

OPTO 22

DATA SHEET

Form 634-010129

CONTROLLER ISA

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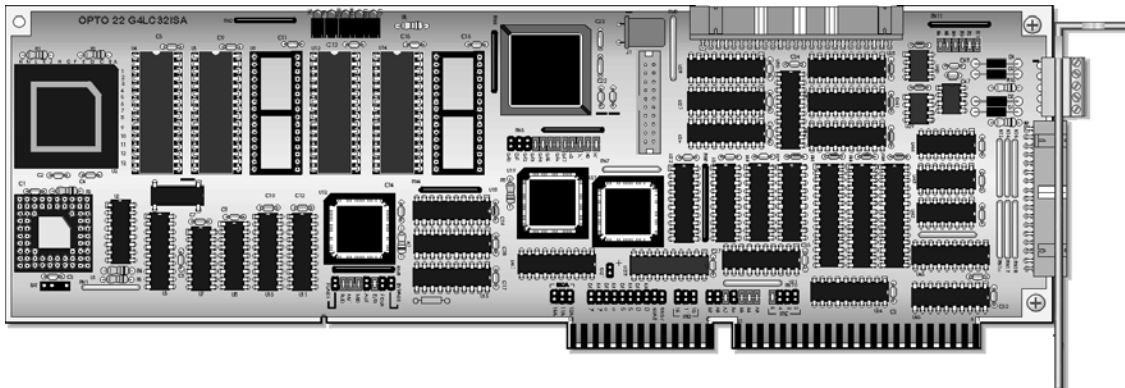
Description

The G4LC32ISA Controller is a high performance real-time controller designed to work within the Opto 22 family of processors and I/O control units. It may be mounted in both active or passive AT backplanes, and communicates directly with other devices on the

bus as a "Bus Master".

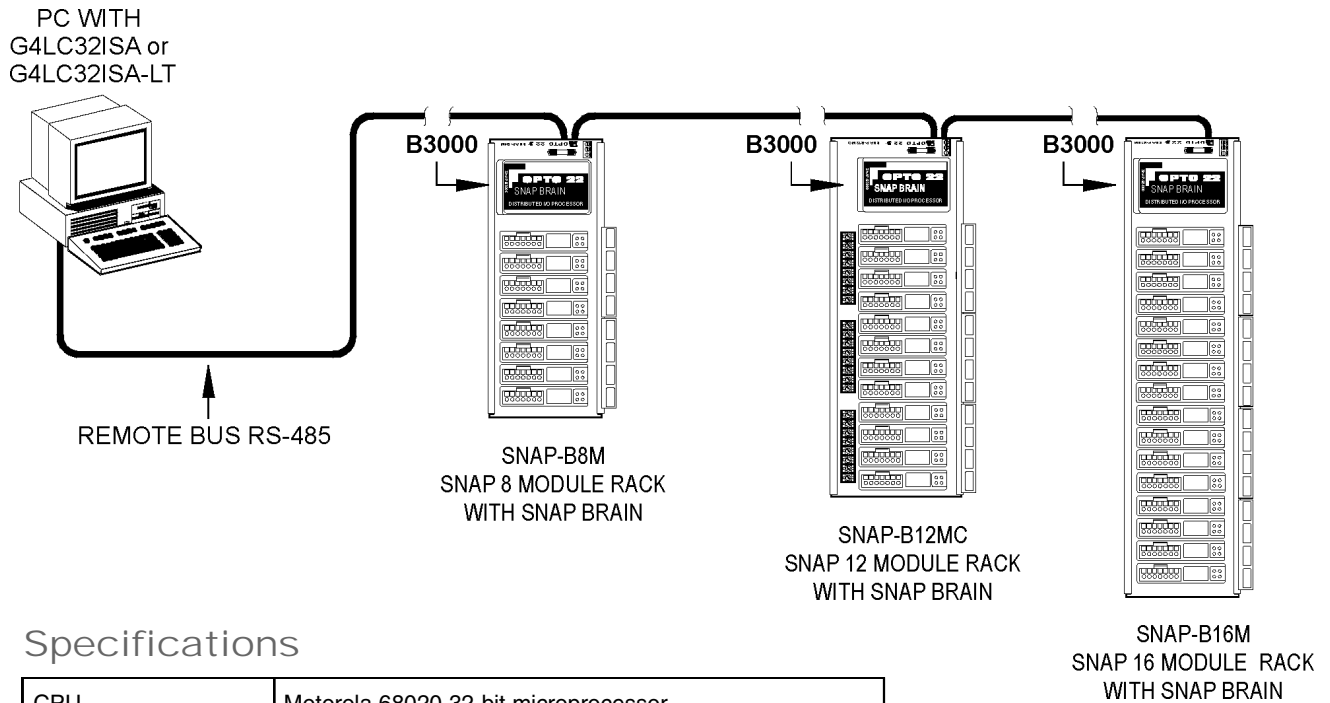
Programming is accomplished with OptoControl or Cyrano 200, Opto 22's revolutionary flow chart based programming languages. Programs are transportable across the entire line of Opto 22 processors.

