

FireWire™ - Your High-Speed Connection To The Future

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What is FireWire™/1394?

- A High speed network (connect up to 63 devices at up to 3.2 Gbps)
- A Guaranteed Quality of Service network
- A self-configuring network
- A Flexible Network:
 - Operates over copper, Coax, CAT5/5e/6 UTP, GOF/POF
- A Secure Network with Hollywood Studio and CableLabs approved DTCP copy protection

Consumer Products



- DTVs/HDTVs
- DVD/Blu-ray Players/Recorders
- Digital VHS Recorders
- Digital Video Cameras
- Digital Cameras
- MP3 Players
- CD Players/Recorders
- Digital Video Recorders (DVRs)
- Personal Video Recorders (PVRs)
- HD Cable Set Top Boxes
- Media Center PCs
- Audio/Video Receivers
- Digital Video Editing
- Digital Video Production
- Digital Projectors
- Digital Audio Recording
- Pro Audio Production

The Computer Products Market

- Displays and Monitors
- Desktop Computers
- Laptop and Tablet Computers
- Workstations
- Hard Disk Storage
- DVD-R/RW Drives
- CD-R/RW Drives
- Network Repeaters & Hubs
- Digital Video Editing
- Printers
- Scanners
- WebCams
- Host Adapter Kits
- Motherboards
- Media Card Readers/Writers
- Software Development Tools
- Cables



The Industrial Market

- Vision Systems including digital cameras and video cameras: Color, BW, UV
- Motion & Servo Controls
- Ruggedized PCs
- Bus and Protocol Analyzers
- Software and Development tools



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Automotive and Aerospace

- Fujitsu: In-vehicle multimedia networks controller ICs supporting IDB-1394 at 100/200/400 Mbps
- 1394 TA Automotive WG: IDB-1394 over Copper Specification for Vehicle Multimedia Networks – Due Q2, 2008



The US F-35 Joint Strike Fighter includes 70 on-board 1394 devices for communication systems, weapon systems, engine controls, and flight controls.

A Common Misconception About FireWire™

1394/FireWire usage is declining



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The 1394 Market in 2008

- Over 1 Billion 1394 Ports have shipped to date
- Deployed in Over 600 Million devices worldwide
- 1394 is Projected To Grow by 20 percent in 2008 and into 2010 in:
 - Digital set top boxes
 - Digital televisions
 - PC peripherals
 - DVD-equipped PCs
 - Non-PC optical disc drives
 - DVD aftermarket kits



Common Misconception

Who needs FireWire?

Ethernet is fine for entertainment

Ethernet Is Different

- Ethernet is asynchronous
 - No guaranteed QoS
 - No system-wide clock for synchronization
 - High network overhead reduces realized throughput as more devices/traffic added
- Less secure
 - Security is typically software based, not built into the hardware

Common Misconception

**USB 2.0 is just as good as
FireWire**

S800 Is 3X Faster Than USB 2.0

Test Results For Storage Transfer Rates

– USB 2.0:		30 Mbytes/sec
– S400:		42 Mbytes/sec
– S800:		90 Mbytes/sec
– S3200:		362 Mbytes/sec

- Real World Results for USB 2.0 are even slower than indicated

Common Misconception

**HDMI is the entertainment
connection of choice**

HDMI Is Not A Network

- HDMI is a Point to Point, local connection
 - It is Not Routable
 - It is Not Symmetrical (low-speed back channel for control only)
- Recording is prohibited
- It is an end point for a network. There is no approved networkable output for HDMI.

What Is Needed for a Successful Market for Home Entertainment Networks and Networked Products?



