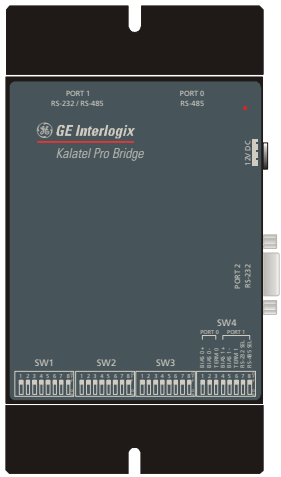
User

Manual

0150-0265A

ProBridge Gateway



GE Interlogix

For the latest product specifications, visit GE Interlogix, Kalatel division, online at www.kalatel.com or contact your Kalatel sales representative.

For technical support before and after installation, call 800-469-1676.

Technical support is available 24 hours a day, 7 days a week.

Call:	**Tech Support**	800-469-1676 (6 A.M. – 5 P.M. PST Monday through Friday)
	Tech Support	541-740-3589 (all other times)
	Main	800-343-3358 or 541-754-9133
Fax:	**Tech Support**	541-752-9096 (available 24 hours a day)
	Main	541-754-7162
Web:	www.kalatel.com	

0150-0265A / August 2003

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.

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BEFORE YOU BEGIN

Read these instructions before installing or operating this product.

Note: This installation should be made by a qualified service person and should conform to local codes.

This manual provides installation and operation information. To use this document, you must have the following minimum qualifications:

- A basic knowledge of CCTV systems and components
- A basic knowledge of electrical wiring and low-voltage electrical hookups

Use this product only for the purpose for which it was designed.

Customer Support

For assistance in installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact Kalatel Technical Support:

GE Interlogix, Kalatel division
Call: 800-469-1676
Fax: 541-752-9096

Note: You should be at the equipment, ready with details before calling Technical Support.

Conventions Used in this Manual

Boldface or button icons highlight command entries. The following **WARNING, CAUTION,** and **Note** statements identify potential hazards:

* **WARNING:**
Improper use of this equipment can cause severe bodily injury or equipment damage.

** **CAUTION:**
Improper use of this equipment can cause equipment damage.

Note: Notes contain important information about a product or procedure.

* This symbol indicates electrical warnings and cautions.
** This symbol indicates general warnings and cautions.

1 OVERVIEW

The ProBridge Gateway is a product specific ProBridge translator that converts RS485 messages between a legacy (IMPAC) RS485 network and a Kalatel RS485 network. Its main purpose is to act as a router between a network that uses zone addressing and a network that uses direct camera addressing. This allows systems to utilize PTZ camera control over the TCP/IP connection with WaveReader in systems that use camera addressing based on matrix switcher input numbers. This product is a derivative of the standard PB3 Protocol Converter product.

The ProBridge Gateway has the following two modes of operation:

- The Programming mode
- The Operating mode

In the **Programming** mode the installer can set up the mapping between cameras assigned to multiplexers/ DVMRe products and dome cameras. This allows for totally arbitrary camera mapping, i.e. DVMRe 5, camera 14 can be mapped to camera number 983.

In the **Operating** mode the ProBridge Gateway will translate messages to ensure that telemetry messages originating from Mux/DVMRe products will correctly address the intended dome.

1.1 PROBRIDGE GATEWAY COMPONENTS:

The ProBridge Gateway product includes:

(1) CBR-PB3-GW ProBridge unit.

(1) P/N 4310-0034B: RJ45 to RJ45 cable. Connects the ProBridge Gateway RS485 Port 0 to the DVMRe Triplex RS485 port. This cable is 6' in length.

(1) P/N 4310-0047B: RJ45 to DB9F cable. Connects the ProBridge Gateway to RS232 Port 1 to a PC or Notebook for programming. This cable is 6' in length.

(1) P/N 4310-0032A: RJ45 to flying leads cable. Connects the ProBridge Gateway to the KTD-405 Keyboard and the dome cameras through the I/O junction box. This cable is 6' in length.