Part Number	Description
G4LC32ISA	Opto 22 ISA Controller



Description (Continued)

G4LC32ISA Stand-alone Architecture



Specifications

CPU	Motorola 68020 32-bit microprocessor
Optional	Motorola 68882 math coprocessor
Power Requirements	5 VDC \pm 0.25 V @ 1.5 A
Temperature	0° C to 70° C
CPU Clock Frequency	16.67 MHz
FLASH Memory	256 KB expandable to 1 MB
RAM	256 KB with battery backup expandable to 2 MB
Communications	One 2-wire half-duplex RS-485 port baud rate Expansion cards One Mystic Local bus port
Watchdog Timer	Hardware
Real-time Clock	Epson 62421A clock/calendar with battery backup
RAM/Clock Battery	3.6 V lithium, non-rechargeable
Software	FactoryFloor (OptoControl, OptoDisplay, and OptoServer) Classic Software (Cyrano, Mystic MMI, MDS)

Specifications (Continued)

Software

The G4LC32ISA is designed to work in combination with FactoryFloor, Opto 22's new suite of Windows 32-bit software, which delivers total control to industrial automation customers. FactoryFloor consists of three integrated components:

- OptoControl, a graphical, flowchart-based development environment for control solutions
- OptoDisplay, a graphical, multimedia operator interface package
- OptoServer, a robust data server that connects the controller network with the PC-based FactoryFloor network.

G4LC32ISA configuration and development are performed through OptoControl on a PC workstation. OptoControl is an easy to use, self-documenting control environment that uses a plain English command set and a long tagname database that is shared by all FactoryFloor components. The G4LC32ISA also works with Opto 22's classic 16-bit software: Cyrano, Mystic MMI and Mystic Data Server (MDS.)

Communication Options (Standard)

- One RS-485 serial port.
- One high-speed Mystic local bus

Interface Options (Adapter Cards)

MODEL G4LC32ISASER	The G4LC32ISASER daughter board provides three serial ports; COM1 through COM3, on a half size adapter card that plugs into any 8 or 16-bit ISA slot.
MODEL G4LC32ISAARC	The G4LC32ISAARC daughter card provides one dedicated ARCNET port via a BNC connector. It plugs into any 8 or 16-bit ISA slot.

I/O Connectivity

Up to 4096 I/O points can be connected per serial COM port.

Expansion Options(RAM and ROM)

The RAM can be used to store a user's control strategy (program) and data. The flash memory (ROM) stores a kernel (operating system) and can be used to store a control strategy permanently. The use of flash technology allows the user to remotely download new firmware offered by Opto 22.

- RAM: Base, 256K Expandable to 2 MB
- ROM: Base, 256K Expandable to 1 MB

Power Supplies

The G4LC32ISA-LT uses power from the PC in which it is mounted.

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 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
- nvio.opto22.com
- 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.