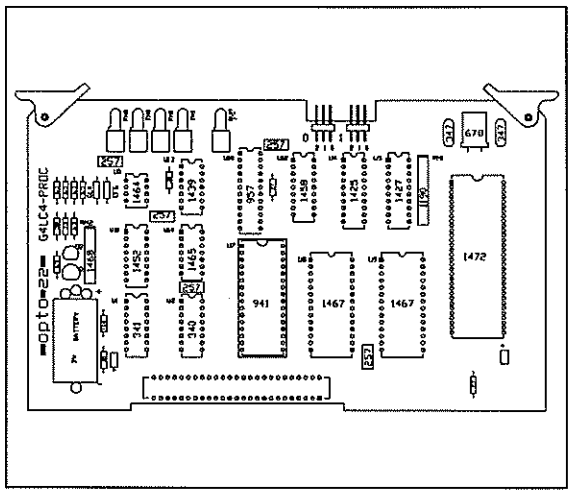
model 100

mistic® CONTROLLER



OPTO 22

GENERATION 4®

PAMUX Processor Card for G4LC4 Local Controller

G4LC4B

DESCRIPTION

The G4LC4B Processor Card is a PC board sub-assembly for the G4LC4 Local Controller. It contains the microcomputer for controlling the digital and analog bricks connected to the G4 PAMUX bus. It has 64K of on-board battery-backed-up CMOS static RAM. It has a socket for an EPROM memory chip. The 32K byte CYRANO EPROM is supplied with this card. The socket supports an EPROM with up to 128K bytes of memory capacity. The processor controls 4 serial ports, 2 RS-232 (Com 2 and Com 3) and 2 RS-485 ports (Com 0 and Com 1). The board has jumpers for setting the baud rates for serial ports Com 0 and Com 1. There is a female 50-pin connector at the bottom of the Processor card used for connecting to the G4LC4C Base Board (backplane). The board has status LEDs for Com 0 and Com 1. It also has a 'RUN' status LED that is ON when the processor is out of RESET (i.e. Running).

FEATURES

- Compatible with ***mistic® 100***
- Microcomputer Based Controller
- High Speed Parallel G4 PAMUX Bus
- Com 0 and Com 1 Status LED's
- RUN Status LED
- Battery Backed CMOS Static RAM
- Up to 128K Bytes of EPROM Memory
- Baud Rate Selection Jumpers
- Low Cost

INSTALLATION DETAILS

Step-By-Step Installation Procedure

1. Install jumpers for setting the desired baud rate for Com 0. See instructions below.
2. Install jumpers for setting the desired baud rate for Com 1. See instructions below.
3. Plug the G4LC4B Processor Card into the G4LC4 Base Board. Make sure that power is off.
4. The termination resistors for the RS-485 lines are set by means of DIP switches on the G4LC4 Base Board. See Form 291 for instructions on setting these switches properly.

