



Tekram Technology Co., Ltd.

Test Report

Product Name : **TR-1394W**
Test Report Date : **Dec-03-2001**
Test Report Version : **A**
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INDEX

A.PRODUCT SPEC & BASIC FUNCTION TEST	3
A1. Product Spec	3
A2. Basic Function Test.....	3
B. FUNCTIONALITY & COMPATIBILITY TEST	4
B1. Functionality & Operation System Test.....	4
B2. IEEE1394 DEVICE TEST	4
B3.Full Loading.....	4
B4. local area network for IEEE1394 controller Card.....	4
C.COMPATIBILITY TEST	5
C1.MAIN BOARD	5
C2.SOUND CARD.....	5
C3.VGA CARD	5
C4.SCSI CARD	5
C5.LAN CARD	5
D.Operation System Test	6
E. Benchmark Test	7
E1. Run IO-Meter (PORT 1).....	7
E2. Run IO-Meter (PORT 2).....	8
E3.Run IO-Meter (PORT 3).....	9
E4. Run WinBench99	10
F. Reliability TEST.....	11
F1. Run WinBench99 (Disk) 72 Hours.....	11
F2. Run Iometer 72 Hours	11

Report Version History

Version	Date	Description
A	Dec-03-2001	First Release

Test Environment

	PCB Version	Drivers Version	Remark
Win98se	2.0	Build in	
WinME	2.0	Build in	
Win2000	2.0	Build in	
WinXP	2.0	Build in	

A.PRODUCT SPEC & BASIC FUNCTION TEST

A1. Product Spec

Features	<ul style="list-style-type: none"> ● High speeds : speeds of 100, 200 and 400 megabits per second (Mbps) are currently supported. ● Isochronous support : Deterministic bandwidth allocation guarantees bandwidth for time-sensitive applications, such as real-time video feeds, that could otherwise be disrupted by heavy bus traffic. ● Flexible topology : Devices can be daisy-chained and no central bus supervision is required. ● Hot-plug support : The bus is dynamically reconfigured whenever new nodes are added, which means users don't have to configure node IDs or unique termination schemes. ● Cable power : Low-cost peripherals can be powered directly from the 1394 cable, so no dedicated power supply is needed. ● Open IEEE standard : IEEE adoption has increased industry acceptance of the standard. ● Optimum performance : Each cable connection can be up to 4.5 meters long, yielding a total cable distance of 72 meters. ● 1394 End Devices : IEEE 1394 interfaces have already been incorporated into a variety of devices, including PC cameras, DV camcorders, DV recorders, digital still cameras, high-speed hard disk drives, CD-ROM drives, DVD-ROM drives, DVD-RAM drives, digital TVs, set-top boxes, scanners, and printers.
Protocols Supported	IEEE 1394-1394A
Processor	VIA Fire II VT6306
External Connector	3
Transfer Rate	100, 200 or 400 Mbit/s
Max Devices	63
Drivers Available	Windows98se / Me / 2000 / XP
Product Description:	<p>Tekram's TR-1394W is a host controller card with a PCI interface. It comes with three independent IEEE1394 bus ports, each of which can transfer data at 400Mbps. When you plug a IEEE 1394/FireWire device into one of the card's three ports, Windows 98 will automatically install the new device and the appropriate driver. With its hot-plug support, you can easily connect or disconnect devices without having to first shut down your computer. This enables true Plug-and-Play functionality.</p> <p>With 1394-compatible products and systems, users can transfer video or still images from a camera or camcorder to a printer, PC, or television quickly, with no image degradation.</p>

A2. Basic Function Test

Test Item	Description	Result	Remark
A1a	Product Model Name Check	Pass	
A2a	Check PCBA Construction and Appearance	Pass	
A2b	Check the LOGO and Model of the chipset	Pass	Chipset:VIA VT6306
A2c	Check PCI List information	Pass	

B. FUNCTIONALITY & COMPATIBILITY TEST

B1. Functionality & Operation System Test

Ports OS	Port1	Port2	Port3	Remark
Win98se	Pass	Pass	Pass	
WinME	Pass	Pass	Pass	
Win 2000	Pass	Pass	Pass	
Win XP	Pass	Pass	Pass	

