OPTO 22

DATA SHEET

Form 588-231214

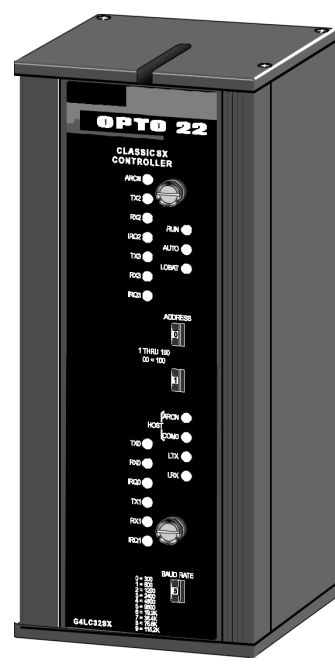| Part Number	Description
G4LC32SX	Classic SX Controller

Description

IMPORTANT NOTE: Due to difficulty obtaining parts, this controller is obsolete and no longer available.

The G4LC32SX is a cost effective, high-performance controller designed to work within the Opto 22 family of rugged, compact controllers and I/O units. A 32-bit 68020 microprocessor supports up to four serial ports, a selectable ARCNET port, and a high-speed local port for flexible communication.
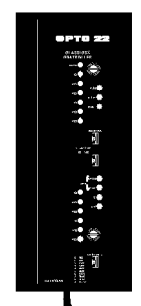
Programming is accomplished with OptoControl or Cyrano flowchart-based programming languages. Programs are transportable across legacy Opto 22 processors.

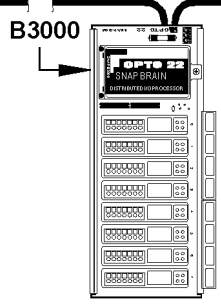NOTE: For new development, we recommend using Opto 22 SNAP PAC controllers and the ioProject software suite.

G4LC32SX
CONTROLLER

REMOTE BUS RS-485
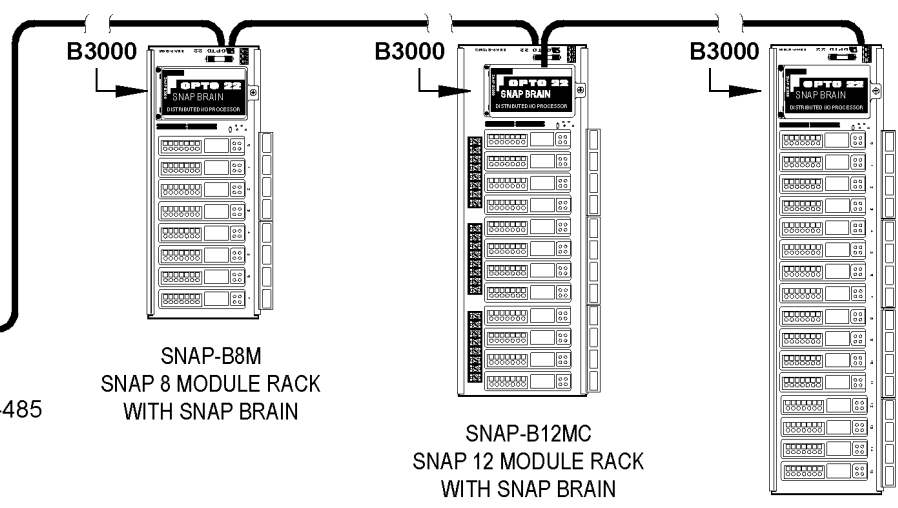
SNAP-B8M
SNAP 8 MODULE RACK
WITH SNAP BRAIN
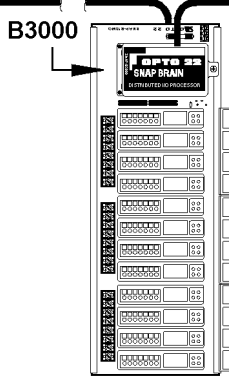
SNAP-B12MC
SNAP 12 MODULE RACK
WITH SNAP BRAIN

SNAP-B16M
SNAP 16 MODULE RACK
WITH SNAP BRAIN

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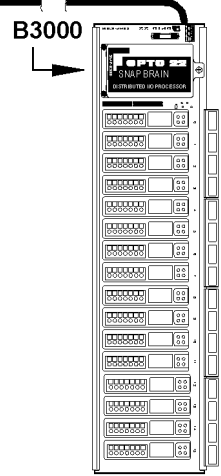## DATA SHEET

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Description (CONT.)

SOFTWARE

The G4LC32SX is designed to work in combination with the FactoryFloor legacy software suite. FactoryFloor consists of three integrated components:

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

G4LC32SX 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 G4LC32SX also works with Opto 22's classic 16-bit software: Cyrano, Mistic MMI and Mistic Data Server (MDS.)

COMMUNICATION OPTIONS (STANDARD)

The G4LC32SX base unit has the following communication ports:

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

INTERFACE OPTIONS (ADAPTER CARDS)

Two interface cards are available to increase your communication options.

Interface Adapter Cards	Function
G4LC32SER	2 RS-232/RS-485 high speed serial ports
G4LC32ARC	ARCNET and 2 RS-485 ports

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Description (CONT.)

I/O CONNECTIVITY

The 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 communication port. Additional serial ports can be obtained with the G4LC32SER or G4LC32ARC.

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, 256K

    Expansion: 1 M. Buy 2 G4RAM4M

ROM: Base, 256K

    Expansion: 1 M. Buy G4LC32F1M

POWER SUPPLIES

Three power supplies are available. They supply enough power to operate the G4LC32SX base unit and seven I/O units (bricks.)

