

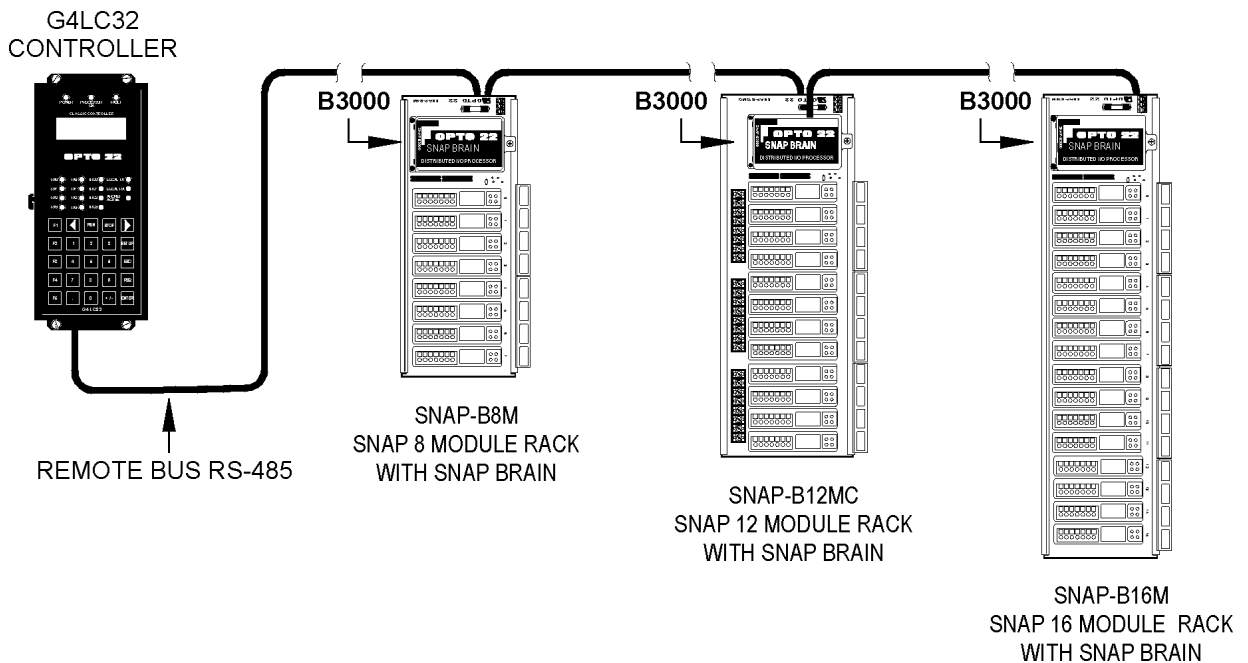
Form 639-010129

Description

The G4LC32 Controller is a high-performance real-time industrial microcomputer designed to work within the Opto 22 family of rugged and compact controllers and I/O units. The G4LC32 features a 32-bit 68020 microprocessor and a 68881 floating point math coprocessor. Expandable battery backed RAM and ROM can accommodate large user applications and data collection requirements. Four serial ports, an ARCNET port, and a high speed local port provide flexible communication choices.

The controller is easily programmed with OptoControl, Opto 22's flow chart based programming language. Complex control problems are broken down into logical pieces with OptoControl's sequential logic presentation.

Part Number	Description
G4LC32	Classic Controller G4LC32



Description (Continued)

Software

The G4LC32 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 four 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
- OptoConnect, a drag-and-drop database utility that makes building SQL Server and Access databases a snap.

G4LC32 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 data base that is shared by all FactoryFloor components. The G4LC32 also works with Opto 22's classic 16-bit software: Cyrano, Mystic MMI and Mystic Data Server (MDS.).

Communication Options (Standard)

The G4LC32 base unit has the following communication ports:

- 2 full-duplex RS-422/485 serial ports, 300-115kBd
- 2 full-duplex combined RS-232 or RS-422/485 serial ports, 300-115kBd
- 1 Mystic local bus, 1.44 MB/s
- 1 ARCNET port, 2.5 Mb/s

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Description (Continued)

I/O Connectivity

The built-in RS-422/485 ports can be used as a serial link to communicate with remote digital and analog I/O units. Up to 4096 I/O points can be connected to each com port. Using all four RS-422/485 serial ports, up to 16,384 points of remote I/O can be controlled.

Memory Expansion Options

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, 512K

Expansion: 1 M. Buy 4 G4RAM1M
 2 M. Buy 4 G4RAM4M
 4 M. Buy 8 G4RAM4M

ROM: Base, 512K

Expansion: 1 M. Buy G4LC32F1M

Power Supplies

Three power supplies are available. They supply enough power to operate the G4LC32 base unit and seven I/O units (bricks.)