B2. IEEE1394 DEVICE TEST

Device Type	Vendor	Model	Operation System	Result	Remark
1394 to IDE	Skymaster	Del-Tron	Win2000	Pass	
1394 to IDE	BusLink	N/A	Win2000	Pass	
DV Camcorder	Sony	DCR-TRV17E	Win2000	Pass	
DV Camcorder	SONY	DCR-SC100	Win2000	Pass	
DV Camcorder	SONY	DCR-PC100	Win2000	Pass	
1394 Repeater	PROCOMP	R106T	Win2000	Pass	
1394 Scanner	UMAX	PowerLook 1100	Win2000	Pass	

B3.Full Loading

Ports	Operation System	Result	Remark
All Ports	Win 2000	Pass	

* Test Environment:1394 to IDE(Skymaster) X 1 ; 1394 to IDE(BusLink) X 2

B4. local area network for IEEE1394 controller Card

1394 Control Card	Operation System	Result	
TR-1394W	Windows XP	Pass	

C.COMPATIBILITY TEST

C1.MAIN BOARD

Manufacturer	MODEL	Chipset	BIOS	CPU Type	Result	Remark
Tekram	P6pro-au	Vt82c69x&Vt82c686a	1.03	PIII500	Pass	
ASUS	TUSL2-M	FW82815&FW82801BA	1009A	PIII550	Pass	
MSI	MS 6337	FW82815&FW82801BA	1.4	PIII550	Pass	
Tekram	P6B40-A4X	FW82443BX & FW82371	1.10	PIII500	Pass	
ASUS	TUSL2-M	FW82815&FW82801BA	1009A	PIII550	Pass	
Gigabyte	Ga-60xet	FW82815&FW82801BA	F8	PIII 1G	Pass	

C2.SOUND CARD

Sound Card Type/Mode	OS Version	Result	Remark
Creative sb live	Windows 2000	Pass	
Board sigmatel AC 97	Windows 2000	Pass	

C3.VGA CARD

Manufacturer /Model	OS Version	Result	Remark
Sis 6326	Windows 2000	Pass	
Nvidia TNT2	Windows 2000	Pass	
Intel FW82815(Build In)	Windows 2000	Pass	
Asus v6600	Windows 2000	pass	

C4.SCSI CARD

Manufacturer /Model	OS Version	Result	Remark
Tekram DC390U3D	Windows 2000	Pass	
Tekram DC390U2W	Windows 2000	Pass	
ADAPTEC 29160	Windows 2000	Pass	

C5.LAN CARD

Manufacturer /Model	OS Version	Result	Remark
D-LINK 530-TX	Windows 2000	Pass	
INTEL 82559	Windows 2000	Pass	

D.Operation System Test

OS	Language	Result	Remark
Windows 98Se	English	Pass	
	German	Pass	
	Japanese	Pass	
	Chinese(CHT)	Pass	
	Chinese(CHS)	Pass	
Windows ME	English	Pass	
	German	Pass	
	Japanese	Pass	
	Chinese(CHT)	Pass	
	Chinese(CHS)	Pass	
Windows 2000	English	Pass	
	German	Pass	
	Japanese	Pass	
	Chinese(CHT)	Pass	
	Chinese(CHS)	Pass	
Windows XP	English	Pass	
	German	Pass	
	Japanese	Pass	
	Chinese(CHT)	Pass	
	Chinese(CHS)	Pass	

Test Environment

Test Environment	Manufacturer	Model	Bios	Chipset	CPU Type
Mother Board	MSI	MSI 6337	1. 4	INTEL FW82815&FW82801BA	PIII550
IDE Hard Disk	1.SEAGATE ST320414A 20GB		2.WD WD64AA-00AAA4 6.4GB		
DRAM	HY 256MB PC133				
IDE CD-ROM	ASUS 50X				
VGA Card	SIS 6326				
Power	GREAT WALL ATX				
1394 to IDE BOX	BUSLINK				

E. Benchmark Test

E1. Run IO-Meter (PORT 1)

