6U SATA Storage Module
FRONT REMOVABLE OPENVPX STORAGE

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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.

Functional 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 -40oC to +75oC
- 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

- 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
- 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.

RELATED PRODUCTS

- RAID Controllers
- ntel & 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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BLOCK DIAGRAM

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

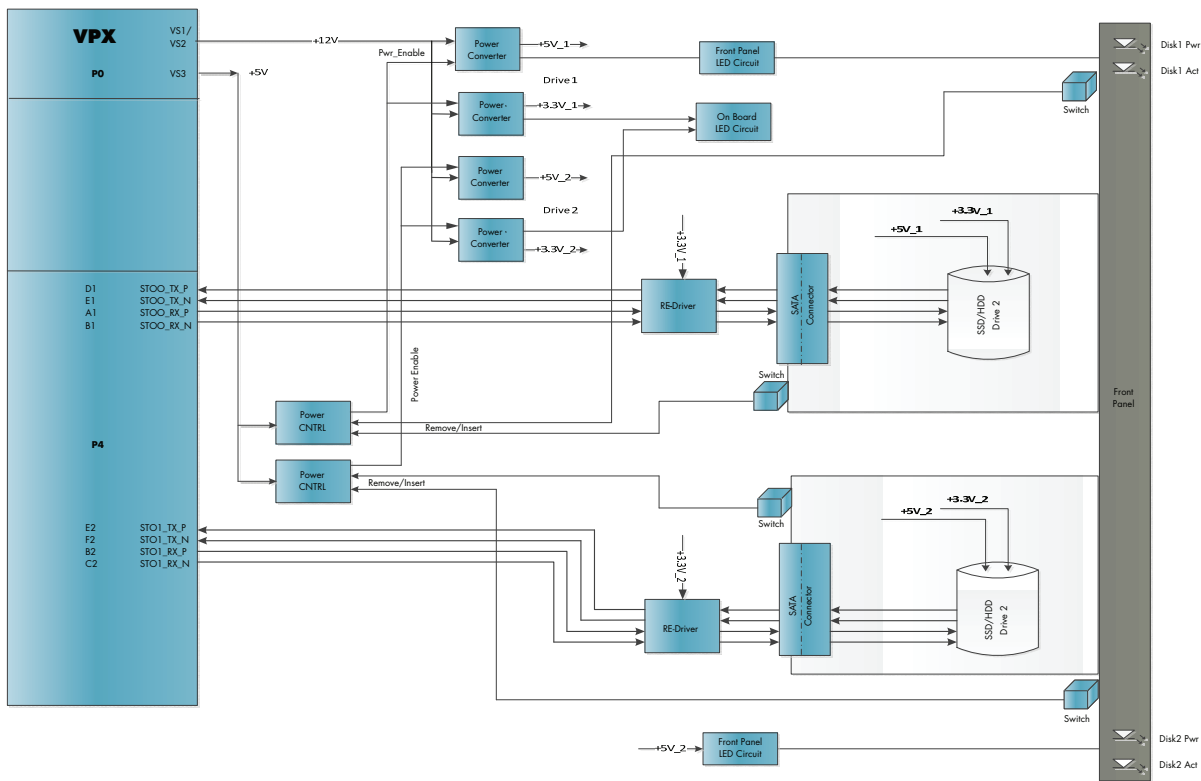## 6U VPX 6Gbps SATA Dual Removable Storage Module

