



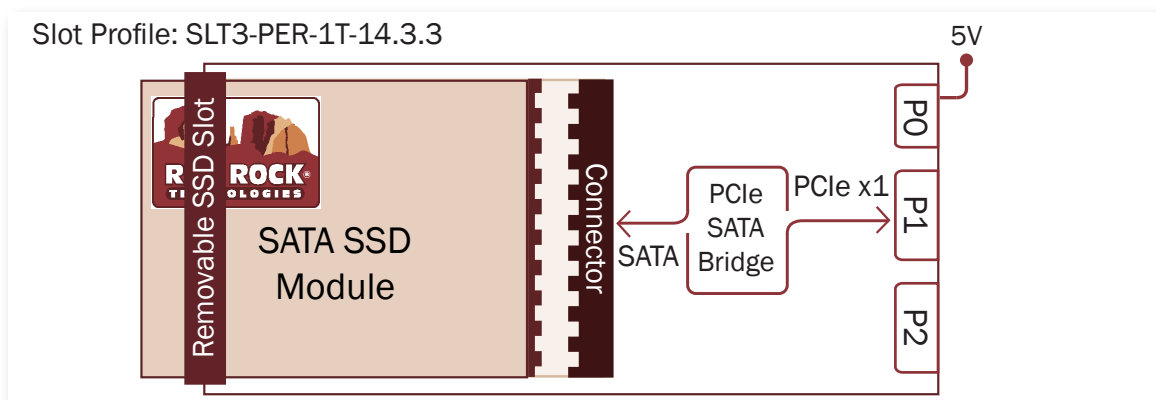
# RRT-3UVPX-PCIe-R-C 3U VPX Conduction Cooled Carrier with PCIe Interface and Removable SSD Module

- Capacities up to 20 TB
- 600 MB/S Transfer rates
- Removable SSD module
- OpenVPX Ultra Thin Pipe (UTP) PCIe x1 interface
- 100,000 mating cycles
- VITA 65 Slot Profiles:
  - SLT3-PER-1T-14.3.3
- VITA 46, 47, 48, 65
- Boot and/or storage disk
- Conduction cooled
- COTS 2.5" SATA SSDs
- SATA3 (SATA600) Interface to SSD
- Military erase, FIPS140-2, FIPS197, TCG Opal options
- Option for thumbscrews to remove drive module without tools
- IDE or AHCI Mode
- Desktop version available to connect drive module to PC



**3U VPX CONDUCTION COOLED CARRIER WITH PCIE INTERFACE AND 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 20TB and transfer rates of up to 600MB/S. Options for FIPS140-2, FIPS197, TCG Opal, and military erase.



# Ordering Information

## 3U VPX Conduction Cooled Carrier with PCIe Interface

RRT-3UVPX-PCIe-R-C- **PER** - **UR** - **X**

### Requirements

#### VPX Interface

PER Peripheral Slot

### Options May be left blank

**Extended Temperature Range**  
X -40°C to 85°C

**Conformal Coating**  
UR Polyurethane  
AR Acrylic

#### ORDER EXAMPLES

RRT-3UVPX-PCIe-R-C-PER-UR-X  
RRT-3UVPX-PCIe-R-C-PER

## Removable SATA SSD Drive Module

RRT-DM-SATA- **MLC** - **20TB** - **UR** - **X** - **FE** - **TS**

### Requirements

#### NAND Flash Type

HDD Hard Disk Drive  
TLC 3D NAND  
MLC Multi Level Cell  
SLC Single Level Cell

#### Capacity

1TB - 5TB For HDD  
120GB - 8TB For TLC  
60GB - 20TB For MLC  
7GB - 240GB For SLC

### Options May be left blank

#### No Tools

TS Thumbscrews

#### Security

FE Fast Erase  
SE1 NSA/CSS Manual 9-12 Erase  
SE2 RCC-TG IRIG 106-107 Chapter 10 Erase  
OPAL TCG Opal Compliant SSD  
FIPS140-2 FIPS 140-2 Compliant SSD  
FIPS197 FIPS 197 Compliant SSD

#### Extended Temperature Range

X -40°C to 85°C

#### Conformal Coating

UR Polyurethane  
AR Acrylic

#### ORDER EXAMPLES

RRT-DM-SATA-SLC-240GB-TS  
RRT-DM-SATA-MLC-20TB-UR-X-SE1  
RRT-DM-SATA-HDD-1TB-FIPS140-2



# Product Specifications

## 3U VPX CONDUCTION COOLED CARRIER WITH PCIE INTERFACE AND REMOVABLE SSD MODULE

PERFORMANCE				
NAND FLASH TYPE	HDD	SSD: TLC	SSD: MLC	SSD: SLC
CAPACITIES <sup>1</sup>	Up to 5TB	Up to 8TB	Up to 20TB	Up to 240GB
INTERFACE <sup>2</sup>	PCIe Gen 2 x 1			
THROUGHPUT - SUSTAINED	130 MB/S	400 MB/S		
RELIABILITY				
MTBF-DRIVE	500,000 hours	1 million hours	2 million hours	3 million hours
MTBF-DRIVE MODULE	3 million hours			
MTBF-VPX BOARD <sup>3</sup>	3 million hours			
DATA RETENTION	Not applicable	1 year	10 years	
ENDURANCE (100GB) TOTAL BYTES WRITTEN	Not applicable	70 TBW	350 TBW	
CARRIER/DRIVE MODULE MATING CYCLES	100,000 mating cycles			
POWER				
VOLTAGE-PERIPHERAL SLOT	+5V +/- 5%			
WATTS (IDLE)	1 W	1.2 W	3.5 W	1 W
WATTS (ACTIVE)	2.5 W	4 W	10 W	2.5 W
ENVIRONMENTAL				
OPERATING TEMPERATURE	5 °C to 55 °C	0 °C to 60 °C	0 °C to 70 °C	0 °C to 70 °C
OPERATING TEMPERATURE - X VERSION	Not available	-40 °C to 85 °C		
STORAGE TEMP.	-40 °C to 70 °C	-40 °C to 85 °C		
ALTITUDE	10,000 ft. (3,000 meters)			
ALTITUDE - X VERSION	Not available	80,000 ft. (24,000 meters)		
RELATIVE HUMIDITY	5% to 95% non-condensing			
SHOCK	20g, 11 millisecond terminal sawtooth pulse			
SHOCK - X VERSION	Not available	40g, 11 millisecond terminal sawtooth pulse		
VIBRATION	0.04 g <sup>2</sup> /Hz, 5 Hz to 100 Hz			
VIBRATION - X VERSION	Not available	0.04 g <sup>2</sup> /Hz, 100 Hz to 1000 Hz		
PHYSICAL				
FORM FACTOR	3U VPX			
WEIGHT	10 oz. max			
PITCH	0.8"			
NOTES				
<p>(1) Larger capacities available as new COTS 2.5" drives released</p> <p>(2) Interface connected via compatible slot profile SLT3-PER-1T-14.3.3</p> <p>(3) Telcordia SR-322, Issue 3, operating temp (40C), electrical stress (50%), environmental factor (1.0)</p> <p>(4) Thermal qualification per MIL-STD-810, Method 501, Procedure II, and MIL-STD-810, Method 502, Procedure II</p>				



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