Vendor / Model	Access Specification Name	Workers	MBps	Maximum Response Time	% CPU Utilization
TR-1394W	8K Sequential Write	10	6.4	53.8	10.2
	8K Sequential Read	10	9.2	47.2	15.8
	8K Random Write	10	0.9	352.1	4.7
	8K Random Read	10	0.9	157	4.5
	16K Sequential Write	10	8.3	68.6	8.5
	16K Sequential Read	10	13.8	52.3	12.3
	16K Random Write	10	1.7	413.7	4.7
	16K Random Read	10	1.7	163.1	4.4
	32K Sequential Write	10	9.9	65.7	6.3
	32K Sequential Read	10	18.6	59.7	9.4
	32K Random Write	10	3.1	416.9	3.9
	32K Random Read	10	3.1	176.9	3.9
	64K Sequential Write	10	10.9	91.5	4.9
	64K Sequential Read	10	18.9	109.6	6.5
	64K Random Write	10	5.3	484.2	3.9
	64K Random Read	10	5.3	209.7	4.6
	128K Sequential Write	10	11.6	162.1	4.3
	128K Sequential Read	10	20.2	136.6	5.2
	128K Random Write	10	8.1	396.1	4.0
	128K Random Read	10	8	275.4	4.3
	256K Sequential Write	10	11.1	405.4	4.6
	256K Sequential Read	10	11.1	407.9	4.7
	256K Random Write	10	10.3	484.7	4.5
	256K Random Read	10	11.1	527.9	4.5
	512K Sequential Write	10	11.3	795.4	4.2
	512K Sequential Read	10	14.5	615.7	4.7
	512K Random Write	10	10.3	1048.7	4.1
	512K Random Read	10	11.3	958	4.5
1M Sequential Write	10	11.2	1582	4.3	
1M Sequential Read	10	15.8	1128.4	5.2	
1M Random Write	10	9.8	2609.2	4.0	
1M Random Read	10	13	3045.9	4.3	

E2. Run IO-Meter (PORT 2)

Vendor / Model	Access Specification Name	Workers	MBps	Maximum Response Time	% CPU Utilization
TR-1394W	8K Sequential Write	10	6.4	60.2	9.5
	8K Sequential Read	10	9.2	46.7	15.0
	8K Random Write	10	0.9	381.5	4.5
	8K Random Read	10	0.9	167.7	4.4
	16K Sequential Write	10	8.3	53.8	9.1
	16K Sequential Read	10	13.8	47	12.0
	16K Random Write	10	1.7	375.4	4.2
	16K Random Read	10	1.7	165.6	4.4
	32K Sequential Write	10	9.9	67.9	6.6
	32K Sequential Read	10	7.7	85.7	5.6
	32K Random Write	10	3.1	410.4	3.9
	32K Random Read	10	3.1	171.1	4.4
	64K Sequential Write	10	10.9	92.7	5.5
	64K Sequential Read	10	18.7	100.9	6.4
	64K Random Write	10	5.2	485	4.1
	64K Random Read	10	5.2	230.7	4.2
	128K Sequential Write	10	11.6	166.8	5.0
	128K Sequential Read	10	20.6	168.5	5.6
	128K Random Write	10	8.1	364.8	3.7
	128K Random Read	10	8.1	262.9	3.9
	256K Sequential Write	10	11.1	403.1	4.2
	256K Sequential Read	10	11.1	419	4.3
	256K Random Write	10	10.2	605.3	4.7
	256K Random Read	10	11.1	479.1	4.9
	512K Sequential Write	10	11.2	795.6	4.1
	512K Sequential Read	10	14.5	615.9	4.7
	512K Random Write	10	10.3	1046.1	4.0
	512K Random Read	10	11.3	953.7	4.2
1M Sequential Write	10	11.2	1581.7	3.9	
1M Sequential Read	10	15.8	1128.4	4.4	
1M Random Write	10	9.8	3436.6	4.0	
1M Random Read	10	12.8	2164.9	4.2	

E3.Run IO-Meter (PORT 3)

