	D	D	D	D	D	U	U
7D	U	D	D	D	D	D	U	D
7E	U	D	D	D	D	D	D	U
7F	U	D	D	D	D	D	D	D
80	D	U	U	U	U	U	U	U
81	D	U	U	U	U	U	U	D
82	D	U	U	U	U	U	D	U
83	D	U	U	U	U	U	D	D
84	D	U	U	U	U	D	U	U
85	D	U	U	U	U	D	U	D
86	D	U	U	U	U	D	D	U
87	D	U	U	U	U	D	D	D
88	D	U	U	U	D	U	U	U
89	D	U	U	U	D	U	U	D
8A	D	U	U	U	D	U	D	U
8B	D	U	U	U	D	U	D	D
8C	D	U	U	U	D	D	U	U
8D	D	U	U	U	D	D	U	D

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
8E	D	U	U	U	D	D	D	U
8F	D	U	U	U	D	D	D	D
90	D	U	U	D	U	U	U	U
91	D	U	U	D	U	U	U	D
92	D	U	U	D	U	U	D	U
93	D	U	U	D	U	U	D	D
94	D	U	U	D	U	D	U	U
95	D	U	U	D	U	D	U	D
96	D	U	U	D	U	D	D	U
97	D	U	U	D	U	D	D	D
98	D	U	U	D	D	U	U	U
99	D	U	U	D	D	U	U	D
9A	D	U	U	D	D	U	D	U
9B	D	U	U	D	D	U	D	D
9C	D	U	U	D	D	D	U	U
9D	D	U	U	D	D	D	U	D
9E	D	U	U	D	D	D	D	U
9F	D	U	U	D	D	D	D	D
A0	D	U	D	U	U	U	U	U
A1	D	U	D	U	U	U	U	D
A2	D	U	D	U	U	U	D	U

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
A3	D	U	D	U	U	U	D	D
A4	D	U	D	U	U	D	U	U
A5	D	U	D	U	U	D	U	D
A6	D	U	D	U	U	D	D	U
A7	D	U	D	U	U	D	D	D
A8	D	U	D	U	D	U	U	U
A9	D	U	D	U	D	U	U	D
AA	D	U	D	U	D	U	D	U
AB	D	U	D	U	D	U	D	D
AC	D	U	D	U	D	D	U	U
AD	D	U	D	U	D	D	U	D
AE	D	U	D	U	D	D	D	U
AF	D	U	D	U	D	D	D	D
B0	D	U	D	D	U	U	U	U
B1	D	U	D	D	U	U	U	D
B2	D	U	D	D	U	U	D	U
B3	D	U	D	D	U	U	D	D
B4	D	U	D	D	U	D	U	U
B5	D	U	D	D	U	D	U	D
B6	D	U	D	D	U	D	D	U
B7	D	U	D	D	U	D	D	D

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
B8	D	U	D	D	D	U	U	U
B9	D	U	D	D	D	U	U	D
BA	D	U	D	D	D	U	D	U
BB	D	U	D	D	D	U	D	D
BC	D	U	D	D	D	D	U	U
BD	D	U	D	D	D	D	U	D
BE	D	U	D	D	D	D	D	U
BF	D	U	D	D	D	D	D	D
C0	D	D	U	U	U	U	U	U
C1	D	D	U	U	U	U	U	D
C2	D	D	U	U	U	U	D	U
C3	D	D	U	U	U	U	D	D
C4	D	D	U	U	U	D	U	U
C5	D	D	U	U	U	D	U	D
C6	D	D	U	U	U	D	D	U
C7	D	D	U	U	U	D	D	D
C8	D	D	U	U	D	U	U	U
C9	D	D	U	U	D	U	U	D
CA	D	D	U	U	D	U	D	U
CB	D	D	U	U	D	U	D	D
CC	D	D	U	U	D	D	U	U

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
CD	D	D	U	U	D	D	U	D
CE	D	D	U	U	D	D	D	U
CF	D	D	U	U	D	D	D	D
D0	D	D	U	D	U	U	U	U
D1	D	D	U	D	U	U	U	D
D2	D	D	U	D	U	U	D	U
D3	D	D	U	D	U	U	D	D
D4	D	D	U	D	U	D	U	U
D5	D	D	U	D	U	D	U	D
D6	D	D	U	D	U	D	D	U
D7	D	D	U	D	U	D	D	D
D8	D	D	U	D	D	U	U	U
D9	D	D	U	D	D	U	U	D
DA	D	D	U	D	D	U	D	U
DB	D	D	U	D	D	U	D	D
DC	D	D	U	D	D	D	U	U
DD	D	D	U	D	D	D	U	D
DE	D	D	U	D	D	D	D	U
DF	D	D	U	D	D	D	D	D
E0	D	D	D	U	U	U	U	U
E1	D	D	D	U	U	U	U	D

