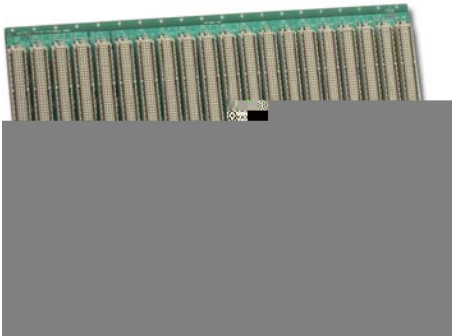


VME64 J1/J2 Monolithic - L Series

Backplane

ELECTRONIC PACKAGING DIVISION



VME64 J1/J2 Backplane – L Series

Carlo Gavazzi's family of enhanced 6 layer monolithic VME J1/J2 backplanes uses a patented trace routing and layer construction which optimizes the important electrical characteristics such as low crosstalk, controlled impedance, and low propagation delay. Carlo Gavazzi's L Series features the popular inboard termination scheme (inside the first and last connectors) resulting in the lowest possible physical profile available in slot counts of 2-21 slots for 16, 24, 32, and 64 bit applications. In addition, by simple choice of letter option in the part number, the user can select the addition of shrouds and latching header on key system control pins, or select the version offering automatic IACK and BG jumpering of unpopulated slots, or with bus bars. The enhanced L Series fully supports the requirements of the 96 pin option of ANSI Standard and ANSI/VITA-1 1994 VME64. The L Series signal line and power distribution design will support high frequency 64 bit parallel data transfers using address and data lines.

The careful control of dielectric spacing provides maximum desired distributed capacitance between power and ground. The multiple ground planes improve power distribution and minimize the potential for ground shift. The power block distribution pattern and unbroken power planes with redundant vias further enhance the backplane's ability to respond to the rapidly fluctuating power demands of today's high performance board sets.

Construction

- Material: FR4 (UL 94-V0 rated)
- Per IPC 600/610
- Power connection to backplane via 10 pin power blocks using #6-32 hardware (provided) Mupac's continued leadership in producing the highest performance, cost-effective VME64 backplanes is again demonstrated by the enhanced performance and features designed into the L Series.

—innovative engineering, dependable products—

Carlo Gavazzi Computing Solutions designs and manufactures standard and custom AdvancedTCA™, CompactPCI®, PCI/ISA, and Switch Fabric backplanes, cabinets, enclosures, I/O boards, and integrated systems that address your outsourcing and time-to-market needs.



Features

- Optimized performance for cost-effective 6 layer design
- Carlo Gavazzi's proprietary patented trace routing for normalized decoupling of adjacent signal and control lines reduces crosstalk while maintaining the controlled transmission line impedance and short propagation delay required VME64
- 100% Level 3 electrical testing
- Common power planes for +5V and GND across J1 and J2 eliminate ground loops
- Matched impedance of J1 and J2
- 100% press-fit construction for reliability
- All signal pins accessible from both sides of backplane
- Bus bar kits available

Performance

Recorded waveforms 20 slots (LF20)

Measured on HP54120A Time Domain Reflectometer with input pulse = 600 ps rise time LF20 was loaded with connectors plus termination

- Decoupling capacitors adjacent to each resistor network to further isolate +5 and GND planes
- Additional bulk capacitors to enhance di/dt response
- Provisions for optional 10 pin latching header to connect to AC fail, +5V, system reset, system fail, and ground signals allow for latching IDC cabling
- End stackability for close coupling of redundant systems or rapid expansion of installed systems
- Bus bar kits available
- Efficient geometry of power block loading pattern for reduction of transplane ground shift
- Standard options specify shrouds installed plus latching 10 pin header, automatic bus grant jumper feature, or installed bus bars
- 64 bit high speed parallel data transfers using address and data lines
- Fully complies with enhanced requirements of ANSI Standard ANSI/VITA-1 1994 VME64

Power

Conservative design rules based on DIN 41612 Class Z connector derating curves define recommended limit per slot for installed 6U VME64 system boards.

