OPTO 22

DATA SHEET

Form 475-010131

Description

Part Number	Description
LC4A	LC Controller 120 VAC
LC4B	LC Controller 220 VAC
LC4DC	LC Controller DC Filter Board

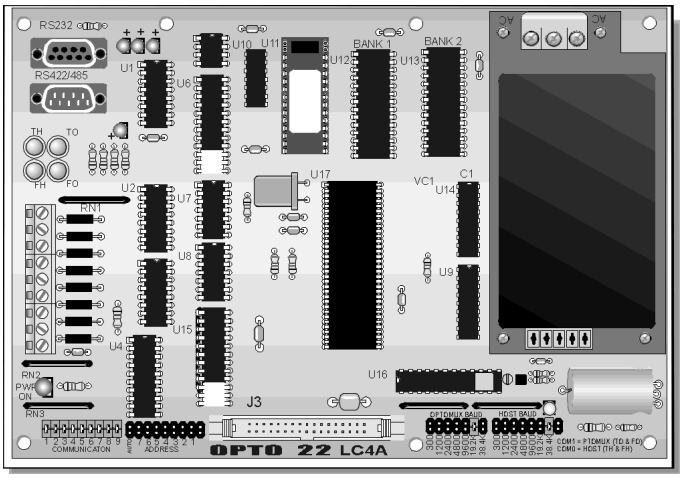
The LC4 is a powerful, low cost, single-board computer which performs the function of a local controller on a Pamux or Optomux network. The LC4 can be programmed in either BASIC or FORTH. The BASIC interpreter is command-set compatible with the IBM PC BASIC interpreter, except for commands related to screen and disk I/O.

The LC4 Local Controller has an expansion port which can accept a daughter card to provide various functions. A daughter card (EX1) is available to allow LC4 to control a Pamux bus. Another daughter card (EX2) is available to provide two additional serial ports as well as a 24-bit, bi-directional parallel port for direct connection to Opto 22 digital I/O mounting racks.

The LC4A includes an onboard 115 VAC power supply, the LC4B includes an onboard 220 VAC power supply, and the LC4DC requires a 10 to 28 VDC power source. The maximum inrush current for the LC4DC is three (3) amperes.

The LC4 Local Controller can be used to replace a host computer for stand-alone applications or several LC4's can be networked to a host computer for distributed applications. The following are several areas where LC4 can be applied:

- Distributed Process Control
- PID Loop Control
- Energy Management
- Protocol Conversion
- Remote Telemetry Unit (RTU)
- Data Acquisition
- Machine Control



Specifications

Hardware

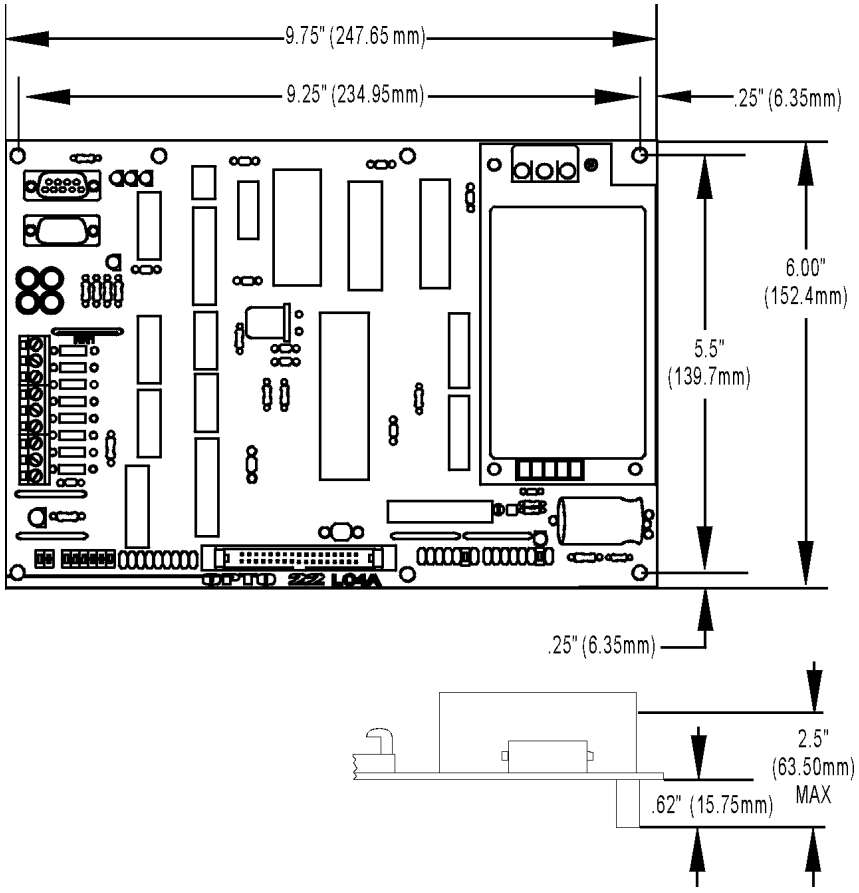
Power Requirements: LC4A LC4B LC4DC	 115 VAC ± 10 VAC, 60 Hz 220 VAC ± 20 VAC, 50 Hz 10–28 VDC, 1.5 amperes @ 10 VDC, 0.50 amperes @ 24 VDC
Power Dissipation:	less than 8 watts @ 25o C
Operating Temperature:	0° to 70° C 95% relative humidity, non-condensing
Interface:	one full duplex, RS-422/485 serial port one full duplex, selectable RS-232 or RS-422/485 port one expansion bus for daughter card
Baud Rate:	300 to 38,400 baud
Distance: RS-422/485 RS-232	 up to 5,000 feet total length up to 100 multidrop stations up to 50 feet
CPU:	64180, 8-bit microprocessor
CPU Clock Frequency:	6.144 MHz
EPROM:	32K bytes
RAM:	64K CMOS with battery backup (32K for the application program and 32K for a RAM disk)
Real-Time Clock:	clock/calendar with battery backup, 0.01 second resolution (Interrupt)
RAM/Clock Battery:	3 volt lithium, over 10 year life
Indicators:	power, host transmit and receive, and Optomux transmit and receive
Jumper Options:	auto run baud rates LC4 address termination and biasing resistors

