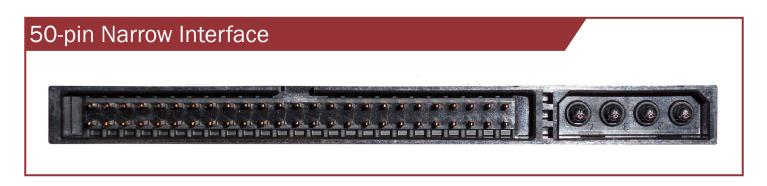


RRT-35SCSI-SN 3.5" SCSI 50-Pin Narrow Solid State Drive (SSD)

- Drop in replacement for obsolete SCSI drives
- 50-pin Narrow 8-bit Single Ended (SE) Ultra SCSI interface
- Built-in debug monitor for diagnostics and updates to firmware
- Transfer rates up to 20 MB/s
- Capacities up to 16TB
- Military secure erase options
- Extended temperature option
- Rugged versions available
- SCSI termination can be enabled within unit
- SCSI ID selection 0 7
- RoHS compliant
- US-Based Engineering and Manufacturing
- In-house Technical Support



THE 3.5" SCSI 50-PIN NARROW SOLID STATE DRIVE (SSD) uses a proprietary FPGA-based design that provides a long-term solution for replacement of obsolete SCSI drives.



(480)-483-3777 •

3.5" SCSI

		RRT-35SCSI-SN- MLC - 120GB - UR - X - SE1
Requireme	<u>ents</u>	
Disk Type HDD SLC MLC TLC	Hard Disk Drive Single Level Cell NAND FLASH SS Multi Level Cell NAND FLASH SSD 3D NAND FLASH SSD	
<u>Capacity</u> 1TB - 5TB 7GB - 240GB 60GB - 16TB 120GB - 8TB	For HDD For SLC For MLC For TLC	
<u>Options ма</u> <u>Conformal Coat</u> UR AR		
Extended Temp	erature Range -40°C to 85°C	
Erase Types FE SE1 SE2	Fast Erase NSA/CSS Manual 9-12 Erase RCC-TG IRIG 106-07 Chapter 10 E	Erase ORDER EXAMPLES RRT-35SCSI-SN-MLC-120GB-UR-X-SE1 RRT-35SCSI-SN-SLC-4.3GB

