



ICY Dock Enclosure Compatibility Report
&
HighPoint RocketRAID 2320, 2300 and 1740 SATA II Controllers

System Configuration

Motherboards Tested: Super Micro X6DVL.EG, Intel 915GAV and ASUS-A8N-E
CPU: Intel Dual Xeon, and P4
Memory: (4) GB SDRAM and (2)GB SDRAM
IDE Hard Disk: WD250 (IDE) Boot Drive
SATA Hard Disk: WD 5000YS
OS: Windows 2003 Enterprise Sever (SP1) and Windows XP Pro SP2

Hard Disk Enclosures: ICY Dock MB455 SPF and ICY Dock MB454 SPF
RocketRAID Controllers: 2320, 2300 and 1740
HighPoint Software: RocketRAID RAID GUI

Testing Environment

PC Tower with MB455 or MB454



Monitor and Keyboard





Executive Statement

The purpose of this testing report is to show compatibility between ICY Dock (MB455 and MB454) SPF internal enclosures with HighPoint RocketRAID 2320, 2300 and 1740 SATA II RAID Controller cards.

Testing for compatibility includes trying (3) motherboards for each controller in a PC tower system under Windows 2003 Enterprise Server and Windows XP Pro environments. The hard disks used for testing were Western Digital 500GB YS Enterprise SATA II hard disks.

ICY Dock enclosures and RocketRAID controllers was verified compatible by booting into the Windows operating system, verifying different RAID levels with the WD drives in the enclosure and running a performance test to verify optimal performance.

Enclosure compatibility with RocketRAID controllers also included Hot swapping drives, verifying Activity LED and Failure LED, and also included SMART Monitoring of hard disk in the ICY Dock enclosures.

Marketing Statement

The goal of this compatible report is to educate customers about RocketRAID controllers (2320, 230 and 1740) that are tested and compatible with ICY Dock enclosures including the (MB455 and MB454). This report is design to provide insight on what is possible between HighPoint RocketRAID controller and ICY Dock internal enclosures.



About HighPoint Technologies

HighPoint Technologies, founded in 1995 specializes in providing cost effective multi-channel SATA RAID solutions that meet customer performance requirements. To ensure that their information is stored securely and backed up reliably, many organizations rely on HighPoint multi-channel SATA RAID solutions and RAID management utilities.

With its new family of 3.0Gbps SATA II RAID Controllers HighPoint is paving the way for customers to gain the benefits of the latest storage technologies. With a vision of delivering RAID storage solutions to all customer types HighPoint products are well positioned in the industry to meet the needs for the (SMB) small to medium business and meet requirements for the enterprise customer.

Today, HighPoint multi-channel SATA RAID solutions help maximize technology investments with highly available and easily manageable storage solutions for mission-critical storage, server, and application resources. The result is a high-performance, high-availability IT environment designed for cost-effective growth.

About ICY Dock

ICY DOCK is a privately held company with more than 10 years being devoted in design, manufacturing, branding and distribution of Storage enclosure peripherals. By keep improving its own new product release process from previous toil experiences, ICY DOCK has formed a standard yet efficient new product development procedures to satisfy timely requirement from the market.

At ICY DOCK, we constantly offers state-of-the-art design of hard disk enclosure and removable storage kit with features such as the currently launched a series of removable drive & hot swap capabilities and eSATA / SATA connectivity products. We also specializes in BTO (Built to Order) of branded, OEM-branded and non-branded products for "Tier 1" customers.

Headquartered in City of Industry, California, ICY DOCK becomes a global peripheral enclosure provider with manufacturing facility located in Zhang-Zang, China since 1997. Restrictively followed ISO9001 proved manufacturing process standard, ICY DOCK delivers high quality standard products at competitive price which provides our customers an excellent opportunity to be successful in the competitive US marketplace.

As one of the leading peripheral enclosure solution provider, we will continue to commit ourselves in supplying our customers the best performance per dollar products. "Your demand is our command" is the key to ensure our success in the business world.



Motherboard Compatibility

The following test were conducted with the following motherboards (Super Micro X6DVL.EG, Intel 915GAV and ASUS-A8N-E) and passed all compatibility test between the RocketRAID controller and the ICY Dock enclosure.

