

New Energy & Space Saving MR2020-2S-S2R Compact-RAID1 Internal Data Storage Unit for SATA-II 2.5" Drives

RAIDON

Equipped with the same powerful hardware RAID controller as in SR2611-2S-S2R, MR2020 Compact disk mirroring unit can provide server level performance with fault-tolerance for data redundancy and disk failure, as well as backup for two SATA-II 2.5" Drives.



Features:

- Real-Time Backup:**
 Backup data through RAID1 mirroring function to prevent loss of data due to hard drive failure.
- Large Data Backup:**
 MR2020 supports 1TB large capacity to save and backup critical data.
- Fault-Tolerant & Hot-Swap:**
 A failed hard drive can be replaced without system power down.
- 5.25" Form factor & Lowest Power Use:**
 MR2020 use only a 5.25" CD-ROM size slot in PC
- SSD Test:** SLC SDDs with Non-JMicron controllers have been fully tested.
- Maintain Computer Efficiency:**
 Due to hardware RAID controller utilization, Backup performance is based on HDD size and speed and it will not have little or no effect on computer performance.
- Driver-Free, Easy to Manage:**
 No driver. Easy to manage and monitor in time with LCD display or via Windows based GUI software.
- Alarm System:**
 The system will monitor the hard disk, fan and temperature. In case of any failure occurred, it sets the alarm on automatically or sends email via GUI Software.

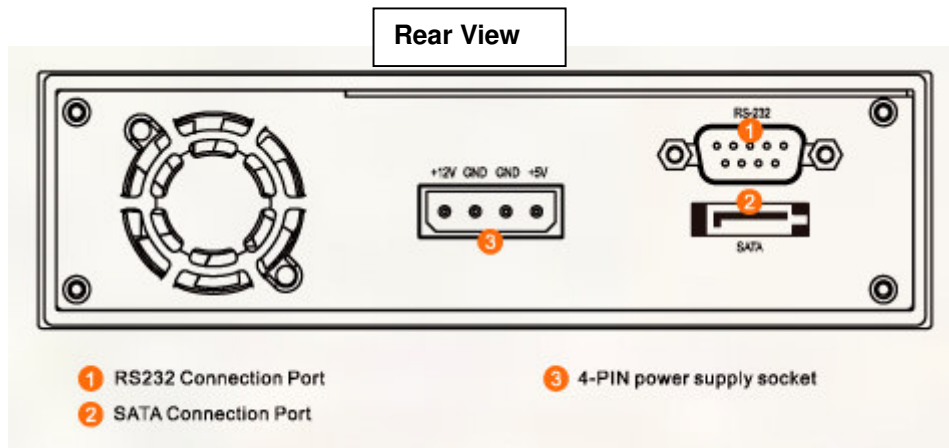


2.5" Tray and Drive
Protective Leather Bag

Model No.	MR2020-2S-S2R
Microprocessor	RAIDON 2045 ASIC SATA-II
Host Interface	SATA-II (300Mb/s)
Burst Transfer Rate	300MB/s
Support Hard Drive	2 x 2.5" SATA-I/II RAID Grade Recommended
Support HDD Capacity	Up to 1TB
RAID Level	RAID 1
Form Factor	Device fit in a single 5.25"/CD-ROM slot
Status Display	LCD Display & Buzzer
Management & Monitoring	Via RA232 Serial DB9 Port (S2R)
RAID Guide Platform	GUI Software for all Windows versions
Operating Systems	Windows / Linux / Others
Power Requirement	12V/5V
Cooling Fan	3cm ball bearing fan
Enviro-Temperature	0C~55C
Certifications	CE & FCC & BSMI
Dimensions (mm)	148W×172D×42H
Net Weight (Kg)	0.92Kg

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MR-2020-2S-S2R Testing Report

Test Configuration:

- Supermicro X8SAX motherboard
- Intel Core i7 CPU 920 @2.67GHz
- 2GB DDR2-667 ECC RAM
- Onboard SATA300
- 2x 2.5" Seagate Constellation 500GB (7200RPM / 32MB Cache)
- Windows XP SP3
- NTFS default 4KB cluster/allocation size

Testing Procedure Results:

Hardware Detection Tests Connection

BIOS Visibility	Yes
OS Visibility	Yes
NTFS & Linux Format	Yes
Read/Write	Yes
Bootable	Yes
Linux Compatible (Fedora Core 4 tested) & Others	Yes

Rebuild Time

Idle (No Data Access)	Successful Mirror Hour for 500Gb	Rebuild Time
Primary > Secondary (MR2020-2S-S2R)	2:06 Hour	500GB / 126 min = 3.97GB/M
Secondary > Primary (MR2020-2S-S2R)	1:56 Hour	500GB / 116 min = 4.31GB/M

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Data Transfer Rate and I/O Performance Tests

Data Access with Single Drive

64K Transfer Request Size	MR-2020-2S-S2R	
	MB/s	IO/s
100% Sequential Read	84.12	1345.94
100% Sequential Write	59.44	951.12
100% Random Read	8.92	142.80
100% Random Write	17.86	285.74
75% Read & 25% Write with 75% Random & 25% Sequential	10.39	166.30
50% Read & 50% Write with 50% Random & 50% Sequential	12.47	199.54

Data Access with Dual Drives in Mirroring Mode

64K Transfer Request Size	MR-2020-2S-S2R	
	MB/s	IO/s
100% Sequential Read	75.36	1205.73
100% Sequential Write	48.29	772.70
100% Random Read	8.77	140.25
100% Random Write	17.07	273.19
75% Read & 25% Write with 75% Random & 25% Sequential	10.10	161.56
50% Read & 50% Write with 50% Random & 50% Sequential	12.35	197.55

Data Access Dual Drives in Mirrored Mode

64K Transfer Request Size	MR2020-2S-S2R	
	MB/s	IO/s
100% Sequential Read	177.75	2843.95
100% Sequential Write	60.85	973.61
100% Random Read	9.25	148.00
100% Random Write	17.58	281.33
75% Read & 25% Write with 75% Random & 25% Sequential	10.42	166.70
50% Read & 50% Write with 50% Random & 50% Sequential	12.61	201.69