3.5" SCSI 50-PIN NARROW SSD

CAPACITIES¹Up to STBUp to 8TBUp to 16TBUp to 240GBINTERFACENarrow 8-bit Single Ended (SE), SCSI-1, SCSI-2 (Fast), Ultra (Fast-20)19MB/SSUSTAINED19MB/SSUSTAINED512 bytesSECTOR SIZE512 bytes RELIABILITY MTBF - DRIVE (HOURS)²500,000 hours1 million hours2 million hours3 million hoursENDURANCE (100GB SSD)Not applicable70 TBW350 TBWTOTAL BYTES WRITTENNot applicable70 TBW10 years4POWERVOLTAGE+ 5V +/-5%ENVIRONMENTALOPERATING TEMP.5°C to 55°C0°C to 60°C°°C to 70°CENVIRONMENTALOPERATING TEMP.5°C to 55°C0°C to 60°C°°C to 70°CSTORAGE TEMP.40°C to 70°CALTITUDE°10,000 ft. (3,000 meters)80,000 ft. (24,000 meters)80,000 ft. (24,000 meters)RELATIVE HUMIDITY?5% to 95% non-condensing500 VIERATION°10.000 g.5msSHOCK®PHYSICALFOYSICALFORM FACTOR3.5° drive1000g 0.5ms1000g 0.5msINFORMENTALPOWERSTORAGE TEMP.4.0° C to 70°C-40°C to 85°CA0° C to 70°CA0° C to 70°CA0° C to 70°CA0° C t	PERFORMANCE								
INTERFACE Narrow 8-bit Single Ended (SE), SCSI-1, SCSI-2 (Fast), Ultra (Fast-20) THROUGHPUT - 19MB/S SUSTAINED SECTOR SIZE 512 bytes FELIABILITY MTBF - DRIVE (HOURS) ² 500,000 hours 1 million hours 2 million hours 3 million hours ENDURANCE (100GB SSD) Not applicable 70 TBW 350 TBW TOTAL BYTES WRITTEN Not applicable 1 year ³ 10 years ⁴ POWER VOLTAGE +5V +/- 5% WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W WATTS (IDLE) 1 W 1.2 W 4.0 W 2.5 W ENVIRONMENTAL OPERATING TEMP. 5°C to 55°C 0°C to 60°C 0°C to 70°C EXTENDED OPERATING TEMP. ⁶ 5°C to 70°C 40°C to 85°C ALTIVDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) SHOCK ⁸ 150g 2ms 1000g 0.5ms YIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz FORM FACTOR 3.5° drive WEIGHT 15 oz. max (420g) DIMENSIONS 4.0° x 5.75° x 1.0° (101.6mm x 146.1mm x 25.4mm)	VERSION	HDD	SSD - TLC	SSD - MLC	SSD - SLC				
THROUGHPUT - SUSTAINED 19MB/S SECTOR SIZE 512 bytes RELIABILITY MTBF - DRIVE (HOURS)2 500,000 hours 1 million hours 2 million hours 3 million hours ENDURANCE (100GB SSD) Not applicable 70 TBW 350 TBW DATA RETENTION Not applicable 1 year ³ 10 years ⁴ POWER VOLTAGE +5V +/- 5% WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W WATTS (IDLE) DPOWER 2.5 W 4 W 10 W 2.5 W ENVIRONMENTAL O° C to 55 °C 0 °C to 60 °C 0 °C to 70 °C ENVIRONMENTAL O° C to 55 °C 0 °C to 60 °C -40 °C to 70 °C ENVIRONMENTAL O° C to 55 °C 0 °C to 60 °C -40 °C to 70 °C ENVIRONMENTAL O° C to 55 °C 0 °C to 85 °C A0 °C to 70 °C A0 °C to 70 °C -40 °C to 85 °C	CAPACITIES ¹	Up to 5TB	Up to 8TB	Up to 16TB	Up to 240GB				
SUSTAINED Image: Substrain of the	INTERFACE	TERFACE Narrow 8-bit Single Ended (SE), SCSI-1, SCSI-2 (Fast), Ultra (Fast-20)							
RELIABILITY MTBF - DRIVE (HOURS)? 500,000 hours 1 million hours 2 million hours 3 million hours ENDURANCE (100GB SSD) Not applicable 70 TBW 350 TBW 350 TBW TOTAL BYTES WRITTEN Not applicable 1 year ³ 10 years ⁴ POWER VOLTAGE +5V +/- 5% WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W 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 TEMP. 5° C to 55° C 0° C to 60° C 0° C to 70° C EXTENDED OPERATING Not available -40° C to 85° C -40° C to 85° C STORAGE TEMP. -40° C to 70° C -40° C to 85° C -40° C to 85° C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 1000g 0.5ms 16.3g 20 Hz to 2000 Hz SHOCK ⁶ 150g 2ms <	THROUGHPUT - SUSTAINED	19MB/S							