(1) P/N 4010-0007: 12VDC 120VAC Power Supply or P/N 4010-0008: 12VDC 220VAC Power Supply.

(1) P/N 0150-0265A: ProBridge Gateway User Manual.

1.1.1 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 ProBridge is limited to 50'. Cable length between the ProBridge unit and the DVMRe is also limited to 50'. 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.

RS485 Limitations: If multiple PB3 units are connected to a single DVMRe unit, the distance between the first and last ProBridge unit is limited to 3,000 feet (RS-485 communications).

1.2 POWER

The 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.

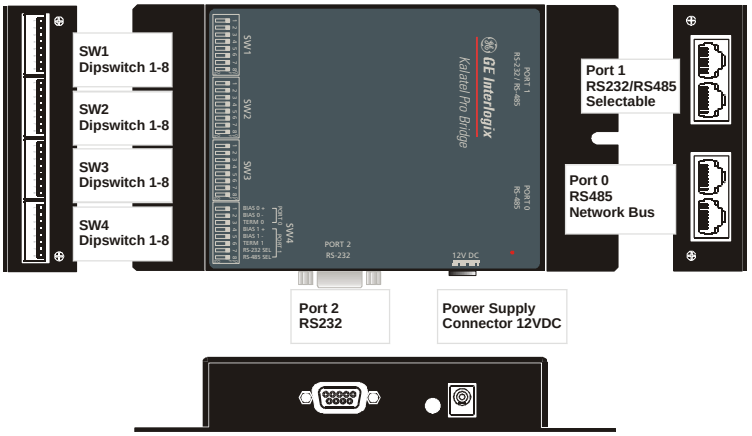
4310-0007: 120VAC Power Supply

Power Supply Input
Voltage: 120 Volt AC **Tolerance:** ±10% **Frequency:** 60 Hz
Power Supply Output
Voltage: 12 Volt DC **Current:** 110mA **Power:** 1.3 Watts **Connector:** 2.1mm female barrel. Center Positive

4310-0008: 220VAC Power Supply

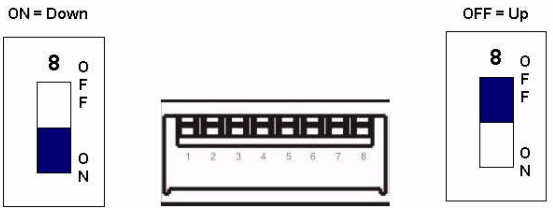
Power Supply Input
Voltage: 220 Volt AC **Tolerance:** ±10% **Frequency:** 50 Hz
Power Supply Output
Voltage: 12 Volt DC **Current:** 110mA **Power:** 1.3 Watts **Connector:** 2.1mm female barrel. Center Positive

1.3 PROBRIDGE GATEWAY PRODUCT DIAGRAM



Note: Port 0 and Port 1 have looping RJ45 connectors.

1.3.1 DIPSWITCH POSITION LEGEND

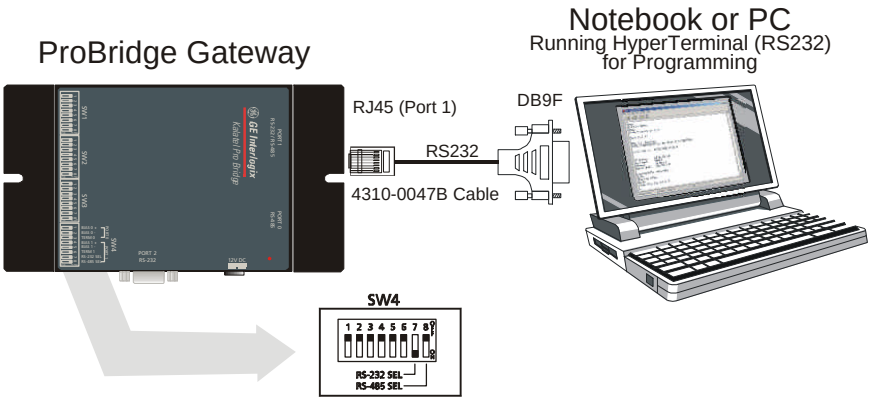


2 PROGRAMMING MODE

Setting the ProBridge Gateway to Programming mode:

- Set the device to programming mode by setting the dipswitch at SW4. (SW4 RS232 SEL on, RS485 SEL off)
- Ensure the RS232 (4310-0047B) cable is connected from the PC or Laptop to one of the port 1 connectors on the ProBridge Gateway.
- Open HyperTerminal on a laptop PC,
  - Set the RS232 port to 9600, N, 8, 1. (File/Properties, “Connect to” tab, “Configure” button)
  - Set local echo on (File/Properties, “Settings” tab, “ASCII Setup” button)
- Cycle power on the ProBridge Gateway box and follow the instructions in HyperTerminal.

Connection Diagram for programming mode is shown below

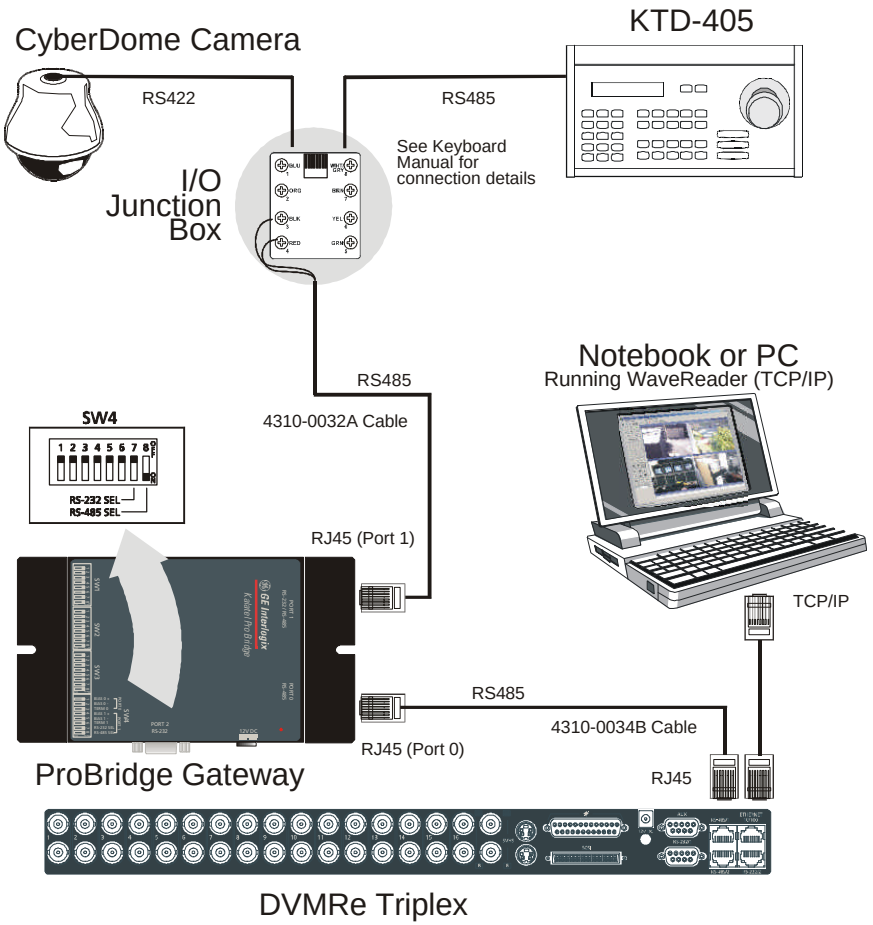


3 OPERATING MODE

Setting the ProBridge Gateway in Operating mode:

- Set the device to operating mode by setting the dipswitch at SW4. (SW4 RS232 SEL off, RS485 SEL on)
- Connect the devices and cables as shown below.
- Cycle power on the ProBridge Gateway box and the other devices.