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
E2	D	D	D	U	U	U	D	U
E3	D	D	D	U	U	U	D	D
E4	D	D	D	U	U	D	U	U
E5	D	D	D	U	U	D	U	D
E6	D	D	D	U	U	D	D	U
E7	D	D	D	U	U	D	D	D
E8	D	D	D	U	D	U	U	U
E9	D	D	D	U	D	U	U	D
EA	D	D	D	U	D	U	D	U
EB	D	D	D	U	D	U	D	D
EC	D	D	D	U	D	D	U	U
ED	D	D	D	U	D	D	U	D
EE	D	D	D	U	D	D	D	U
EF	D	D	D	U	D	D	D	D
F0	D	D	D	D	U	U	U	U
F1	D	D	D	D	U	U	U	D
F2	D	D	D	D	U	U	D	U
F3	D	D	D	D	U	U	D	D
F4	D	D	D	D	U	D	U	U
F5	D	D	D	D	U	D	U	D
F6	D	D	D	D	U	D	D	U

Table 8. SW3 switches 1 to 8 - ATM address (continued)

SW3								
ATM ID	1	2	3	4	5	6	7	8
F8	D	D	D	D	D	U	U	U
F9	D	D	D	D	D	U	U	D
FA	D	D	D	D	D	U	D	U
FB	D	D	D	D	D	U	D	D
FC	D	D	D	D	D	D	U	U
FD	D	D	D	D	D	D	U	D
FE	D	D	D	D	D	D	D	U

SW4 switches 1, 2, 4, 5, and 6

These switches are reserved for technical support. Do not use.

SW4 switch 3

Switch 3 on SW4 is used for signal termination for port 0 on the ATM ProBridge. Termination is important whenever multiple ATM ProBridges are interconnected via the unit's built-in RS-485 network and the distance between ProBridges exceeds 2000 ft. (609.6 m). The default termination setting on the ATM ProBridge is termination set to **OFF**. Whenever the distance between any ATM ProBridge and another exceeds 2000 ft. (609.6 m), then the first ATM ProBridge and the last ATM ProBridge on the RS-485 network will have termination set to **ON** (down), all others between these two units will have their termination set to **OFF** (up).

SW4 switches 7 and 8

Switches 7 and 8 on switch 4 control the communication protocol between the ATM ProBridge at port 1 and the DVMRe or PC. Normally this is set at RS-232.

Table 9. SW4 switches 7 and 8 - communication protocol

SW4		
Communication protocol	7	8
RS-232	D	U
RS-485	U	D

Technical specifications

ATM ProBridge

General

Housing:	Metal enclosure
Dimensions:	4 x 7 x 1 in. (100 x 175 x 25 mm)
Weight:	4.8 oz. (136 g)
Color:	Black

Environmental

Operating temperature:	0 to 40° C.
Relative humidity:	10 to 80%. Storage: 10 to 95%

Electrical

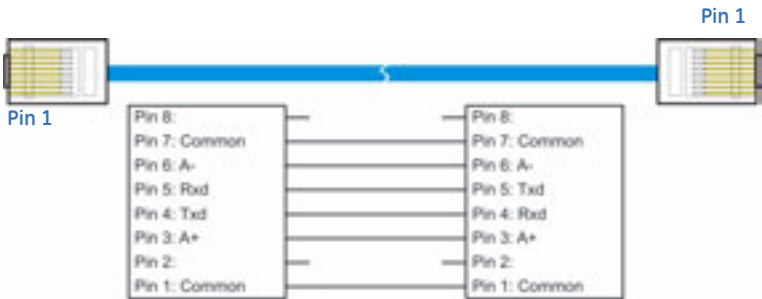
AC power:	Included external power supply
Voltage range:	110 to 240 VAC $\pm 10\%$
Current:	200 mA
DC power:	DC jack, positive center
Power supply voltage:	12 VDC
Current:	110 mA
Power consumption:	1.5 watts max.

Cable Specifications

ATM ProBridge to DVMRe Triplex

Part number:	4310-0034B
Communication type:	RS-232
Connector type:	RJ45
Length:	5 ft. (1.52 m)

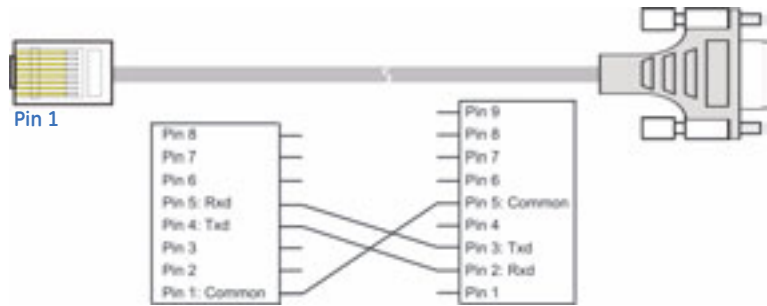
Figure 8. 4310-0034B cable



ATM ProBridge to PC

Part number:	4310-0047B
Communication type:	RS-232
Connector type:	RJ45, DB9-F
Length:	6 ft. (1.82 m)

