

Front Removable VME Storage

6U SATA Storage Module



Description

The 5055 is a 6U SATA storage module with dual front removable storage drives. It is configured to provide SATA I/O for dual 2.5" drives using a rear transition module or break out board via the P0 connector. Each single drive can be removed independently for easy system upgrade, data transport or drive replacement. The 5055 may be utilized singularly or integrated as part of a multi-slot storage array using an external SATA RAID controller.

Features

- Choose the latest in solid state drive technology; SLC, MLC or eMLC or standard, enhanced or extended duty rotating drives
- Supports current drive capacities currently over 2TB per board
- 3Gbs data rates are supported
- Standard 6U x 4HP x 160mm VME form factor
- Drive activity LEDs
- Extended temperature operation from -40°C to +85°C
- Individual drive sleds are front-removable, (not hot pluggable)
- Rear Transition Module (RTM) provides rear SATA port connectivity
- RoHS compliant and lead-free
- Also available in 6U cPCI form factor

Benefits

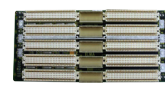
- High data rates for current application needs
- Addresses high capacity storage needs
- Capable of providing RAID 0, 1 or 5 via software RAID
- Easy system upgrade, data transport or maintenance with front removability
- Operates in temperature extremes of -40°C to +85°C using solid-state drives
- Multi-slot expansion capability enables high capacity array design

Applications and Related Products

- High capacity storage requirements for a wide range of defense applications including ground, shipboard and airborne systems
 - Signal intelligence data storage
 - Engine control systems data
 - Mission data storage
- Commercial and industrial data storage applications requiring high capacities, expandability and RAID protection.
- Rugged applications requiring resistance to a wide range of temperature extremes as well as high shock and vibration resistance.

Example Order Number: 5055200256GBSTSYE

Model 5055 with two 256GB SLC solid state drives, conformal coating, for use in extended temperature environments.



- RAID Controllers
- Intel & Freescale Single Board Computers
- Blade level networking boards (Ethernet, PCI Express)
- FPGA configurable I/O solutions
- Rackmount, desktop, and ATR chassis platforms
- Ruggedization programs

VME

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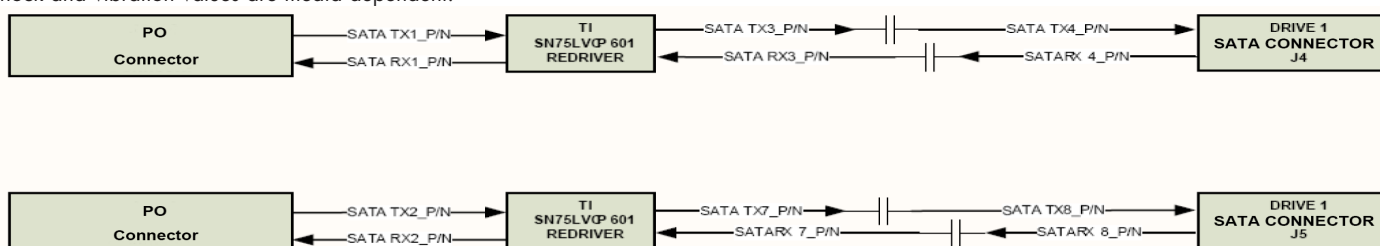
Storage

VME

Block Diagram and Environmentals

Specification		With Typical HDD	With Typical SSD
Temperature	Operating (Ambient)	0 to 60 C	-40 to +85 C
	Non-operating	-40 to 65 C	-40 to +85C
Relative Humidity	Operating	8% to 90% Non-condensing	5% to 95% Non-condensing
Vibration (Sine)	Operating	1G (5 to 500 Hz)	5G (10 to 2000 Hz)
Shock	Operating	400G (2 ms)	20G (11 ms)
Altitude	Operating	40,000 ft	80,000 ft

Shock and vibration values are media dependent.



General

The 5055 is a 6U SATA single slot (4HP) storage module with dual front removable drives accessed via dual rear SATA ports.

Input / Output

When attached to a host Single Board Computer (SBC), the 5055 provides direct access for up to two 2.5" SSD or rotating drives from the host SATA ports via PO and a rear transition module (model 5050-RTM).

Compatibility

The 5055 is directly compatible with 6U VME system architectures including single board computers and system chassis.

Power Requirements

- 5V ±5% @ .004A 3.3V ±5% @ 0.16A
- Typical HDD, add 5V ±5% @ 1.1A
- Typical SSD, add 5V ±5% @ 0.8A

Order Information

5055

Configuration

- 1 = One 2.5" drive
- 2 = Two 2.5" drives

Drive RPM

- 54
- 72
- 00 (solid state drive)

2.5" Drive capacity (configuration 2 – both drives same capacity)

- xxxG
- xxxT
- Example
- 500G = 500GB drive
- 012T = 1.2TB drive

Drive Type

- RSD = standard duty rotating
- RED = enhanced duty rotating
- RXD = extended duty rotating
- SSS = commercial solid state SLC
- SSM = commercial solid state MLC
- SSE = commercial solid state eMLC
- STS = extended temp solid state SLC
- STM = extended temp solid state MLC
- STE = extended temp solid state eMLC

Conformal Coating

Y / N

Temperature Requirements

- S = 0°C to +55°C
- E = -40°C to +85°C
- O = Other

I/O Board Model Number:
5050-RTM, rear transition module

*Consult Elma for the complete range of available drive capacities.