

3U VPX PCIe Carrier with Removable Drive Module

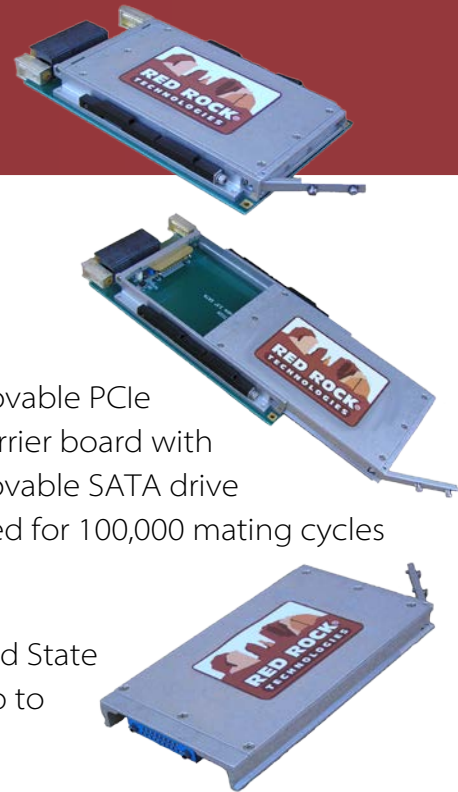
RRT-3UVPX-PCIe-R

For applications that require the frequent removal of SSD, the 3U VPX Removable PCIe drive module is recommended. It consists of 2 components; the 3U VPX carrier board with PCI express (PCIe) interface that mounts in the 3U VPX chassis and the removable SATA drive module. The connectors between the drive module and the carrier are rated for 100,000 mating cycles to support frequent insertions/removals.

The drive module can use any COTS 2.5" SATA Hard Disk Drive (HDD) or Solid State Drive (SSD) providing capacities up to 2TB and sustained transfer rates of up to 500 MB/S. Option for discrete controlled secure erase.

FEATURES INCLUDE

- PCIe Gen 2 x 2 interface to VPX backplane
- OpenVPX Thin Pipe (TP) storage module profile MOD-3-PER-1T-16.3.3.1 or 2
- 3U VPX Storage VITA 46, 47, 48, 65
- Provides boot disk and/or disk storage
- Conduction or air cooled versions
- Rugged removable module connectors rated for 100,000 mating cycles
- Uses COTS 2.5" SATA drives for wide range of options
- Options for discrete controlled secure erase
- Robust design for extreme temperature, shock & vibration environments
- High performance SATA transfer rates up to 500 MB/S
- IDE and AHCI modes available
- VxWorks™, Linux and Windows™ drivers available



Security Options

ERASE/DESTROY OPTIONS INVOKED BY COMMAND OR BY DISCRETE INPUT

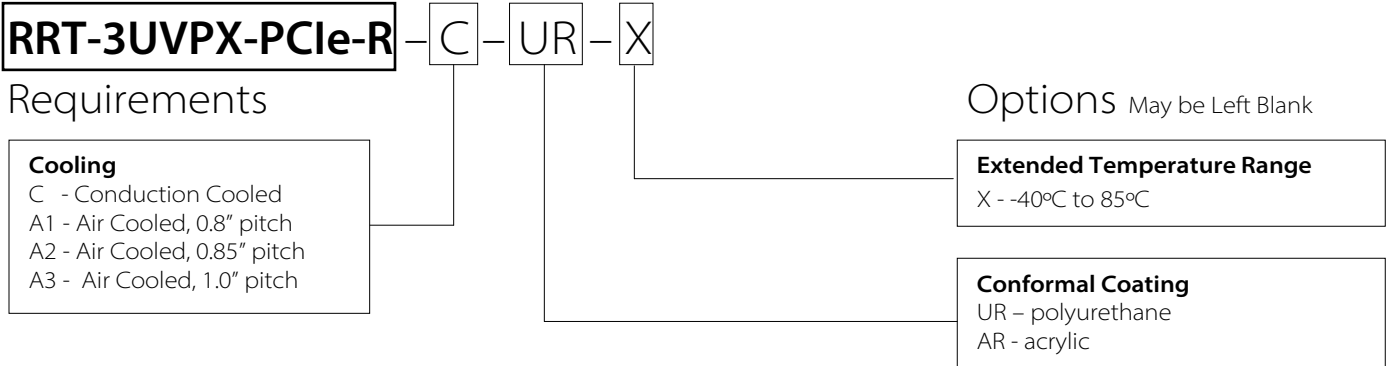
Fast Erase Sets all locations to set value

NSA/CSS Manual 9-12 Erase Erases all locations, including bad blocks, then sets all locations to 0x55, then internal verification is performed reading 1% of capacity confirming data pattern

RCC-TG IRIG 106-07 Chapter 10 Erase Erases all locations, including bad blocks, then sets all locations to 0x55, then sets all locations to 0xAA, and finally erased

Drive Destroy Performs erase of all NAND flash including internal SSD firmware, file system, and tables which makes the drive unusable and unreadable

