# RRT-3UVPX-PCIe-R-A

### 3U VPX Air Cooled PCIe Carrier with Removable SSD Module

The 3U VPX Air Cooled PCIe carrier with removable SSD module is for applications that require the frequent removal of SSD, fast transfer rates and large capacities. It consists of two components; the 3U VPX carrier board with PCI express (PCIe) interface that mounts in one slot of 3U VPX chassis and the removable SATA SSD Module. The connectors between the drive module and the carrier are rated for 100,000 mating cycles to support frequent insertions and removals.

The drive module can use any COTS 2.5" SATA Solid State Drive (SSD) providing capacities up to 16TB and transfer rates of up to 600MB/S. Options for TCG opal and military erase.



### **FEATURES**

- Capacities up to 16 TB
- 600MB/S Transfer Rates
- Removable SSD module
- PCIe Gen 2 x 2 interface
- 100,000 mating cycles
- OpenVPX Thin Pipe (TP) MOD-3-PER-1T-16.3.3.x
- VITA 46, 47, 48, 65
- Boot and/or storage disk
- Air cooled
- COTS 2.5" SATA SSDs
- SATA3 (SATA600) Interface to SSD
- Military erase options
- FIPS197,TCG Opal options
- Rugged design
- IDE or AHCI Mode
- VxWorks™, Linux and Windows™ support



# EASILY REMOVE SSD DRIVE MODULE FROM VPX BOARD



# 3U VPX Air Cooled Carrier with PCIe Interface RRT-3UVPX-PCIe-R- -----

REQUIREMENTS					
COOLING					
A080	AIR COOLED, 0.80" PITCH				
A085	AIR COOLED, 0.85" PITCH				
A100	AIR COOLED, 1.00" PITCH				
OPTIONS (MAY BE LEFT BLANK)					
CONFORMAL COATING					
UR	POLYURETHANE				
AR	ACRYLIC				
	EXTENDED TEMP. RANGE				
X	-40° C to 85° C				

EXAMPLES: RRT-3UVPX-PCIe-R-A100-UR-X RRT-3UVPX-PCIe-R-A085

## Removable SATA SSD Drive Module

RRT-DM-SATA- - - - - - -

REQUIREMENTS					
NAND FLASH TYPE					
SLC	SINGLE LEVEL CELL				
MLC	MULTI LEVEL CELL				
TLC	TRI LEVEL CELL (3D)				
CAPACITY					
CAPACITIES UP TO 16 TB					
OPTIONS (MAY BE LEFT BLANK)					
	CONFORMAL COATING				
UR	POLYURETHANE				
AR	ACRYLIC				
EXTENDED TEMP. RANGE					
Х	-40°C to 85°C				
NO TOOLS					
TS	THUMB SCREWS				
SECURITY					
FE	FAST ERASE				
SE1	NSA/CSS MANUAL 9-12 ERASE				
SE2	RCC-TG IRIG 106-107 CHAPTER 10 ERASE				
OPAL	TCG OPAL COMPLIANT				
FIPS197	FIPS197 COMPLIANT				

#### **EXAMPLES**:

RRT-DM-SATA-TLC-16TB RRT-DM-SATA-SLC-1TB-UR-X-SE1 RRT-DM-SATA-MLC-8TB-UR-X



### 3U VPX Air Cooled PCIe Carrier with Removable SSD Module

PERFORMANCE						
NAND FLASH TYPE	TLC	MLC	SLC			
CAPACITIES <sup>1</sup>	UP TO 16TB	UP TO 8TB	UP TO 480GB			
INTERFACE <sup>2</sup>		PCIe Gen 2x2				
THROUGHPUT - SUSTAINED	450 MB/S	400 MB/S	400 MB/S			
RELIABILITY						
MTBF-DRIVE	1 MILLION HOURS	1 MILLION HOURS	2 MILLION HOURS			
MTBF-VPX BOARD <sup>6</sup>	3 MILLION HOURS					
DATA RETENTION	1 YEAR	1 YEAR	10 YEARS			
ENDURANCE (100GB) TOTAL BYTES WRITTEN	70 TBW	70 TBW	350 TBW			
CARRIER/DRIVE MODULE MATING CYCLES	100,000 CYCLES					
POWER						
VOLTAGE	+5V +/- 5%, +3.3V +/- 5%	1				
WATTS (IDLE)	1.2 W	3.5 W	1 W			
WATTS (ACTIVE)	4 W	10 W	2.5 W			
	ENVIRO	NMENTAL				
OPERATING TEMP., VITA 47 CLASS <sup>3</sup>	0 to 60C, AC1	0 to 60C, AC1 -40 to 85C, AC3 for -X option				
STORAGE TEMP.	-40°C to 85°C	-40°C	to 85°C			
ALTITUDE	80,000 FT (24,000 METERS)					
RELATIVE HUMIDITY	5% TO 95%					
SHOCK, VITA 47 CLASS <sup>4</sup>	40 g 11 MILLISECOND HALF-SINE, OS2					
VIBRATION, VITA 47         0.1 g²/HZ100 HZ TO 1000 HZ, V3           CLASS <sup>5</sup> 0.1 g²/HZ100 HZ TO 1000 HZ, V3						
PHYSICAL						
FORM FACTOR 3U VPX						
WEIGHT 10 OZ MAX						
PITCH	0.8"					
NOTES						

### **NOTES**

- (1) Larger capacities available as new COTS 2.5" drives released
  (2) Interface connected via compatible slot profile SLT3-PER-1X-14.3.X
  (3) Thermal qualification per MIL-STD-810, Method 501, Procedure II, and MIL-STD-810, Method 502, Procedure II
  (4) Shock qualification per MIL-STD-810F, Method 516, Procedure I
  (5) Vibration qualification per MIL-STD-810F, Method 514, Procedure 1

- (6) Telcordia SR-322, Issue 3, operating temp (40C), electrical stress (50%), environmental factor (1.0)

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