

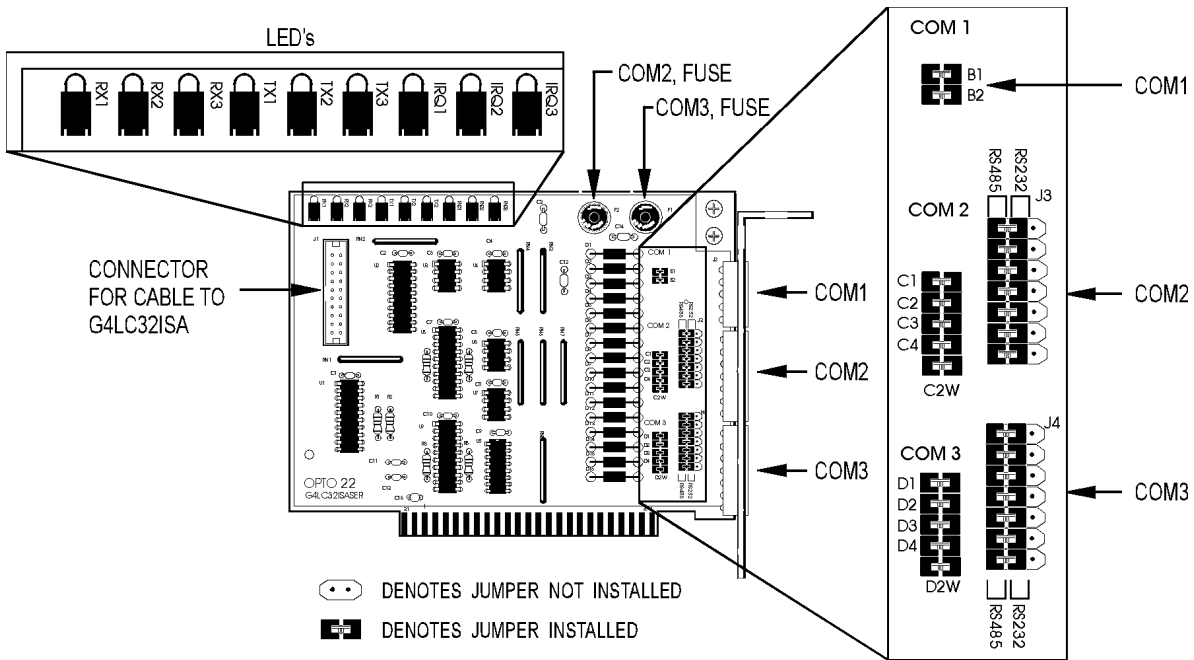
Form 644-010129

### Description

Part Number	Description
G4LC32ISASER	ISA Serial Adapter for G4LC32ISA

### G4LC32ISASER

The following diagram shows the communication jumper groups, LED's, RS-232 fuses, and physical layout of the G4LC32ISASER daughter card.



G4LC32ISASER Physical Layout

### G4LC32ISA Descriptions

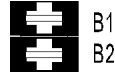
LED	Description
RX1	Receive LED for COM1
RX2	Receive LED for COM2
RX3	Receive LED for COM3
TX1	Transmit LED for COM1
TX2	Transmit LED for COM2
TX3	Transmit LED for COM3
IRQ1	IRQ LED for COM1
IRQ2	IRQ LED for COM2
IRQ3	IRQ LED for COM3

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### G4LC32ISASER Jumpers

#### COM1 Jumper Settings

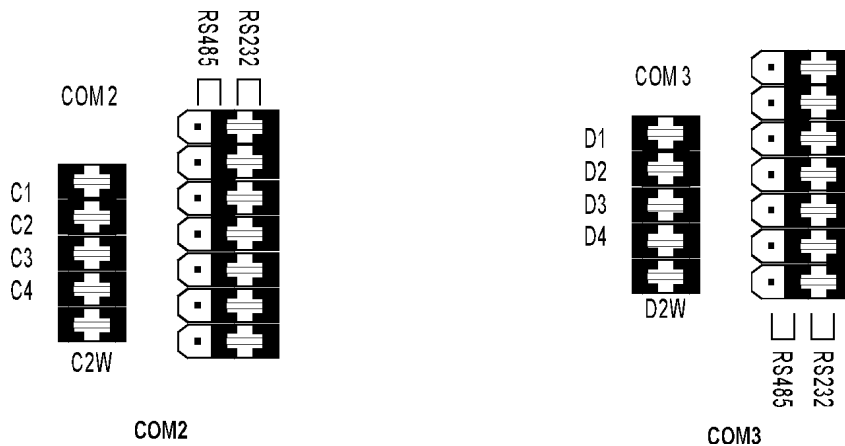
Install jumpers on B1 and B2 to provide termination and biasing for COM1, the RS-485 2-wire, half-duplex serial port.