Connection Diagram for Operating mode is shown below.



4 OPERATION

4.1 MESSAGE TRANSLATION FROM LEGACY (IMPAC) RS485 NETWORK TO THE KALATEL RS485 NETWORK:

- Legacy (Impac) RS485 network (Multiplexers/DVMRe's) is referenced as Port 0 in the rest of this document.
- Kalatel RS485 network (KTD405 and domes) is referenced as Port 1 in the rest of this document.
- **Only telemetry messages (type 0x09) are processed**. All other message types are passed through unchanged.

4.1.1 ADDRESSING

Kalatel domes can be addressed from 0000 up to 1023.

4.1.2 PRESET:

Port 0: Example with **Set Preset** and **Go To** Preset on WaveReader.

Set Preset: On drop down menu, select the preset number from preset menu (1 to16). Click "Set" to set the preset.

Go To Preset: On the drop down menu, select the preset number from preset 1 to16. Click "Go to" to recall that preset (Presets can also be generated on Muxes that have advanced alarm handling capability). The DVMRe will receive these preset messages via TCP/IP and convert them to RS485. They will appear at port 0 in the following format:

Message format:

Synchronization	0xFF
Length	0x07
Message type 1	0x09
Message type 2	0x0A/0x0B (set preset/call preset)
Destination	Impac Mux/DVMRe
Source	Impac Mux/DVMRe
Camera number	Camera connected to Mux/DVMRe (00-0F)
Preset number	0 to 15 (for preset 1 to 16)
Checksum	2's complement

Port 1: Set Preset and **Call Preset** on the KTD405.

Message format:

Synchronization	0xFF
Length	0x07
Message type 1	0x20 Digiplex message
Message type 2	312 command code CMD312_SET_PRESET(Q) / CMD312_FIND_PRESET(E)
Destination	Mapped camera: 0x80-0xFD* 0x80 + camera # high byte
Source	0x00-0xFD keypad address <= Impac Mux/DVMRe

Camera number	Mapped camera: Camera (site) # low byte
"Monitor " value	Preset number value 1 to 16 (for Preset 1 to 16) (General command parameter)
Checksum	2's complement

4.1.3 MOVEMENT SPEED:

4.1.3.1 PAN, TILT, AND ZOOM (PTZ)

WaveReader: Variable speed range 0 – 15 (Pan & Tilt) based on variable Pan & Tilt speed value from WaveReader, will be converted to range 1-32 on the Kalatel RS485 network. (Zoom: fixed at 10 at Kalatel RS485 network)

Two messages are generated for controlling PTZ: Motor message and Variable Speed message. The ProBridge Gateway combines these two into one message as follows:

Port 0: Example with PTZ messages on WaveReader.

Motor Message format:

Synchronization	0xFF
Length	0x07
Message type 1	0x09
Message type 2	0x05
Destination	Impac Mux/DVMRe
Source	Impac Mux/DVMRe
Camera number	Camera connected to Mux/DVMRe (00-0F)
Motor command	Impac motor command
Checksum	2's complement

Variable Speed Message format:

Synchronization	0xFF
Length	0x0B
Message type 1	0x09
Message type 2	0x0C
Destination	Impac Mux/DVMRe
Source	Impac Mux/DVMRe
Camera number	Camera connected to Mux/DVMRe (00-0F)
Pan speed	Pan speed value
Tilt speed	Tilt speed value
Zoom speed	Zoom speed value
Focus speed	Focus speed value
Iris speed	Iris speed value
Checksum	2's complement

Port 1: PTZ message at KTD405. Message type 1=0x09, Message type 2=0x14

Message format:

Synchronization	0xFF
Length	0x09
Message type 1	0x09 Telemetry message type 1
Message type 2	0x14 New PTZ packet
Destination	0x00-0xFD Zone = Destination + 1 (Mapped camera)

Source	0x00-0xFD keypad address <= Impac Mux/DVMRe
Camera number	Mapped camera: 32 Cameras/Zone
Pan information	0x00: No Pan movement; 0x01 to 0x20: Pan Left at speed 1 to 32...
Tilt information	0x00: No Tilt movement; 0x01 to 0x20: Tilt Down at speed to 32...
Zoom information	0x00: No Zoom; 0x80+(0x01 to 0x20): Zoom In at speed 1 to 32...
Checksum	2's complement

4.1.3.2 IRIS AND FOCUS (No Speed Values)

There is a motor start and motor stop command associated with each of the 4 functions to be controlled: **Iris Open, Iris Close, Focus Near, Focus Far**. A message is generated each time one of these four keys are pressed or released. The ProBridge Gateway converts these messages to 312 messages as follows:

Port 0: Example with Iris Close (Start) on WaveReader

Motor Message format:

Synchronization	0xFF
Length	0x07
Message type 1	0x09
Message type 2	0x05
Destination	Impac Mux/DVMRe
Source	Impac Mux/DVMRe
Camera number	Camera connected to Mux/DVMRe (00-0F)
Motor command	Iris Close Start (Impac motor command)
Checksum	2's complement

Port 1: Iris, Focus message at KTD405

Message format:

Synchronization	0xFF
Length	0x07
Message type 1	0x20 Digiplex message
Message type 2	312 command code CMD312_IRIS_CLOSE(C) (Start)
Destination	Mapped camera: 0x80-0xFD* 0x80 + camera # high byte
Source	0x00-0xFD keypad address <= Impac Mux/DVMRe
Camera number	Mapped camera: Camera (site) # low byte
"Monitor " value	0 (General command parameter)
Checksum	2's complement

4.1.3.3 MOUSETRAK COMMAND:

Mapped address only. Nothing else has been changed.

4.1.3.4 AUX:

Not available at this time.

4.2 MESSAGE TRANSLATION FROM KALATEL RS485 NETWORK TO LEGACY (IMPAC) RS485 NETWORK:

All messages are passed through unchanged (transparent), with the exception of Kalatel Menu Mode messages, which are blocked. (Message types 0x08, 0x09, 0x10, 0x11, 0x12, 0x13 and 0x14 are passed through)

5 CABLE SPECIFICATIONS

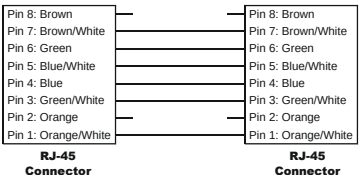
5.1 PROBRIDGE TO DVMRE TRIPLEX CABLE

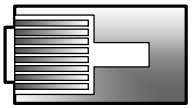
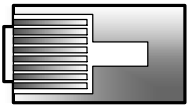
Part Number : 4310-0034B

Communication Type: RS485

Connector Type: RJ-45, RJ-45

Cable Required: 5 Foot RJ-45 to RJ-45 Triplex RS485 Cable (Supplied). Connects ProBridge to DVMRe-CT.



RJ-45 Connector	RJ-45 Connector
	

5.2 PROBRIDGE TO PC/LAPTOP CABLE

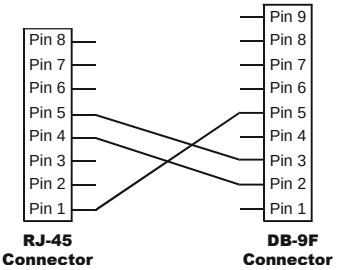
Part Number : 4310-0047B

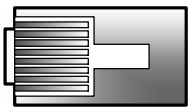
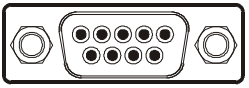
Communication Type: RS232

Connector Type: RJ-45 ,DB9F

Cable Required: 6 Foot RJ-45 to DB9F RS232 Cable (Supplied). Connects ProBridge to the serial port of a PC or Laptop computer.

