

# 3.5" SCSI 68-Pin Wide LVD Solid State Drive (SSD)



## RRT-35SFS-LW

Red Rock Technologies, Inc. offers a proprietary FPGA-based design that provides a long-term solution for replacement of obsolete SCSI drives.

### FEATURES

- ❖ Drop in replacement for obsolete LVD SCSI drives
- ❖ 68-pin 16-bit Wide Low Voltage Differential (LVD) Ultra SCSI interface
- ❖ Built-in debug monitor for diagnostics and updates to firmware
- ❖ Transfer rates up to 40 MB/s
- ❖ Capacities up to 960GB
- ❖ Military secure erase and drive destroy options available
- ❖ Commercial and Extended temperature versions available
- ❖ Rugged versions available
- ❖ Optional onboard SCSI termination
- ❖ Customizable firmware (modified to work in your system)
- ❖ RoHS compliant
- ❖ US-Based Engineering and Manufacturing
- ❖ In-house Technical Support

# 3.5" SCSI 68-pin Wide LVD SSD Specifications

PERFORMANCE				
Version	SLC	MLC	Secure Erase	Drive Destroy
Capacities <sup>(1)</sup>	Up to 256GB	Up to 960GB	Up to 256GB	Up to 256GB
NAND Flash Type	SLC	MLC	SLC	SLC
Interface	16-bit Wide LVD (Low Voltage Differential) SCSI1, SCSI2, Ultra SCSI			
Sustained Throughput Read/Write	38 MB/s			
Sector Size	512 byte default, custom sector sizes available			
RELIABILITY				
MTBF (hours) <sup>(2)</sup>	2 million	1 million	1.24 million	1 million
Endurance (100GB SSD) Total Bytes Written	350TB	70TB	350TB	350TB
Data Retention	10 years <sup>(3)</sup>	1 year <sup>(4)</sup>	10 years <sup>(3)</sup>	10 years <sup>(3)</sup>
POWER				
Voltage	+5V ± 5%			
Watts-idle	3W			
Watts-active	4W max			
ENVIRONMENTAL				
Operating Temperature	0°C to 70°C			
Storage Temperature	-40°C to 85°C			
Extended Operating Temperature <sup>(5)</sup>	-40°C to 85°C			
Extended Storage Temperature	-40°C to 85°C		-50°C to 95°C	
Relative Humidity <sup>(6)</sup>	5% to 95% non-condensing			
Altitude <sup>(7)</sup>	80,000 ft (24,000 meters)			
Shock	50g 11 millisecond			
Shock - Rugged <sup>(8)</sup>	1500g 0.5 millisecond			
Vibration	12.0g 20 Hz to 2000 Hz			
Vibration - Rugged <sup>(9)</sup>	16.3g 20 Hz to 2000 Hz			
PHYSICAL				
Form Factor	3.5" drive			
Weight	15 oz. max (420g)			
Dimensions (W x L x H)	4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)			
(1) Larger capacities available as new COTS 2.5" drives released				
(2) Telcordia SR-332, Issue 3, operating temp. (40°C), electrical stress (50%), environmental factor (1.0)				
(3) SLC 10 years at 10% TBW ramping down to 1 year at 100% TBW				
(4) MLC 10 years at 0% TBW ramping down to 1 year at 100% TBW				
(5) Thermal qualification MIL-STD-810F, Method 501, Procedure II, and MIL-STD-810F, Method 502, Procedure II				
(6) Relative Humidity qualification MIL-STD-810F, Method 507				
(7) Altitude qualification MIL-STD-810F, Method 500, Procedure II				
(8) Shock qualification MIL-STD-810F, Method 516, Procedure I, terminal peak saw tooth				
(9) Vibration qualification MIL-STD-810F, Method 514, Procedure I				

# Security Options

## ERASE/DESTROY OPTIONS INVOKED BY COMMAND OR BY DISCRETE INPUT

**Fast Erase (FE):** Sets all locations to set value.

**NSA/CSS Manual 9-12 Erase (SE1):** 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 (SE2):** Erases all locations, including bad blocks, then sets all locations to 0x55, then sets all locations to 0xAA, and then, finally erased.

**Drive Destroy (DD):** Performs erase of all NAND flash including internal SSD firmware, file system, and tables which makes the drive unusable and unreadable.

---MORE MILITARY ERASE OPTIONS AVAILABLE---

## Ordering Information

**RRT-35SFS-LW** - **SLC** - **120GB** - **SE1** - **UR** - **X** - **R**

### Requirements

**NAND Flash Type**  
**SLC** Single Level Cell  
**MLC** Multi Level Cell

**Capacity**  
Any capacity up to 960GB

### Options May be left blank

**Security Type**  
**FE** Fast Erase  
**SE1** NSA/CSS Manual 9-12 Erase  
**SE2** RCC-TG IRIG 106-07 Chapter 10 Erase  
**DD** Drive Destroy

**Conformal Coating**  
**UR** Polyurethane  
**AR** Acrylic

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

**Shock/Vibration**  
**R** Rugged version with extended shock/vibration

Part Order Examples: RRT-35SFS-LW-SLC-512MB-FE  
RRT-35SFS-LW-SLC-120GB-AR-X-R

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