Test Description

1. Setup the configuration in BIOS.

Test Results

No.	Configuration	Result
1	RAID0 with 2, 4, drives.	PASS
2	RAID1 with 2 drivers	PASS
3	RAID1/0 with 4 drives.	PASS
4	RAID5 with 3, 4 drives.	PASS
5	RAID5/0 with 3, 4 drives.	PASS

Driver/GUI basic function Test

Test Description

1. Install OS to onboard IDE.
2. Install driver. Check the controller/driver information in Device Manager.
3. Install GUI.
4. Test each item in the table.

Test Results

No.	Test Description	Result
1	Create RAID0 with 2, 4 disks in GUI. Check array information.	PASS
2	Create RAID1 with 2 disks in GUI. Check array information.	PASS
3	Create RAID1/0 with 4, disks in GUI. Check array information.	PASS
4	Create RAID5 with 3, 4, disks in GUI. Check array information.	PASS
5	Create RAID5/0 with 3, 4, disks in GUI. Check array information.	PASS



Hot swap, Activity LED, Failure LED and SMART Monitoring

The following procedures were conducted to verify Hot swap, Activity LED, Failure LED and SMART monitoring with the ICY Dock enclosures.

Hot swap – Remove a single disk from the ICY Dock enclosure through the HighPoint RAID GUI utility.

Activity LED – Remove jumper set from back of ICY Dock units, no LED cabling was needed. Perform READ/WRITE activity to hard disk attached to RocketRAID controller attached to the ICY Dock units and verify LED lights were blinking.

Failure LED - Remove jumper set from back of ICY Dock units, no LED cabling was needed. Faulted single hard disk and verified that Failure LED lights stayed lit to identify failed drive port.

SMART Monitoring – Monitor SMART information from SATA hard disk through the HighPoint RAID GUI with drives attached to the ICY Dock enclosure.

Host Adapter	RR2320	RR2300	RR1740
Hot Swap	Pass	Pass	Pass
Activity LED	Pass	Pass	Pass
Failure LED	Pass	Pass	Pass
SMART	Pass	Pass	Pass

IOmeter RAID 5 READ/WRITE Performance Testing

RAID 0 READ MB/s

SEQUENTIAL-READ	BLOCK SIZE	RR1740	RR2320/2300(4HDD)
	512B	7.8	7.4
	1k	16.3	15.4
	2k	49.4	42.9
	4k	123.2	117.5
	8k	199.2	217.5
	16k	203.1	234.2
	32k	215.2	234.3
	64k	223.4	234.2
	128k	224.6	234.1
	256k	224.6	234.3
	512k	224.6	234.3
	1M	224.6	234.3

RAID 0 WRITE MB/s

SEQUENTIAL-WRITE	BLOCK SIZE	RR1740	RR2320/2300(4HDD)
	512B	8.9	9.4
	1k	21.5	21.5
	2k	61.0	61.6
	4k	134.4	159.4
	8k	168.6	233.3
	16k	173.2	233.7
	32k	156.4	233.9
	64k	182.9	234.0
	128k	172.8	234.3
	256k	172.8	234.3
	512k	172.5	234.2
	1M	172.4	234.2

IOmeter RAID 0 READ/WRITE Performance Testing

RAID 5 READ MB/s

SEQUENTIAL-READ	BLOCK SIZE	RR1740	RR2320/2300(4HDD)
	512B	7.3	7.3
	1k	15.9	15.8
	2k	43.1	43.2
	4k	101.3	101.5
	8k	172.6	142.1
	16k	174.0	172.4
	32k	175.7	175.8
	64k	175.8	176.1
	128k	175.8	176.0
	256k	175.8	176.1
	512k	175.8	175.9
	1M	175.8	175.7

RAID 5 WRITE MB/s

SEQUENTIAL-WRITE	BLOCK SIZE	RR1740	RR2320/2300(4HDD)
	512B	8.7	8.7
	1k	17.3	17.3
	2k	34.6	34.6
	4k	123.1	69.3
	8k	141.1	175.3
	16k	141.2	175.2
	32k	141.3	175.4
	64k	141.3	175.2
	128k	141.4	175.2
	256k	141.3	175.4
	512k	141.3	175.3
	1M	141.2	175.1