LOCATION DRAWING

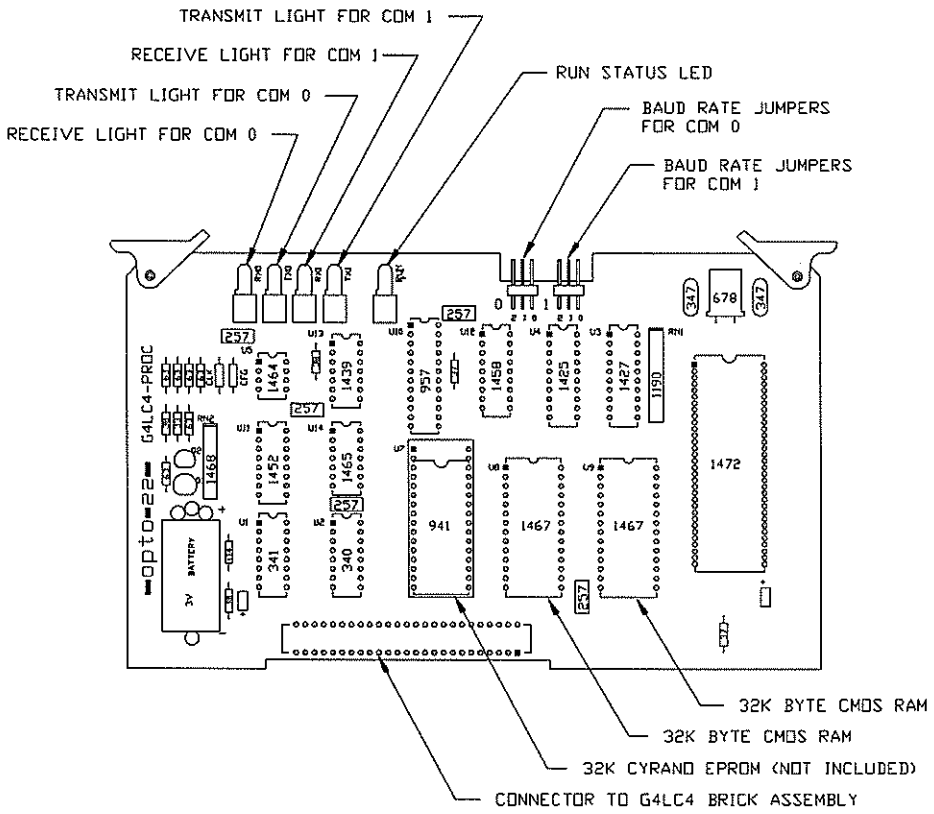


Figure 1 - G4LC4B Processor Card

STATUS LIGHTS

There are five LED status lights on the G4LC4B Processor Card. They are located at the top left of the board. Four of these indicate the status of the communications lines. When the G4LC4 Local Controller is transmitting data on COM 1, then the TX1 LED is ON. When the controller is transmitting data on COM 0, then the TX0 LED is ON. When the ***host*** computer is transmitting data on COM 1 to all of the G4LC4 Local Controllers, then the RX1 LED is ON. When the ***host*** computer is transmitting data on COM 0 to all of the G4LC4 Local Controllers, then the RX0 LED is ON. The 'RUN' status LED is ON whenever 5 VDC power is applied, the processor is running and the processor is out of RESET.

CYRANO EPROM

The CYRANO EPROM is supplied as part of the G4LC4B G4 PAMUX Processor Card for Local Controller. If you are supplied a new EPROM because of upgrades, please observe the following precaution. When you plug the CYRANO EPROM into the socket provided on the G4LC4B G4 PAMUX Processor Card, please note that the EPROM is ***bottom*** aligned, as shown in Figure 1. Observe that pin 1 of the EPROM is ***not*** aligned with pin 1 of the socket.

BAUD RATE SELECTION JUMPERS

To set COM 0 for the desired baud rate, install jumper 2, 1 and 0 for COM 0. See Figure 1. To set COM 1 for the desired baud rate, install jumper 2, 1 and 0 for COM 1. See Figure 1. Refer to the following table for the jumpers to be installed:

Baud Rate	Description	Jumper Settings 2	1	0
300	Selects 300 BAUD rate on COM 0 or COM 1.	0	X	X
1200	Selects 1200 BAUD rate on COM 0 or COM 1.	X	0	X
2400	Selects 2400 BAUD rate on COM 0 or COM 1.	0	0	X
4800	Selects 4800 BAUD rate on COM 0 or COM 1.	X	X	0
9600	Selects 9600 BAUD rate on COM 0 or COM 1.	0	X	0
19.2K	Selects 19200 BAUD rate on COM 0 or COM 1.	X	0	0
38.4K	Selects 38400 BAUD rate on COM 0 or COM 1.	0	0	0
No Clock	Reserved for Future Use.	X	X	X

NOTE: X means that a jumper is installed, 0 means that no jumper is installed.

Refer to the Operations Manual of your host terminal or computer for configuring and initializing the host's serial port. The host should be set up with the following parameters:

BAUD RATE:	300, 1200, 2400 4800, 9600, 19200 or 38400
START BITS:	1
STOP BITS:	1
DATA BITS:	8
PARITY:	NONE

POWER SUPPLY

Power for the G4LC4B (G4 PAMUX Processor Card for Local Controller) is supplied from the G4LC4C (G4 PAMUX Base Board for Local Controller). A separate power supply brick will supply power to the G4LC4 Local Controller as well as to the Digital and Analog bricks.

MULTIDROP CONFIGURATION

When more than one G4LC4 is connected in a multidrop configuration on one communications link, you will normally use the Com 0 port (RS-485).

In order to communicate to individual G4LC4 units on such a link, each device must have a unique address. Remember to set the address jumpers on the G4LC4A I/O card. See Form 289.

HOST TO G4LC4 COMMUNICATIONS

When you are running CYRANO on a host computer (PC/AT), you will normally use the Com 0 port (RS-485) on the G4LC4B (G4 PAMUX Processor Card) to communicate with the host computer.