#### COM2 and COM3 Jumper Settings

COM2 and COM3 offer RS-485 2- or 4-wire communications as well as RS-232. Each port is jumper selectable for the type of mode required. Only one serial mode can be used at a time. Each communication port has two groups of jumpers. They need to be set according to the serial mode used.

#### RS-232 Jumper Settings



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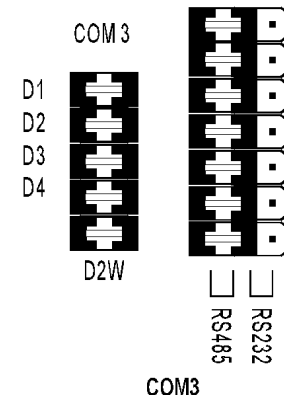
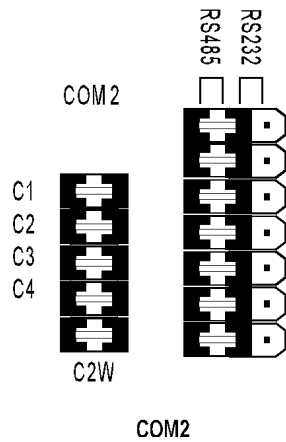
### G4LC32ISASER Jumpers (Continued)

#### RS-485 Jumper Settings

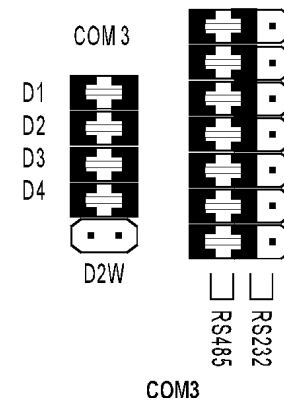
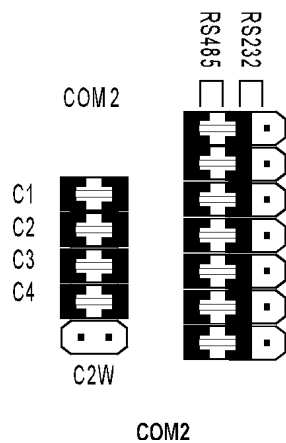
The "C" and "D" jumper groups are used for biasing and terminating the RS-485 ports. The physical location of the controller on the RS-485 communication network effects which jumpers are installed.

If the controller is at the physical beginning or end of the RS-485, install these jumpers:

#### 2-Wire Half-Duplex



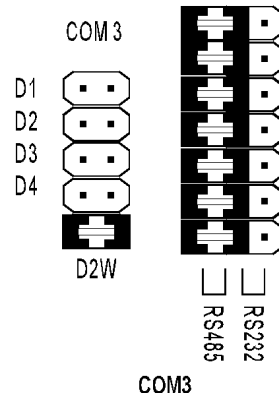
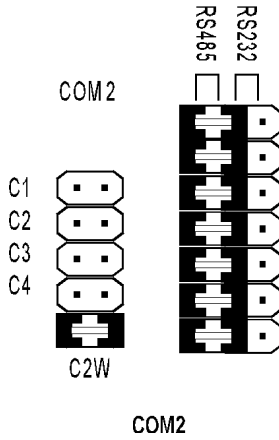
#### 4-Wire Full-Duplex



