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Find the *Technobox 4978* at our website: ***Click HERE***

Storage Controller PMC

8-lane 3 Gb/s SATA / SAS Controller PMC

The SAS/SATA controller PMC is based on the LSI Logic 1068 controller and provides 8 lanes of either SAS or SATA connectivity at 3.0 Gb/s per lane.

Two SFF-8470 connectors at the PMC front panel are used for connectivity. Each connector supplies 4 lanes. A jack-screw style retaining method is used to allow operation in rugged environments.

The design features a 64Kb serial EEPROM which is used to store user-configurable parameters by the LSI BIOS. A 2Mx8b FLASH memory holds the BIOS for Intel-platforms and the BIOS is burned in the FLASH as delivered. A 32Kx8b Non-Volatile RAM holds mirroring data as required by the LSI logic firmware.

A set of 8 green and 8 red LEDs is provided on the body of the board to convey activity and fault status for each of the 8 attached devices. The "or" state of these indicators is also presented on the front panel using a single red (fault) and green (activity) LED. A green LED serving as an ARM processor "heartbeat" is also on the board.

The connection to the host processor is via a PCI-X bus running at up to 133 MHz. The board can be used in lower-performance PCI busses with reduced throughput capability. Note that this board only supports 3.3V PCI bus signaling, and therefore the keying hole for 3.3V operation is incorporated in the board. A heat-sink is provide for the LSISAS1068 controller. A switching regulator is used to provide 1.2V core power for the LSI chip from the 3.3V power rail for optimum power efficiency. Only 3.3V power from the host is required.

General Purpose (GPIO) signals, link Fault and activity signals, an I2C bus, and TX/RX data for a UART are presented at the PN4 Rear I/O connector of the PMC for applications requiring these functions.

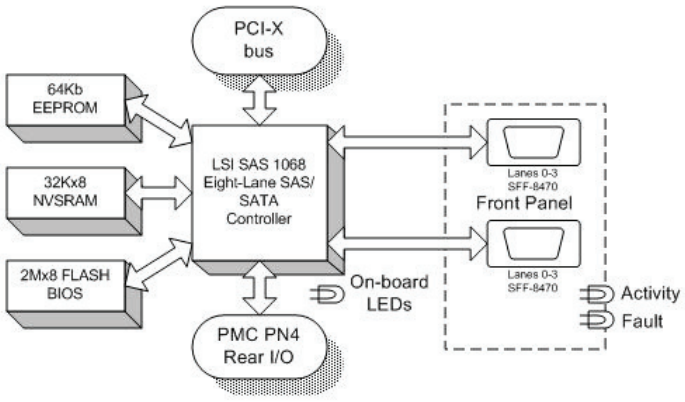
Several positions for debug connectors are located on the back side of the board for LSI logic debug purposes per LSI's recommendations. These are not populated in the delivered product and are normally not used by customers.

For vibration-sensitive applications, additional mounting holes are pro-

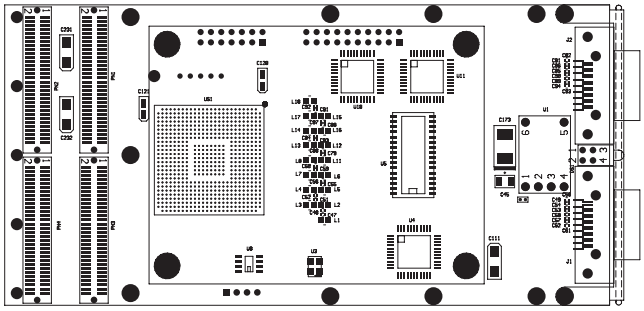


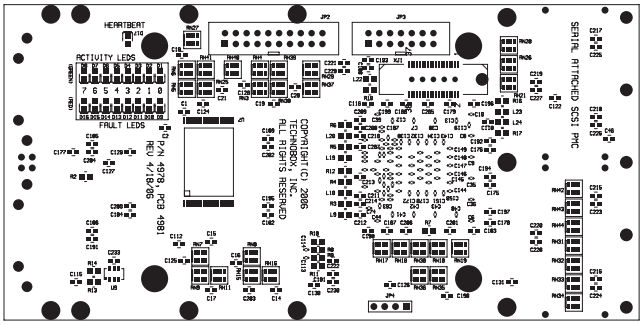
4978

- **Supports up to 8 lanes of SAS or SATA**
- **Rates up to 3 Gb/s per lane**
- **LSI SAS1068**
- **Dual SFF-8470 front panel connectors**
- **On-board storage of user-defined parameters, BIOS, and mirroring data**
- **Eight sets of on-board LEDs convey device status and activity**
- **Front panel indicators provide general status and activity**
- **RoHS-compliant, Lead-free**



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vided and are located per the VITA 20 conduction cooling specification, but this is not a conduction-cooling capable board. The anti-fretting holes at the rear behind PN2/PN4 and holes along the edge of the board for the secondary thermal interface are only provided for this purpose.

The product is available in a “commercial grade” version (P/N 4978) and also a conformally coated burned-in version (P/N 4986). During production testing, P/N 4986 is operated in a room temperature environment for 24 hours with SAS/SATA drives attached. P/N 4986 is coated with Acrylic conformal coating. However, note that both products are only specified for commercial operating temperature range and commercial environments.

This product is manufactured for RoHS compliance and does not contain any lead used during soldering.

For more information concerning the capability of this board, please consult the LSI Logic LSISAS1068 controller information available at www.lsil.com.

Please contact Technobox for software support.

Specifications

Temperature (Operating): 0° to 55° C

Temperature (Storage): -40° to +85° C

Altitude: Not specified or characterized (Typical similar equipment is at 15,000 ft.)

Humidity (Operating/Storage): 5% to 90% non-condensing

Vibration: Not specified or Characterized

MTBF: Available upon request

Typical Power Dissipation: TBD

Power Supplies Required: 3.3 Volts

PCI Environment: 3.3V PCI-X (5V NOT SUPPORTED)

Ordering Information

4978: 8-lane 3 Gb/s SATA / SAS Controller PMC

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