Power Supply Model Number	Voltage
G4PS245A	120 VAC
G4PS245AFM*	**[OBSOLETE]** 120 VAC
G4PS245B	220 VAC

* Obsolete Product

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Specifications

CPU	32-bit Motorola 68020 processor IEEE floating-point math
CPU clock frequency	16.67 MHz

Memory
  RAM
  Flash EEPROM on controller
	256 KB - 1 MB with battery backup (user programs & data)
	256 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
	2 combined RS-232 or RS-485/422 ports, local bus port.
	Via daughter cards: configurable serial ports, ARCNET.

Real-time clock	Clock/calendar, Epson 62421A with battery back
Power requirements	5 VDC ± 0.1 @ 2.0 A
Typical operating temperature	0° C to 70° C
Storage temperature	0° C to 70° C
Humidity	5% to 95% relative humidity
Software	FactoryFloor (OptoControl, OptoDisplay and Optoserver) Classic Software (Cyrano, Mistic 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

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Dimensions

5.50" (139.7mm)

4.35" (110.5mm)

10.50"
(266.7mm)

More about Opto 22
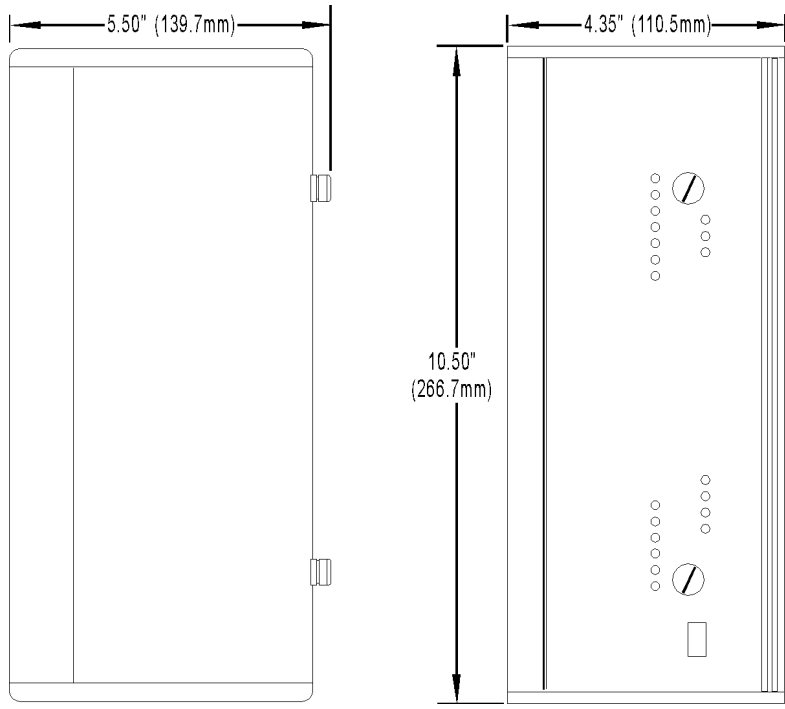
PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov RIO®

groov RIO edge I/O offers a single, compact, PoE-powered industrial package with web-based configuration and IIoT software built in, support for multiple OT and IT protocols, and security features like a device firewall, data encryption, and user account control.

Standing alone, groov RIO connects to sensors, equipment, and legacy systems, collecting and securely publishing data from field to cloud. Choose a universal I/O model with thousands of possible field I/O configurations, with or without Ignition from Inductive Automation®, or a RIO EMU energy monitoring unit that reports 64 energy data values from 3-phase loads up to 600 VAC, Delta or Wye.

You can even write an IEC 61131-3 compliant control program to run on groov RIO, using CODESYS. You can also use groov RIO with a Modbus/TCP master or as remote I/O for a groov EPIC system.

groov EPIC® System

Opto 22's groov Edge Programmable Industrial Controller (EPIC) system gives you industrially hardened control with a flexible Linux®-based processor with gateway functions, guaranteed-for-life I/O, and software for your automation and IIoT applications.

groov EPIC Processor

The heart of the system is the groov EPIC processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud. No industrial PC needed.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen, on a monitor connected via the HDMI or USB ports, or on a PC or mobile device with a web browser.

groov EPIC I/O

groov I/O connects locally to sensors and equipment. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status. groov I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Software

The groov EPIC processor comes ready to run the software you need:

- Programming: Choose flowchart-based PAC Control, CODESYS Development System for IEC61131-3 compliant programs, or secure shell access (SSH) to the Linux OS for custom applications
- Node-RED for creating simple IIoT logic flows from pre-built nodes
- Efficient MQTT data communications with string or Sparkplug data formats
- Multiple OPC UA server options
- HMI: groov View to build your own HMI viewable on touchscreen, PCs, and mobile devices; PAC Display for a Windows HMI; Node-RED dashboard UI
- Ignition or Ignition Edge® from Inductive Automation (requires license purchase) with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications

Older products

From solid state relays, to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and working hard at thousands of installations worldwide. You can count on us for the reliability and service you expect, now and in the future.

QUALITY

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California.

Because we test each product twice before it leaves our factory rather than testing a sample of each batch, we can afford to guarantee most solid-state relays and optically isolated I/O modules for life.

FREE PRODUCT SUPPORT

Opto 22's California-based Product Support Group offers free technical support for Opto 22 products from engineers with decades of training and experience. Support is available in English and Spanish by phone or email, Monday–Friday, 7 a.m. to 5 p.m. PST.

Support is always available on our website, including free online training at OptoU, how-to videos, user's guides, the Opto 22 KnowledgeBase, and OptoForums.

PURCHASING OPTO 22 PRODUCTS

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at **800-321-6786** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at www.opto22.com.

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