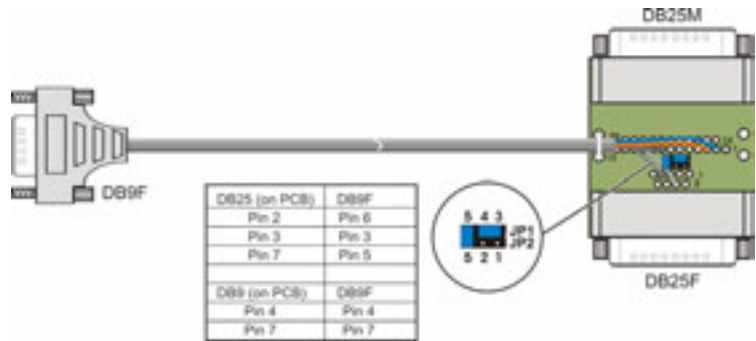
Figure 9. 4310-0047B cable



ATM triport adapter

Part number:	0900-0144D
Communication type:	RS-232
Connector type:	DB9F, DB25M, DB25F
length:	6 ft. (1.83 m)

Figure 10. 0900-0144D triport cable



Jumper settings

These settings do not need to be changed under normal conditions.

Default settings for common clock **RxCk** (digital and/or analog modems) are:

- 5 to 5 on JP1 and JP2
- 4 to 3 on JP1

Settings for separate clocks (digital modems only) are:

- 5 to 4 on JP1
- 5 to 2 on JP2

Settings for common clock **TxClk** (digital and/or analog modems) are:

- 5 to 5 on JP1 and JP2
- 2 to 1 on JP2

Troubleshooting and support

Before calling for technical support, see if this troubleshooting section can assist you in resolving your problems.

The autodetect mode should complete in approximately 20 to 45 seconds. In some instances, autodetect will not be able to detect the protocol or the ATM's messaging format. In these cases it may be necessary to complete the configuration using the DIP switches and/or the ATM ProBridge menus through the use of HyperTerminal.

To resolve this issue, do the following:

1. Clear the ATM ProBridge's nonvolatile memory by placing DIP switch bank 1 switches 1 to 4 in the **DOWN** position and cycle power to the ATM ProBridge. Return the switches 1 to 4 to the **UP** position before continuing.
2. Check that the version of firmware installed in the ATM ProBridge is 2.3 or higher. Earlier versions do not recognize async networks.
3. Set the ATM ProBridge to the most common setting for an ATM network:
 - Protocol: Sync
 - Baud rate: SYNC (doesn't need to change)
 - Parity: None
 - Mode: Sync-32
 - Code: EBCDIC
 - Device: ATM generic ASYNC/SYNC
4. Perform a transaction or have a bank branch representative help.
5. Observe any data that was recorded. It will either be no data, garbage, or a good transaction. If the ATM

transaction was either of the first two then you must try a different setting.

6. Set the ATM ProBridge to the next most common setting for an ATM network:
 - Protocol: SDLC
 - Baud rate: 9600
 - Parity: None
 - Mode: Sync NRZ
 - Code: EBCDIC
 - Device: ATM generic SDLC
7. If you get similar results, then try the third most common settings:
 - Protocol: Async
 - Baud rate: 9600
 - Parity: None
 - Mode: 1-stop
 - Code: 8-bit ASCII
 - Device: ATM generic ASYNC/SYNC

Note: This setting may take some changing of the baud rate to get it right since async protocols are dependent on the baud rate.

Contacting technical support

For assistance installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, you may contact technical support during normal business hours (Monday through Friday, excluding holidays, between 6 a.m. and 5 p.m. Pacific Time).

Table 10. Sales and support contact information

	Sales	Technical support
Phone	Toll-free: 888.GESECURity (888.437.3287 in the US, including Alaska and Hawaii; Puerto Rico; Canada). Outside the toll-free area: 503.885.5700.	
E-mail	info@gesecurity.com	generaltech@ge.com
Fax	800.483.2495	541.752.9096 (24 hours/day)

Note: Be ready at the equipment before calling for technical support.

Online publication library

Another great resource for assistance with your GE product is our online publication library, available to all of our customers. To access the library, go to our website at the following location:

<http://www.gesecurity.com>

In the **Tools** area at the top, click the *Publication Library* link. After you register and log on, you may search through our online library for the documentation you need.¹

1. Many GE documents are provided as PDFs. To read these documents, you will need Adobe Acrobat Reader, which can be downloaded free from Adobe’s website at www.adobe.com.