Figure 1: Block Diagram

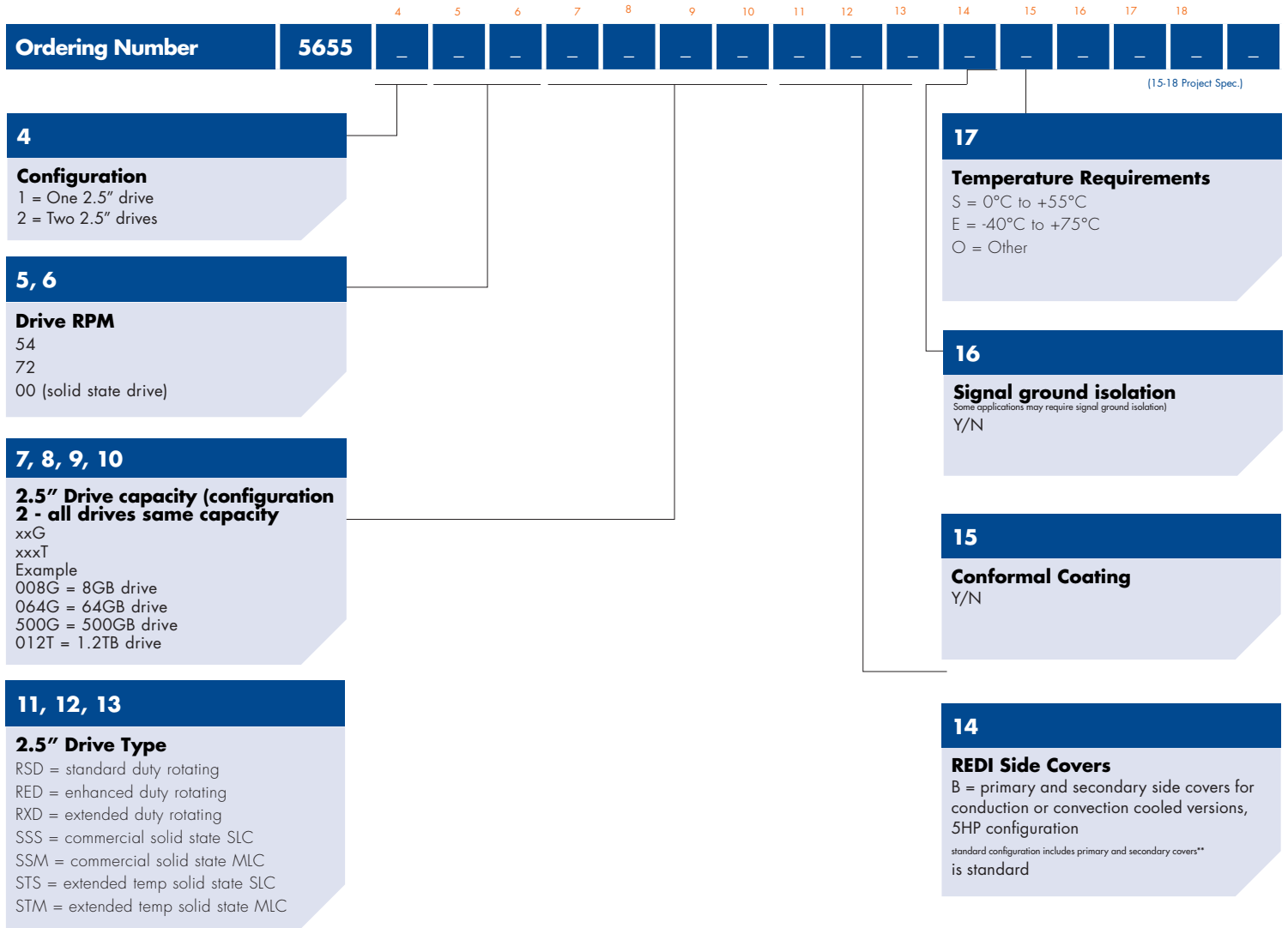Shock and vibration values are media dependent.

ENVIRONMENTALS

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

6U VMEbus Storage
STORAGE MODULES WITH SATA AND DVD DRIVES

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ORDERING INFORMATION

Ordering Number	5655	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	5655	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

(15-18 Project Spec.)

4
Configuration
1 = One 2.5" drive
2 = Two 2.5" drives

5, 6
Drive RPM
54
72
00 (solid state drive)

7, 8, 9, 10
2.5" Drive capacity (configuration 2 - all drives same capacity
xxG
xxxT
Example
008G = 8GB drive
064G = 64GB drive
500G = 500GB drive
012T = 1.2TB drive

11, 12, 13
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
STS = extended temp solid state SLC
STM = extended temp solid state MLC

17
Temperature Requirements
S = 0°C to +55°C
E = -40°C to +75°C
O = Other

16
Signal ground isolation
Some applications may require signal ground isolation)
Y/N

15
Conformal Coating
Y/N

14
REDI Side Covers
B = primary and secondary side covers for conduction or convection cooled versions, 5HP configuration

standard configuration includes primary and secondary covers**
is standard

Please contact our sales team for more details.

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