Max. Current per Slot (based on DIN connector spec.)

| | +25°C | +60°C |
|------|-------|-------|
| +5V | 9A | 6A |
| +12V | 1.5A | 1A |
| -12V | 1.5A | 1A |
| +5VB | 1.5A | 1A |
| GND | 18A | 12A |

CARLO GAVAZZI COMPUTING SOLUTIONS

Electronic Packaging

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Fulfillment



VME64 J1/J2 Monolithic - L Series

Backplane

ELECTRONIC PACKAGING DIVISION

Ordering Information — L Series VME64 J1/J2

Model Number Selection: L

Option Code Slot Count

Option Code

F G K L N R

Additional Features

1. Shrouds on rear of all J2 and first and last J1 connectors, plus 10 pin latching header (AMP746140 or equiv.) on ACFAIL, SYSFAIL, SYSRESET, GND

2. Automatic jumpering for IACK and BG pins for unpopulated slots

3. Bus bars included

Ordering Examples:

LF12 = 12 slot VME64 J1/J2 96 pin DIN base line standard w/o cost adder options

LN20 = 20 slot VME64 J1/J2 96 pin with shrouds and 10 pin header and bus bars included

| Model No. | Slot Count | Dim A | Power Block Locations* | | | | | Bus Bar Kit** |
|-----------|------------|-------------------|---|----------|----------|----------|---|---------------|
| | | | +5 | +12 | -12 | +5B | GND | |
| LX03 | 3 | 2.34 (59,44) | C1, D2 | B1 | C2 | B2 | A1, A2, D1 | 3425003-01 |
| LX04 | 4 | 3.14 (79,76) | B1, C3 | B2 | C2 | B3 | A1, C1, D1-D3 | 3425004-01 |
| LX05 | 5 | 3.94 (100,15) | B1, B4 | B2 | C2 | B3 | C1, C3, C4 | 3425005-01 |
| LX06 | 6 | 4.74 (100,42) | B1, B2, B5 | B3 | C3 | B4 | C1, C2, C4, C5 | 3425006-01 |
| LX07 | 7 | 5.54 (140,72) | B1, B5, B6 | B3 | C3 | B4 | C1, C2, C4, C5, C6 | 3425007-01 |
| LX08 | 8 | 6.34 (161,04) | B1, B2, B7 | B4 | C4 | B5 | C1, C2, C3, C5, C6, C7 | 3425008-01 |
| LX09 | 9 | 7.14 (181,43) | B1, B2, B7, B8 | B4 | C4 | B5 | C1, C2, C3, C5, C6, C7, C8 | 3425009-01 |
| LX10 | 10 | 7.94 (201,68) | B1, B2, B3, B8, B9 | B5 | C5 | B6 | C1, C2, C3, C4, C6, C7, C8, C9 | 3425010-01 |
| LX12 | 12 | 9.54 (242,39) | B1, B3, B4, B5, B8, B9 | B6 | C6 | B7 | C2, C3, C4, C5, C7, C8, C9, C10 | 3425012-01 |
| LX13 | 13 | 10.34 (262,68) | B1, B3, B4, B5, B9, B10, B11 | B6 | C6 | B7 | C2, C3, C4, C5, C7, C8, C9, C10, C11 | 3425013-01 |
| LX14 | 14 | 11.14 (282,96) | B1, B3, B4, B5, B8, B9, B10 | B7 | C7 | B8 | C2, C3, C4, C5, C9, C10, C11, C12 | 3425014-01 |
| LX16 | 16 | 12.74 (323,67) | B1, B3, B4, B5, B6, B10, B11, B12, B13 | B8 | C8 | B9 | C3, C4, C5, C6, C10, C11, C12, C13, C14 | 3425016-01 |
| LX19 | 19 | 15.14 (384,63) | B1, B3, B4, B5, B6, B12, B13, B14, B15, B16 | B8, B9 | C8, C9 | B10 | C2, C3, C4, C5, C6, C11, C12, C13, C14, C15, C16, C17 | 3425019-01 |
| LX20 | 20 | 15.94 (404,95) | B1, B3, B4, B5, B6, B7, B13, B14, B15, B16, B17 | B9, B10 | C9, C10 | B11, B19 | C3, C4, C5, C6, C7, C12, C13, C14, C15, C16, C17, C18 | 3425020-01 |
| LX21 | 21 | 16.74 (425,27) | B1, B3, B4, B5, B6, B7, B8, B14, B15, B16, B17, B18 | B10, B11 | C10, C11 | B12, B20 | C3, C4, C5, C6, C7, C8, C13, C14, C15, C16, C17, C18 | 3425021-01 |

*25 Amp Max Input per Power Block (Fully Derated @ 60°C)

**See Accessories Section for Bus Bar Drawings

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