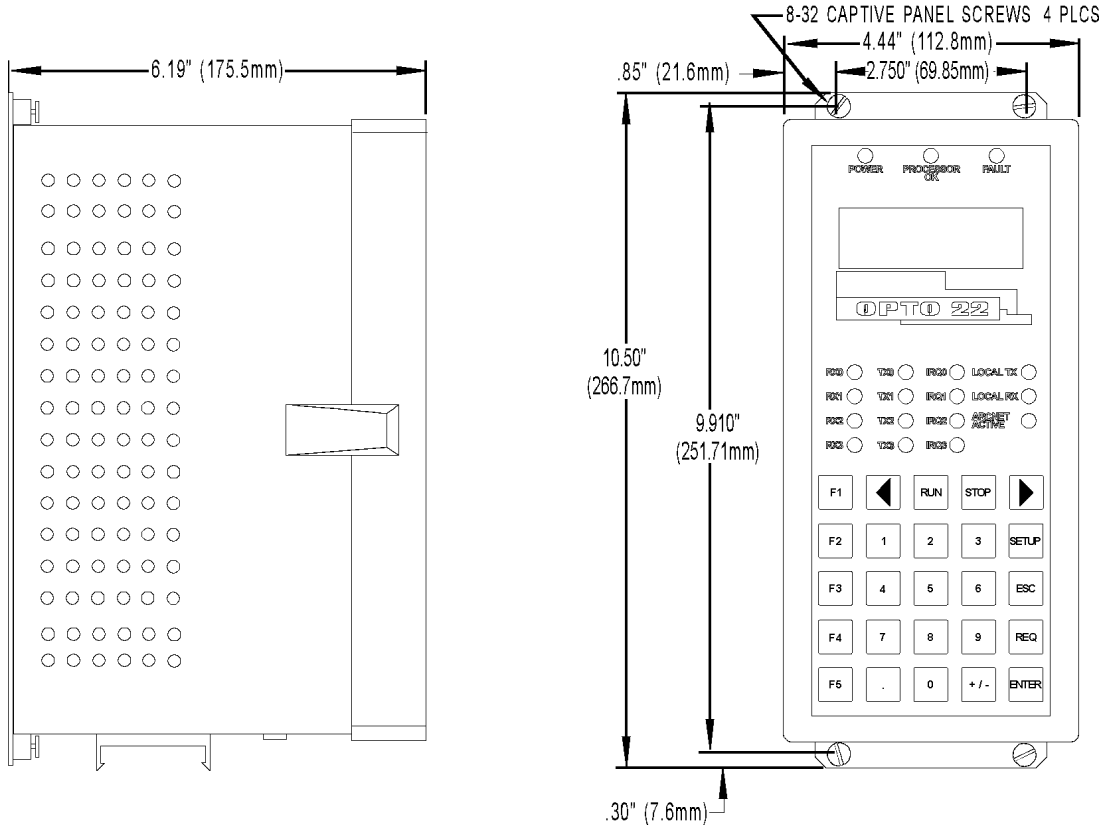
Power Supply Model Number	Voltage
G4PS245A	120 VAC
G4PS245AFM	120 VAC Factory Mutual Approved
G4PS245B	220 VAC

Specifications

Item	Specification
CPU	32-bit Motorola 68020 processor Motorola 68881 math co-processor IEEE floating-point math
CPU clock frequency	16.67 MHz
Memory RAM Flash EEPROM on controller	512 KB• 4 MB with battery backup (user programs & data) 512 KB• 1 MB (firmware and user programs)
RAM/clock battery	3.6-volt lithium, non-rechargeable
I/O	Via RS-485 ports, using Opto 22 I/O
Communication Base unit Expansion Modem support	1 RS-232 and 1 RS-485/422 port Via daughter cards: configurable serial ports and ARCNET Direct, lease, and radio
Real-time clock	Clock/calendar, Epson 62421A with battery backup
Power requirements	5 VDC +/- 0.1 V at 2.0 A
Typical operating temperature	0° C to 60° C 0° C to 50° C for LCD display (based on 5% to 95% relative humidity)
Storage temperature	0° C to 60° C
Humidity	5% to 95% relative humidity
Software	FactoryFloor (OptoControl, OptoDisplay and Optoserver) Classic Software (Cyrano, Mystic MMI, MDS)
System monitors Host communications Watchdog timers RAM battery backup low Operating temperature	Detect communication errors from processor, I/O, etc. Detect main power supply operation Detects program corruption (check sum RAM test) Detects temperature
Front Panel Display	4 line X 20 backlit LCD
Front Panel Keyboard	25-button keypad

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Dimensions



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.