# Front Removable OpenVPX Storage

**6U SATA Storage Module** 





### **Description**

The 5655 is a 6U SATA storage module with dual front removable storage drives. It is designed to provide SATA I/O access for dual 2.5" drives via OpenVPX backplane data plane connections. Each single drive can be removed independently for easy system upgrade, data transport or drive replacement. The 5655 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 technogy; SLC or MLC standard, enhanced or extended duty rotating drives
- Supports current drive capacties currently up to 4TB per drive
- 6Gbps data rates are supported (external controller dependent)
- Standard 6U x 5HP x 160mm OpenVPX form factor
- Drive activity LEDs media dependent
- Extended temperature operation from -40°C to +75°C
- Individual drive shuttles are hot pluggable
- VITA 48.1 REDI primary and Secondary Covers
- RoHS compliant and lead-free
- Also available in 6U cPCI and VME form factor
- Optional rear transition module design on request

#### **Benefits**

- High data rates for current application needs
- Addresses high capacity storage needs
- · Capable of providing RAID 0, 1 or 5 via external RAID controller
- Easy system upgrade, data transport or maintenance with front removability
- Operates in temperature extremes of -40°C to +75°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
  - o Signal intelligence data storage
  - o Engine control systems data
  - Mission data storage
- Commercial and industrial data storage applications requiring high capacities, expandability.
- Rugged applications requiring resistance to a wide range of temperature extremes as well as high shock and vibration resistance.

### **Example Order Number: 5655200020TSTMBYYE**

Model 5655 with 2 X 2TB extended temp MLC drives, REDI covers, signal ground isolation, 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



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Storage

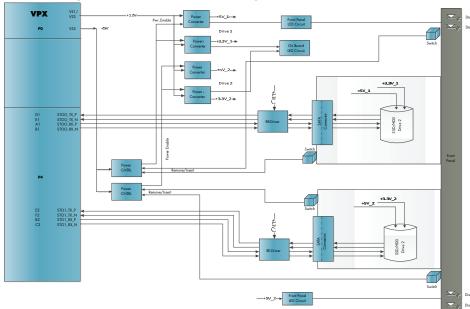
**VPX** 

## **Block Diagram and Environmentals**

Specification		With Typical HDD	With Typical SSD
Temperature	Operating (Ambient)	0 to 60°C	-40 to +75°C
	Non-operating	-40 to 65°C	-40 to +85°C
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)

Shock and vibration values are media dependent.

#### **6U VPX 6Gbps SATA Dual Removable Storage Module**



#### Figure 1: Block Diagram

The 5655 is a 6U SATA single slot (5HP) 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 5655 provides direct access for up to two 2.5" SSD or rotating drives from the host SATA ports via P4 and a rear transition module.

#### Compatibility

The 5655 is directly compatible with 6U VPX system architectures including single board computers and system chassis.

#### **Power Requirements**

- +12V +/-5%@0.12A
- +5V +5/-2,5%@0.008A
- Each SSD Typical
- +12V +/-5%@0.5A (+12V generates SSD +5V)

## **Order Information**

Signal ground isolation 2.5" Drive Type Configuration 1 = One 2.5" drive 2 = Two 2.5" drives standard duty rotating Y/NRED = enhanced duty rotating RXD = extended duty rotating SSS = commercial solid state SLC **Drive RPM** SSM = commercial solid state MLC STS = extended temp solid state SLC **Conformal Coating** 54 72 00 (solid state drive) STM = extended temp solid state MLC 2.5" Drive capacity (configuration 2 - both drive **REDI Side Covers Temperature Requirements** xxxG xxxT Example 008G = 8GB drive 064G = 64GB drive 500G = 500GB drive 012T = 1.2TB drive = 0°C to +55°C = -40°C to +75°C B = primary and secondary side covers for conduction or convection cooled versions, 5HP configuration

5655

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

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