MTBF - DRIVE (HOURS)2500,000 hours1 million hours2 million hours3 million hoursENDURANCE (100GB SSD) TOTAL BYTES WRITTENNot applicable70 TBW 350 TBWDATA RETENTIONNot applicable1 year310 years4POWERVOLTAGE $+5V +/- 5\%$ WATTS (IDLE)1 W1.2 W3.5 W1 WWATTS (IDLE)1 W1.2 W3.5 W1 WWATTS (IDLE)ENVIRONMENTALOPERATING TEMP.2.5 C to 55 °C0 °C to 60 °C0 °C to 70 °CEXTENDED OPERATING TEMP.5Not available-40 °C to 85 °CAd0 °C to 70 °C-40 °C to 85 °CAd0 °C to 70 °C-40 °C to 70 °C<	SECTOR SIZE	512 bytes							
ENDURANCE (100GB SSD) TOTAL BYTES WRITTEN Not applicable 70 TBW 350 TBW DATA RETENTION Not applicable 1 year ³ 10 years ⁴ DATA RETENTION Not applicable 1 year ³ 10 years ⁴ POWER VOLTAGE +5V +/- 5%	RELIABILITY								
TOTAL BYTES WRITTENNot applicable1 year310 years4POWERVOLTAGE $+5V +/-5\%$ WATTS (IDLE)1 W1.2 W3.5 W1 WWATTS (ACTIVE)2.5 W4 W10 W2.5 WENVIRONMENTALOPERATING TEMP.5°C to 55°C0°C to 60°C0°C to 70°CENVIRONMENTALOPERATING TEMP.5°C to 55°C0°C to 60°C0°C to 70°CENVIRONMENTALOPERATING TEMP.5°C to 55°C0°C to 60°C0°C to 70°CENVIRONMENTALOPERATING TEMP.5°C to 55°C0°C to 85°CA0°C to 70°C-40°C to 70°C-40°C to 70°C-40°C to 85°CSTORAGE TEMP40°C to 70°C-40°C to 85°CALTITUDE®10,000 ft. (3,000 meters)80,000 ft. (24,000 meters)80,000 ft. (24,000 meters)RELATIVE HUMIDITY75% to 95% non-condensingSHOCK®150g 2ms1000g 0.5msVIBRATION°1g 5Hz to 500 Hz16.3g 20 Hz to 2000 HzPHYSICALFORM FACTOR3.5° driveWEIGHT15 oz. max (420g)JUMENSIONS4.0° x 5.75° x 1.0° (101.6mm x 146.1mm x 25.4mm)	MTBF - DRIVE (HOURS) ²	500,000 hours	1 million hours	2 million hours	3 million hours				
POWER VOLTAGE +5V +/- 5% WATTS (IDLE) 1 W 1.2 W 3.5 W 1 W 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 TEMP. 5°C to 55°C 0°C to 60°C 0°C to 70°C ENVIRONMENTAL OPERATING TEMP. 5°C to 70°C 0°C to 60°C 0°C to 70°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C Adv °C to 70°C -40°C to 85°C Adv °C to 70°C -40°C to 85°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C Adv °C to 70°C -40°C to 85°C Adv °C to 70°C -40°C to 85°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C Adv °C to 70°C -40°C to 85°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C	ENDURANCE (100GB SSD) TOTAL BYTES WRITTEN	Not applicable	70 TBW		350 TBW				
VOLTAGE +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 TEMP. 5 °C to 55 °C 0 °C to 60 °C 0 °C to 70 °C EXTENDED OPERATING TEMP. ⁶ Not available -40 °C to 85 °C STORAGE TEMP. -40 °C to 70 °C -40 °C to 85 °C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) SHOCK ⁸ 150g 2ms 1000g 0.5ms 1000g 0.5ms 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz 1000g 0.5ms VIBRATION ⁹ 3.5" drive 150 z. max (420g) 1000g 0.5ms 1000g 0.5ms WEIGHT 15 oz. max (420g) 1000g 0.5ms x 1.0" (101.6mm x 146.1mm x 25.4mm) 10000g 0.5ms 100000g 0.5mg	DATA RETENTION	Not applicable	1 year ³		10 years ⁴				
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 TEMP. 5°C to 55°C 0°C to 60°C 0°C to 70°C ENVIRONMENTAL OPERATING TEMP. 5°C to 55°C 0°C to 60°C 0°C to 70°C EXTENDED OPERATING TEMP. 5°C to 70°C -40°C to 85°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 1000g 0.5ms 80,000 ft. (24,000 meters) SHOCK ⁸ 150g 2ms 1000g 0.5ms 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5″ drive WEIGHT 15 oz. max (420g) PHYSICAL Storma (420g) DIMENSIONS 4.0″ x 5.75″ x 1.0″ (101.6mm x 146.1mm x 25.4mm) Storma (4000 meters)	POWER								
WATTS (ACTIVE) 2.5 W 4 W 10 W 2.5 W ENVIRONMENTAL OPERATING TEMP. 5 °C to 55 °C 0 °C to 60 °C 0 °C to 70 °C EXTENDED OPERATING TEMP. ⁵ Not available -40 °C to 85 °C STORAGE TEMP. -40 °C to 70 °C -40 °C to 85 °C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY? 5% to 95% non-condensing 1000g 0.5ms 1000g 0.5ms SHOCK ⁸ 150g 2ms 1000g 0.5ms 16.3g 20 Hz to 2000 Hz VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz FORM FACTOR S.5" drive WEIGHT 15 oz. max (420g) UMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	VOLTAGE	+5V +/- 5%							
