

# 6U VMEbus Storage

## Storage Modules with SATA and DVD Drives



### Description

Elma's Model 5050 family of 6U VME SATA Storage Modules are designed to meet the ever-increasing storage capacity and high-speed data storage needs in embedded computing systems. Using a direct SATA interface, the modules are an ideal solution for new system designs while allowing fast and easy storage upgrades in existing systems. A RAID solution can be scaled to size using multiple blades with software RAID, or external raid controllers. The module is also available in a CompactPCI® form factor (Model 6050).

### Features

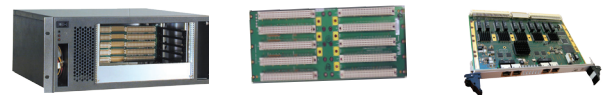
- Two available configurations:
  - Three 2.5in drives in a single 6U slot
  - One single 2.5in drive plus DVD
- Rotating or solid-state SATA drives
  - Solid flash drives with SLC or MLC flash technology
- More than 1.8TB of SSD (solid-state drive) storage in a single blade\*
- More than 3TB of rotating storage in a single blade\*
- Front panel SATA ports or rear SATA ports via RTM (VME64x only)
- Up to 300MB/sec individual drive data rates (configuration dependent)
- Multi-slot expansion capability for multi-terabyte array options
- Suited for high shock and vibration applications\*
- Extended temperature versions -40° C to +85° C\*

### Benefits

- High data rates for current application speeds
- Addresses high capacity storage needs
- Capable of providing RAID 0, 1 or 5 via software RAID
- Easy system upgrade via DVD drive
- Three drive version qualified for -40°C to +85°C operation using solid-state drives

## Related Products and Applications

- High capacity storage arrays in a wide range of defense applications including ground, shipboard and airborne systems
  - Signal intelligence data storage
  - Engine control systems data
  - Flight data recorders
- Rugged industrial and defense storage arrays supporting systems requiring resistance to high temperature and high shock and vibration
- Low to moderate capacity single blade storage for medical imaging equipment with expansion capability



- 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

### Example Order Number: 50501010TRNS

VMEStor with one 1TB 2.5in rotating drive and one DVD R/W, no conformal coating

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## Storage Modules with SATA and DVD Drives



VME



Storage

### Environmentals

<b>General</b>	Each module is 6U high by 4HP (0.8in) wide by 160mm deep and compatible with VME64 (Front I/O Only) and VME64X (Front and Rear I/O) mechanical and electrical specifications. Weight: <2 pounds (configuration dependent).
<b>Input/Output</b>	Direct SATA access to each drive through front panel SATA connectors or rear transition module via P0
<b>Compatibility</b>	Model 5050 VME SATA Storage Modules are directly compatible with VME Single Board Computers supporting SATA I/O connectivity
<b>Power Requirements</b>	<b>Input Power</b> Typical Power Required Hard Drive: +5 V +5/-3% @ 0.75 A per drive DVD/RW Drive: +5 V +5/-3% @ 1.2 A +3.3 V +5/-3% @ 0.03 A
<b>Environment</b>	Operating Temp: 0° C to 45° C with DVD 0° C to 60° C with Commercial Drive -40° C to 85° C with Industrial SSD Non-operating: -20° C to +60° C (limited by DVD) Operating shock: 10Gs at 11 msec (configuration dependent) Operating vibration: 2Gs, 20 to 2,000Hz (configuration dependent) Humidity: 5 to 95%, non-condensing All configurations are RoHS compatible.

### Order Information

5050



(17-19 Project Specific)

#### Configuration

- 1 = 2.5" drive and one DVD R/W  
 2 = Three 2.5" drives

#### Drive RPM

- 54  
 72  
 00 (solid state drive)

#### 2.5" Drive capacity (configuration 2 - all drives same capacity)

- xxxG  
 xxxT

#### Example

- 064G = 64GB drive  
 500G = 500GB drive  
 012T = 1.2TB drive  
 000G = no drive installed  
 (Applicable to configuration 1 only)

#### 2.5" 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  
 NNN = Not applicable (Applies to configuration 1 if no 2.5" drive installed)

#### Conformal Coating

- Y/N

#### Temperature Requirements

- S = +5° C to +45° C with DVD  
 E = -40° C to 85° C  
 O = Other

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



**RTM Part Number:  
 5050-RTM**

Consult Elma for the complete range of available drive capacities