NOTE: This cable is used for Programming ProBridge via Windows HyperTerminal



RJ-45 Connector	DB9F Connector
	

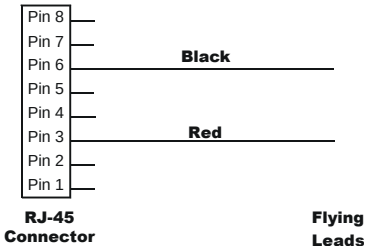
5.3 PROBRIDGE TO I/O JUNCTION BOX

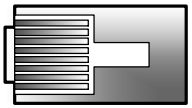
Part Number : 4310-0032A

Communication Type: RS485

Connector Type: RJ45, Flying Leads

Cable Required: RS-485 Flying Leads Cable. Interconnects ProBridge with KTD-405 and Dome Cameras.



RJ45 Connector	Flying Leads
	

6 SPECIFICATIONS

Physical	
Housing	Metal enclosure.
Dimensions (W x L x H)	4.0" **x** 7.0" **x** 1.0". (100mm **x** 175mm **x** 25 mm)
Nominal Weight	4.8 oz (136 g)
Shipping Weight	1 lb (453 g) packaged, including the external AC power supply and manual.
Color	Black.

Environmental	
Temperature	0 to 40 °C, operating.
Relative Humidity	90%, non-condensing.

Electrical	
AC Power	External AC power supply included.
Voltage Range:	110 to 240 VAC ± 10%
Current:	200 mA
DC Power	DC jack, positive center.
Power Supply Voltage:	12 VDC
Current:	110 mA
Power:	1.5 W

Note: All specifications are subject to change without notice. Kalatel believes that all specifications are correct, however no liability is assumed for omissions or errors.

WARRANTY AND RETURN INFORMATION

GE Interlogix, Kalatel division, warrants its equipment for three years from the date of purchase. This warranty covers defects in materials and workmanship only; equipment failures that are due to improper installation, modification, abuse, or acts of nature are not covered by this warranty. The repair department will evaluate all equipment returned for repair to determine warranty coverage. The Tech Support Manager will resolve any questions that may arise during evaluation to make a final determination.

Note: The three-year warranty does not apply to the following products: MobileView® and the monitor CRT, which carry a 12-month warranty from the date of purchase.

For all warranty repairs, GE Interlogix, Kalatel division, will cover all costs, including parts, labor, and shipping. Repaired equipment will be returned via the same method of shipment in which it was received. If a customer requests a faster return shipment, the difference will be charged.

For all non-warranty repairs, the customer will be billed for parts, labor, and shipping. Labor will be billed in half-hour increments.

Note: Customers requesting an estimate prior to repair will be notified by phone. If they cannot be reached, they will be notified by fax. If we are unable to reach the contact person for repair authorization after one phone attempt and two fax attempts, the equipment will be returned without being repaired. We will hold equipment no longer than two weeks.

ADVANCE REPLACEMENT POLICY

When an advance replacement is required, we will send the customer replacement equipment from our stock and receive the returned product in exchange. The received equipment will be evaluated and the repair department will determine whether it is a warranty replacement. If it is non-warranty, see our repair policy above for details. The following guidelines will be used for all advance replacements:

- Fewer than 45 days from purchase, GE Interlogix, Kalatel division, will replace the product with new equipment.
- From 45 days to 1 year from purchase, GE Interlogix, Kalatel division, will replace the product with refurbished equipment.
- From 1 year to 3 years from purchase, the product must be sent in for repair. Advance replacements will be sent for a fee of $100.

If you have questions about this policy, please contact Kalatel's RMA department at 800-469-1676.