Vendor / Model	Access Specification Name	Workers	MBps	Maximum Response Time	% CPU Utilization
TR-1394W	8K Sequential Write	10	6.4	65.6	12
	8K Sequential Read	10	9.3	45.5	15.5
	8K Random Write	10	0.9	367.2	4.4
	8K Random Read	10	0.9	163.3	4.4
	16K Sequential Write	10	8.3	89.3	8.2
	16K Sequential Read	10	13.8	48.1	11.8
	16K Random Write	10	1.7	348.1	4.5
	16K Random Read	10	1.7	172.7	4.2
	32K Sequential Write	10	9.9	67.8	5.4
	32K Sequential Read	10	14.1	88.7	7.6
	32K Random Write	10	3.2	391.4	4.1
	32K Random Read	10	3.1	190.8	4.4
	64K Sequential Write	10	10.9	90.6	5
	64K Sequential Read	10	19.1	111.8	6.5
	64K Random Write	10	5.3	455.5	4.4
	64K Random Read	10	5.3	197	4.2
	128K Sequential Write	10	11.6	161.9	4.1
	128K Sequential Read	10	24.9	117	5.8
	128K Random Write	10	8.2	343.4	3.9
	128K Random Read	10	8.1	257.7	3.6
	256K Sequential Write	10	11.2	403.4	4.7
	256K Sequential Read	10	11.1	419	4.1
	256K Random Write	10	10.3	559.2	3.8
	256K Random Read	10	11.1	492	4.5
	512K Sequential Write	10	11.3	795.4	4.1
	512K Sequential Read	10	14.5	619.2	5.2
	512K Random Write	10	10.2	1220.4	4.2
	512K Random Read	10	11.3	1062.4	4.2
1M Sequential Write	10	11.2	1581.9	4.3	
1M Sequential Read	10	15.8	1128.5	4.8	
1M Random Write	10	9.7	2485.8	3.8	
1M Random Read	10	12.8	3245.2	4.2	

E4. Run WinBench99(Disk)

Item	Bench Mark	Operation System	Prot1	Prot2	Prot3	Remark
1	BUSINESS DISK WINMARK99	Win2000	5810	5640	5810	
2	HIG-END DISK WINMARK99	Win2000	13900	13600	13700	
3	DISK PLAYBACK/BUS:OVERALL	Win2000	5810	5460	5810	
4	DISK PLAYBACK/HE:OVERALL	Win2000	13900	13600	13700	
5	DISK PLAYBACK/HE:AVS/EXPRES	Win2000	12700	12500	12500	
6	DISK PLAYBACK/HE:FRONTPAGE	Win2000	110000	92000	109000	
7	DISK PLAYBACK/MICROSTATION	Win2000	20800	19800	21300	
8	DISK PLAYBACK/HE:PHOTOSHOP	Win2000	6300	6320	6310	
9	DISK PLAYBACK/HE:PREMIERE	Win2000	12300	12400	12100	
10	DISK PLAYBACK/HE:SOUNDFORG	Win2000	16200	14600	14300	
11	DISK PLAYBACK/HE:VISUALC++	Win2000	15200	15100	15200	

Test Environment

Test Environment	Manufacturer	Model	Bios	Chipset	CPU Type
Mother Board	MSI	MSI 6337	1. 4	INTEL FW82815&FW82801BA	PIII 550
IDE Hard Disk	1.SEAGATE ST320414A 20GB		2.WD WD64AA-00AAA4 6.4GB		
DRAM	HY 256MB PC133				
VGA Card	SIS 6326				
Power	GREAT WALL ATX				
1394 TO IDE BOX	BUSLINK				

F. Reliability TEST

F1. Run WinBench99 (Disk) 72 Hours

ITEM	Port	Run Times	Operation System	Result	Remark
Run WinBench99	Port1	24 Hours	Win2000	Pass	
Run WinBench99	Port2	24 Hours	Win2000	Pass	
Run WinBench99	Port3	24 Hours	Win2000	Pass	

F2. Run IOmeter 72 Hours

ITEM	Port	Run Times	Operation System	Result	Remark
Run Iometer	Port1	24 Hours	Win2000	Pass	
Run Iometer	Port2	24 Hours	Win2000	Pass	
Run Iometer	Port3	24 Hours	Win2000	Pass	

Appendix

Attention:

1. Before we plug off 1394 Device from system, we must Unplug or Eject 1394 Hardware.

2. Windows 98SE must install a [Safe Removal utility](#)

(http://www.microsoft.com/windows98/downloads/contents/WURecommended/S_WUFeatured/1394/Default.asp)

that allows you to safely stop a Plug and Play storage device prior to physically unplugging the device.