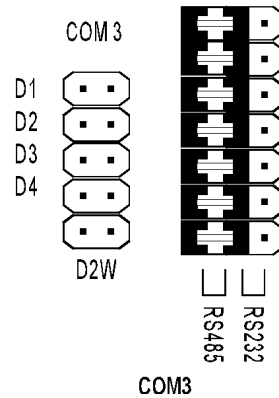
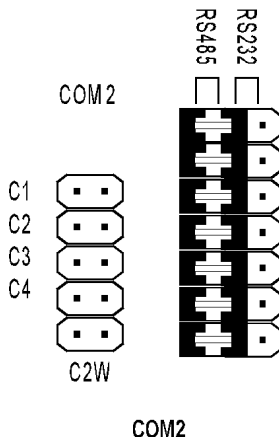
### G4LC32ISASER Jumpers (Continued)

If the controller is **not** at the physical beginning or end of the RS-485 network, install these jumpers:

#### 2-Wire Full-Duplex



#### 4-Wire Full-Duplex



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### Wiring

**Important:** Connectors wired for other Mystic 200 controllers may not be compatible with the G4LC32ISA. Use the connectors provided and refer to the configuration label for wiring information.

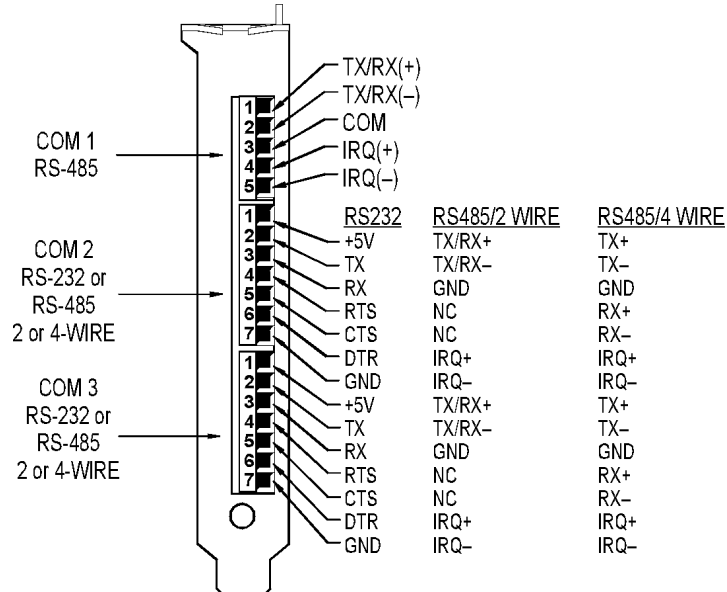
#### COM0 and COM1

COM0 on the G4LC32ISA and COM1 on the G4LC32ISASER uses a pluggable 5-terminal block. The pinouts are:

Pin	RS-485 2-Wire Mode Only
1	TX/RX (+)
2	TX/RX (-)
3	Common Ground
4	Interrupt (+)
5	Interrupt (-)

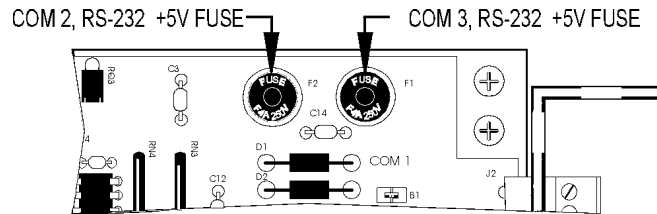
#### COM2 and COM3

COM2 and COM3 on the G4LC32ISASER use a pluggable 7-terminal block. The pinouts are:



### Fusing for RS-232 +5V

A +5VDC fused source is available from the COM2 or COM3 ports on Pin 1. Fuse F2 is for COM2 and fuse F1 is for COM3. The replacement part number for this fuse is Opto 22 P/N FUSE01G4 (Wickman p/n 19373A).



### Installation

This section describes how to install a G4LC32ISASER card into your computer. Please refer to the owner's manual for your computer for information on opening and removing the computer's cover.

To install the daughter cards into the computer:

1. Find an unoccupied 8- or 16-bit ISA expansion slot adjacent to the G4LC32ISA card.
2. Remove the expansion slot cover if one is installed.
3. Discharge any static electricity you may have by touching the computer's metal chassis.
4. Attach one end of the cable included with the daughter board card to the daughter board, and the other to the G4LC32ISA.
5. Install the card by orienting the computer connector facing the expansion slot and the mounting bracket facing the access port.