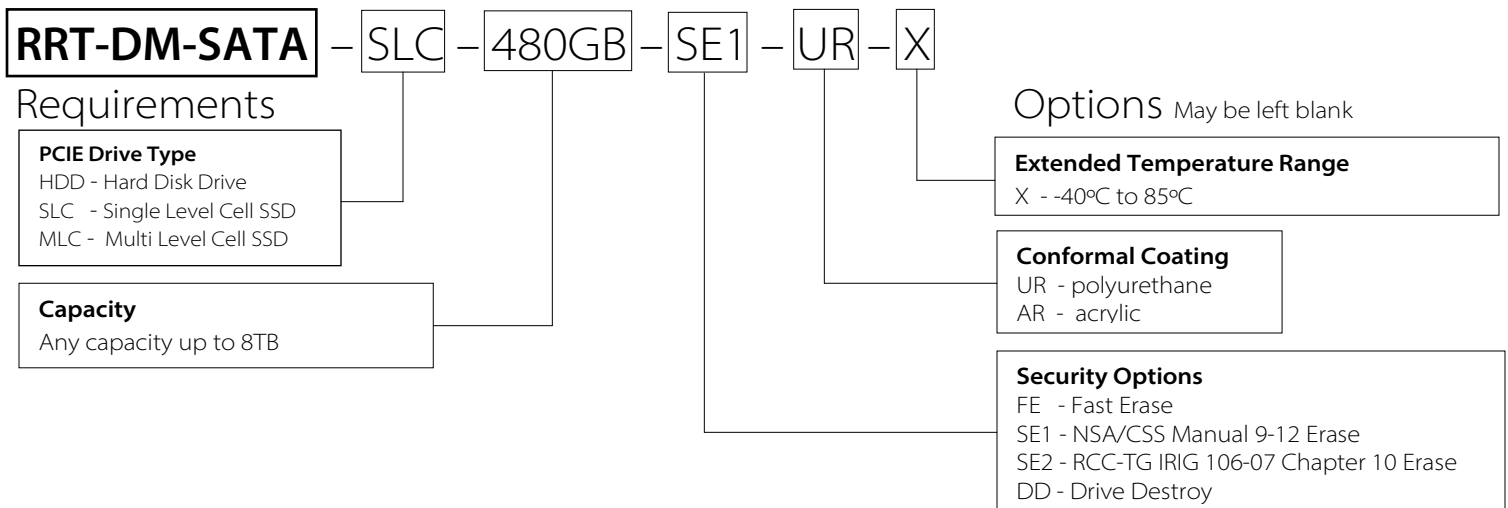
Ordering Information – 3U VPX Carrier Board



Example: RRT-3UVPX-PCIe-R-C-UR-X

Example: RRT-3UVPX-PCIe-R-A3

Ordering Information – Removable Drive Module



Example: RRT-DM-SATA-SLC-480GB-SE1-UR-X

Example: RRT-DM-SATA-MLC-8TB-UR

Example: RRT-DM-SATA-HDD-1TB

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3U VPX Removable PCIe Drive Module Specifications

| Performance | | | | |
|--|------------------------------|---|-----------|----------------------|
| Version | HDD | SSD- SLC | SSD-MLC | SSD-SLC-Secure Erase |
| Capacities (1) | Up to 2TB | Up to 480GB | Up to 2TB | Up to 480GB |
| NAND FLASH Type | NA | SLC | MLC | SLC |
| Interface (2) | PCIe Gen 2 x 2 | | | |
| Sustained Throughput | 130 MB/S | 220 MB/S | 450 MB/S | 220 MB/S |
| Sector Size | 512 | | | |
| Reliability | | | | |
| MTBF-Drive (in hours) | 500,000 | 3 million | 1 million | 1.2 million |
| MTBF-Drive Module (6) | 3 million hours | | | |
| MTBF-Drive Carrier (6) | 3 million hours | | | |
| Carrier/Drive Module Mating cycles | 100,000 | | | |
| Power | | | | |
| Voltage | 5 V+/- 5%, +3.3V +/- 5% | | | |
| Watts | 1 | 1.2 | 1.2 | 1 |
| Watts-active | 2.5 | 2.5 | 2.5 | 2 |
| Environmental | | | | |
| Temperature – operating (3) VITA 47 Class | 0 to 60C, CC1,AC1 | -40 to 85C, CC4, AC3 for -X option 0 to 70C, CC1, AC1 for Standard SSD | | |
| Temperature storage | -40 to 70C | -40 to 85C | | |
| Relative Humidity | 5% to 95% | | | |
| Altitude | 10,000 ft (3000 meters) | 80,000 ft (24,000 meters) | | |
| Shock (4) VITA 47 Class | 20g, OS1 | 40g 11 millisecond half-sine, OS2 | | |
| Vibration (5), VITA 47 Class | 0.04 g ² /Hz,V2 | 0.1 g ² /Hz100 Hz to 1000 Hz,V3 | | |
| Physical | | | | |
| Form Factor | 3U VPX | | | |
| Weight | 14 oz max. | | | |
| Pitch | 0.8", 0.85" and 1.0" options | | | |
| <p>(1) Larger capacities available as new COTS 2.5" drives released</p> <p>(2) Interface connected via compatible slot profile MOD-3-PER-1T-16.3.3.1 or 2</p> <p>(3) Thermal qualification per MIL-STD-810F, Method 501 Procedure II, and MIL-STD-810F, Method 502, Procedure II</p> <p>(4) Shock qualification per MIL-STD-810F, Method 516, Procedure I</p> <p>(5) Vibration qualification per MIL-STD-810F, Method 514, Procedure I</p> <p>(6) Telcordia SR-322, issue 3, operating temp (40C), electrical stress (50%), environmental factor (1.0)</p> | | | | |

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