ENVIRONMENTAL OPERATING TEMP. 5°C to 55°C 0°C to 60°C 0°C to 70°C EXTENDED OPERATING TEMP. ⁵ Not available -40°C to 85°C STORAGE TEMP. -40°C to 70°C -40°C to 85°C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 80,000 ft. (24,000 meters) SHOCK ⁸ 150g 2ms 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) UDUL6mm x 146.1mm x 25.4mm)	WATTS (IDLE)	1 W	1.2 W	3.5 W	1 W				
OPERATING TEMP. 5 °C to 55 °C 0 °C to 60 °C 0 °C to 70 °C EXTENDED OPERATING TEMP. ⁵ Not available -40 °C to 85 °C STORAGE TEMP. -40 °C to 70 °C -40 °C to 85 °C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 80,000 ft. (24,000 meters) SHOCK ⁸ 150g 2ms 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) J0.01.6mm x 146.1mm x 25.4mm)	WATTS (ACTIVE)	2.5 W	4 W	10 W	2.5 W				
EXTENDED OPERATING TEMP. ⁵ Not available -40 ° C to 85 ° C STORAGE TEMP. -40 ° C to 70 ° C -40 ° C to 85 ° C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 80,000 ft. (24,000 meters) SHOCK ⁸ 150g 2ms 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) Unu (101.6mm x 146.1mm x 25.4mm)	ENVIRONMENTAL								
TEMP. ⁵ -40°C to 70°C -40°C to 85°C ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condens 1000g 0.5ms stores) SHOCK ⁸ 150g 2ms 1000g 0.5ms 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz Temperature PHYSICAL FORM FACTOR 3.5" drive 15 oz. max (420g) Temperature Temperature WEIGHT 15 oz. max (420g) 4.0" x 5.75" x 1.0" (101 torm x 146.1mm x 25.4mm) Temperature Temperature	OPERATING TEMP.	5°C to 55°C	0°C to 60°C	0°C to 70°C					
ALTITUDE ⁶ 10,000 ft. (3,000 meters) 80,000 ft. (24,000 meters) 80,000 ft. (24,000 meters) RELATIVE HUMIDITY ⁷ 5% to 95% non-condensing 1000g 0.5ms 150g 2ms 1000g 0.5ms SHOCK ⁸ 150g 2ms 1000g 0.5ms 16.3g 20 Hz to 2000 Hz 16.3g 20 Hz to 2000 Hz VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm) 15 oz. max (420g)	EXTENDED OPERATING TEMP. ⁵	Not available		-40°C to 85°C					
meters) meters) RELATIVE HUMIDITY7 5% to 95% non-condensing SHOCK8 150g 2ms 150g 2ms 1000g 0.5ms VIBRATION9 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	STORAGE TEMP.	-40°C to 70°C	-40°C to 85°C	•					
SHOCK ⁸ 150g 2ms 1000g 0.5ms VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	ALTITUDE ⁶	10,000 ft. (3,000 meters)							
VIBRATION ⁹ 1g 5Hz to 500 Hz 16.3g 20 Hz to 2000 Hz PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	RELATIVE HUMIDITY ⁷	5% to 95% non-conden	sing	·					
PHYSICAL FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	SHOCK ⁸	150g 2ms		1000g 0.5ms					
FORM FACTOR 3.5" drive WEIGHT 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	VIBRATION ⁹	1g 5Hz to 500 Hz		16.3g 20 Hz to 2000 Hz					
WEIGHT 15 oz. max (420g) DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	PHYSICAL								
DIMENSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)	FORM FACTOR	3.5" drive							
	WEIGHT	15 oz. max (420g)							
NOTES	DIMENSIONS	NSIONS 4.0" x 5.75" x 1.0" (101.6mm x 146.1mm x 25.4mm)							
NOILS									
(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) MLC								
	(4) SLC								
	(5) Thermal qualification								
(6) Altitude qualification MIL-STD-810F, Method 500, Procedure I (7) Relative Humidity gualification MIL-STD-810F, Method 507									
	(8) Shock qualification								
(9) Vibration qualification MIL-STD-810F, Method 514, Procedure I									



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