### Specifications

Power Requirements:	5 VDC $\pm$ 0.25 V @ 0.5 A
Operating Temperature:	0° C to 70° C
Storage Temperature:	-25° C to 85° C
Humidity:	5% to 95% Relative Humidity
Baud Rate:	300 - 115.2 KBd (All ports)
RS-485:	2-wire or 4-wire
RS-232:	TX, RX, Gnd, RTS, CTS
Weight:	0.1 Kg

## Products

Opto 22 produces a broad array of reliable, flexible hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications.

## SNAP Ethernet Systems

Based on the Internet Protocol (IP), SNAP Ethernet systems offer flexibility in their network connectivity and in the software applications they work with. The physical network may be a wired Ethernet network, a cellular wireless network, or a modem. A wide variety of software applications can exchange data with SNAP Ethernet systems, including:

- Opto 22's own ioProject™ suite of control and HMI software
- Manufacturing resource planning (MRP), enterprise management, and other enterprise systems
- Human-machine interfaces (HMIs)
- Databases
- Email systems
- OPC client software
- Custom applications
- Modbus/TCP software and hardware.



SNAP Ethernet system hardware consists of controllers and I/O units. Controllers provide central control and data distribution. I/O units provide local connection to sensors and equipment.

## SNAP OEM Systems

Opto 22 SNAP OEM I/O systems are highly configurable, programmable processors intended for OEMs, IT professionals, and others who need to use custom software with Opto 22 SNAP I/O modules.

Linux® applications running on these systems can read and write to analog, simple digital, and serial I/O points on SNAP I/O modules using easily implemented file-based operations. Applications can be developed using several common development tools and environments, including C or C++, Java, and shell scripts.



## M2M Systems

Machine-to-machine (M2M) systems connect your business computer systems to the machines, devices, and environments you want to monitor, control, or collect data from. M2M systems often use wireless cellular communications to link remote facilities to central systems over the Internet, or to provide monitoring and control capability via a cellular phone.

Opto 22's Nvio™ systems include everything you need for M2M—interface and communications hardware, data service plan, and Web portal—in one easy-to-use package. Visit [nvio.opto22.com](http://nvio.opto22.com) for more information.

## Opto 22 Software

Opto 22's ioProject and FactoryFloor® software suites provide full-featured and cost-effective control, HMI, and OPC software to power your Opto 22 hardware. These software applications help you develop control automation solutions, build easy-to-use operator interfaces, and expand your manufacturing systems' connectivity.



## Quality

In delivering hardware and software solutions for worldwide device management and control, Opto 22 retains the highest commitment to quality. We do no statistical testing; each product is made in the U.S.A. and is tested twice before leaving our 160,000 square-foot manufacturing facility in Temecula, California. That's why we can guarantee solid-state relays and optically-isolated I/O modules *for life*.

## Product Support

Opto 22's Product Support Group offers comprehensive technical support for Opto 22 products. The staff of support engineers represents years of training and experience, and can assist with a variety of project implementation questions. Product support is available in English and Spanish from Monday through Friday, 7 a.m. to 5 p.m. PST.

## Opto 22 Web Sites

- [www.opto22.com](http://www.opto22.com)
- [nvio.opto22.com](http://nvio.opto22.com)
- [www.internetio.com](http://www.internetio.com) (live Internet I/O demo)

## Other Resources

- OptoInfo CDs
- Custom integration and development
- Hands-on customer training classes.



## About Opto 22

Opto 22 manufactures and develops hardware and software products for industrial automation, remote monitoring, enterprise data acquisition, and machine-to-machine (M2M) applications. Using standard, commercially available Internet, networking, and computer technologies, Opto 22's input/output and control systems allow customers to monitor, control, and acquire data from all of the mechanical, electrical, and electronic assets that are key to their business operations. Opto 22's products and services support automation end users, OEMs, and information technology and operations personnel.

Founded in 1974 and with over 85 million Opto 22-connected devices deployed worldwide, the company has an established reputation for quality and reliability.