Specifications

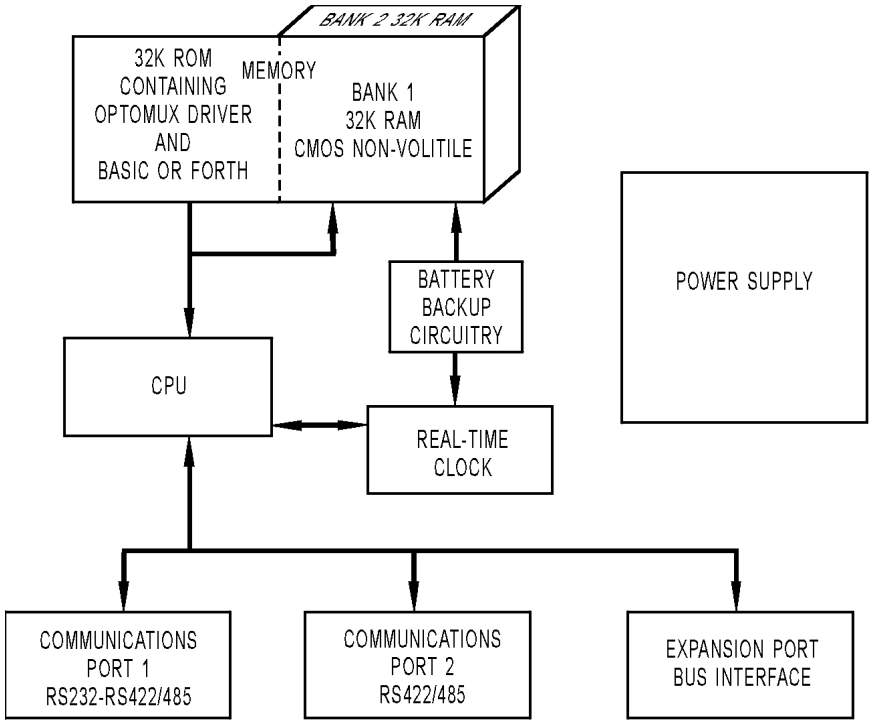
Software

- IBM PC command compatible BASIC interpreter
- FORTH interpreter (subset of FORTH-83 Standard)
- OptoWare (Optomux communications Driver) and Pamux Driver
- Integer and IEEE floating-point arithmetic

Dimensions



Architecture



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:

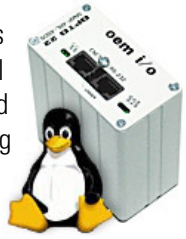
- Opto 22's own ioProject™ suite of control and HMI software
- Manufacturing resource planning (MRP), enterprise management, and other enterprise systems
- Human-machine interfaces (HMIs)
- Databases
- Email systems
- OPC client software
- Custom applications
- Modbus/TCP software and hardware.

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.

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