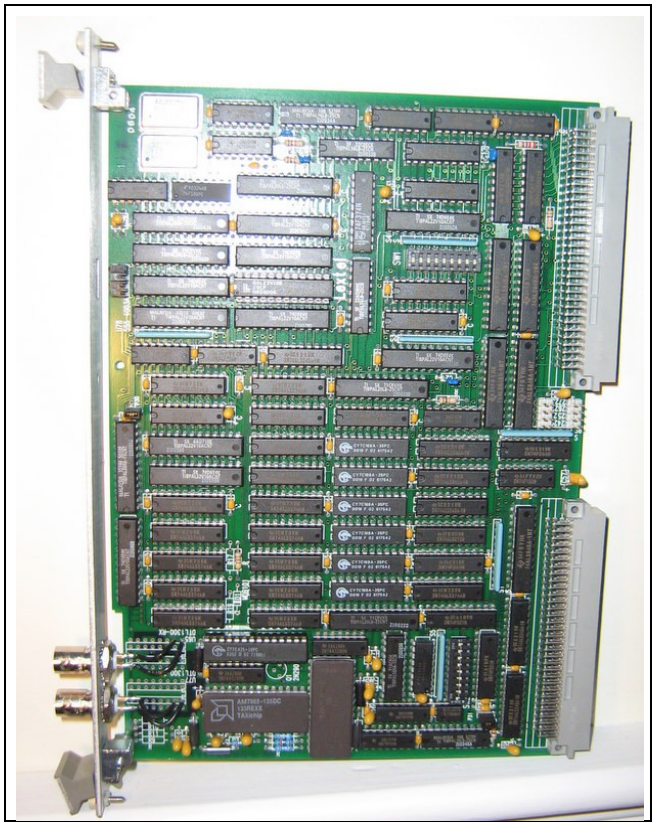
LL2000

VMEbus to VMEbus LINK



FEATURES

· High speed bus to bus link

· Fiber Optic or Coax Cable

· Up to 2Km system separation

· Programmable address windows

· Symmetrical Master/Slave operation

· Both busses run independently

· Remote Reset Function

· 16/24/32 Bit Addresses, 8/16/32 Bit Data

· Passes Interrupts

· VMEbus system controller functions

SUMMARY

LL2000 is a VMEbus to VMEbus link that allows the physical address space of one VMEbus based computer to be mapped into that of another one. Bus masters on either bus can have direct, random access to the other bus. Remote memory and IO devices appear to be within the local machine, even though they may be physically located up to 2Km away.

Up to 4096 address segments, or 'windows' on one of the busses can be mapped into the other bus. In addition, the addresses can be translated as they pass across the link.

The LL2000 does not tie up both systems when one is in use. Both systems may run independently.

The LL2000 links the systems over a pair of high speed fiber optic or coax cables. Fiber may span up to 2Km. The fiber cable provides the benefits of long distance, ease of installation, and high noise immunity.

APPLICATIONS

LL2000 and other Lextel Bus Links are being used to solve these kinds of problems:

BUS EXTENSION:	When equipment needs to be connected up to 2Km apart without loss of throughput.
BUS CONVERSION:	When one bus architecture needs to be used with another.
BUS EXPANSION:	When more bus slots are needed
NOISE IMMUNITY:	Fiber optics are immune to EMI, RFI and crosstalk.
HIGH SPEED DATA:	When a standard LAN isn't fast enough.

Example Application areas are Test and Measurement, Control Systems, Factory Floor, and Image Transmission.

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DESCRIPTION

Fiber Cable

Data is transmitted at 125Mhz on 62.5/125 um fiber cable. The fiber link may span up to 2Km, providing noise immunity, security, light weight and ease of installation.

Coax Cable

A lower cost alternative over distances up to 200ft. is Coax cable, which uses Dual conductor cable and Dual-BNC type connectors

VMEbus Address Translation Map

Up to 4096 individual VMEbus address segments, or 'windows' can be mapped from a Local to a Remote VMEbus. The address can be translated prior to transmission to the remote bus.

Symetrical Link

All operations are allowed from both ends of the link. This includes acquiring bus mastership, asserting interrupts, reseting the remote bus, and setting up programmable IO registers on the link boards.

Communication RAM

Unused portions of the Address Translation Maps can be used as a communication area between the two systems.

Interrupts

Any of the seven VMEbus interrupts may be passed across the link. The IACK cycle may also be passed. A VMEbus processor can also assert any of the Remote VMEbus interrupt lines by loading a register on the Remote link board.

Data Throughput

Maximum data throughput is 4MBytes/sec. Typical throughput will depend on the system and application software.

Block Data Transfer and Write Queing

These two performance enhancement features help speed data across the link, especially usefull on long cable runs, where cable delay becomes a factor.

VMEbus Address Modifier Generation

Four standard AM Codes can be generated and responded to. Other codes can be provided by a modified PAL device.

VMEbus System Controller Functions

The system clock, timeout mechanism, and single level arbiter are provided.

SPECIFICATIONS

VMEbus

Power	4.0A @+5VDC
Form Factor	6U Eurocard
System Control	Single Level Arbiter,Sysclk and Timeout
Address Modifiers	09, 29, 39, 3A Standard, others optional
Address,Data	A32/A24/A16, D32/D16/D8
Requestor	RWD
Slave Registers	4 registers, 12KBytes Map/Comm Ram

FIBER CABLE

Connector	ST Bayonet
Cable	62.5/125um
Length	2Km max

COAX CABLE

Connector	Dual BNC
Cable	RG-108A/U
Length	200ft. max

ENVIRONMENT

Temperature	0 to 70 degrees C
Humidity	20% to 80% Noncondensing

ORDERING INFORMATION

BUS LINKS

LL100x	NuBus-NuBus
LL200x	VMEbus-VMEbus
LL300x	NuBus-VMEbus
LL500x	ISA-ISA
LL510x	ISA-NuBus
LL520x	ISA-VMEbus

x =	1:Coax, 200ft max
	3:Fiber, 2Km max
	4:Fiber, 1000ft max

All Links include 2 circuit boards, user manuals, and sample software. Cable is ordered separately.

CABLE ASSEMBLIES

LC0xxx	Duplex Coax Cable Assembly, xxx = ft.
LFxxxx	Duplex Fiber Cable Assembly, xxxx = ft.

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