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The 1394 TA Has The Answer: IEEE 1394 Bridged Over Coaxial Cable

- All the benefits of 1394, operating over Coax
 - Coexists with all existing coax signaling including Cable/Satellite, DOCSIS, MoCA, HomePNA
- Fast: S400 today, moving to S800
- Layer 3, IPv4 based bridging
- Support for legacy, non-IP 1394 devices



1394 Over Coax – A Market Enabler

- Drive sales of HDTVs
- Sharing Expensive HD sources will drive sales
- No-New-Wires key to retail market
- 1394 Simplicity and Reliability

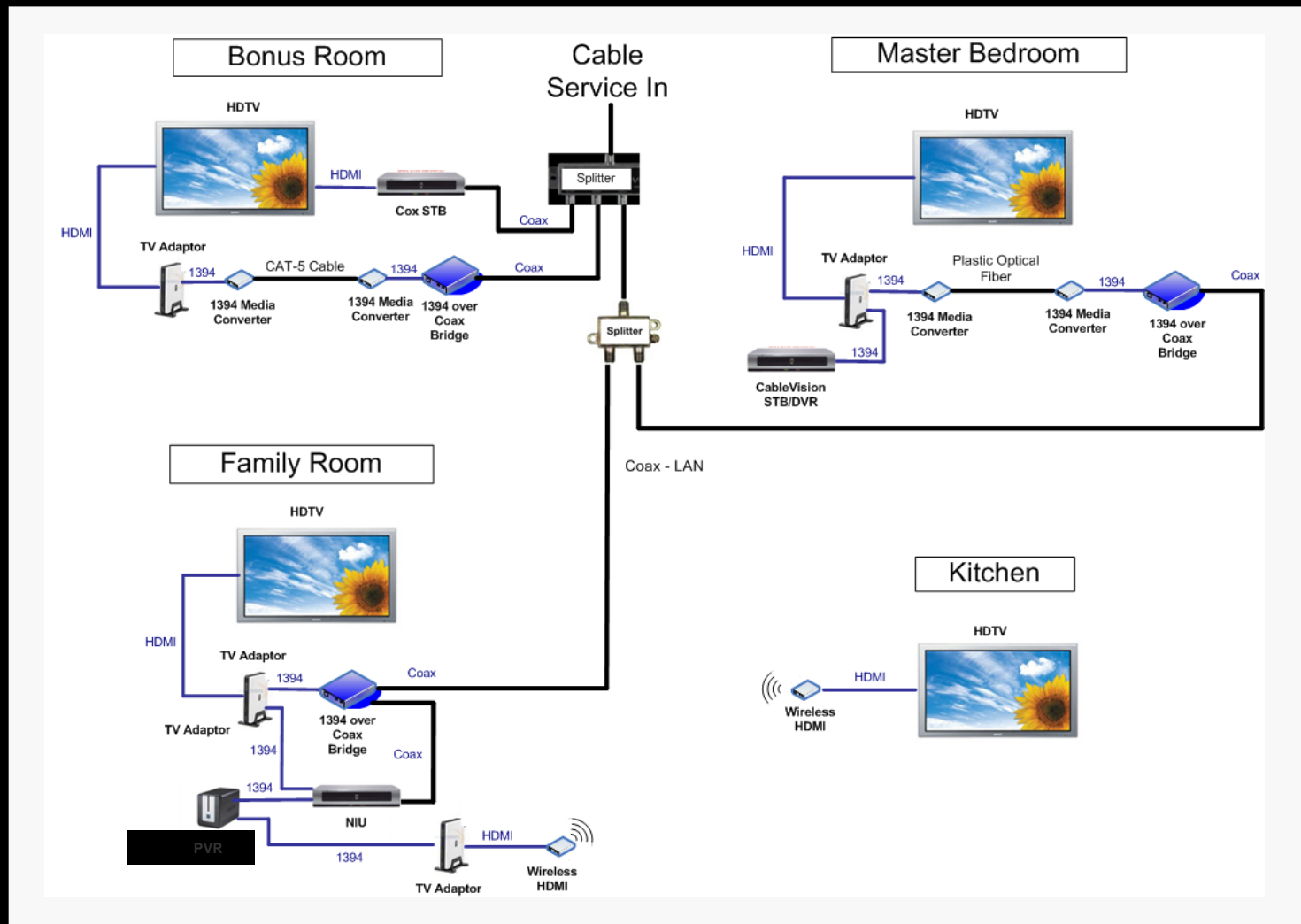


Even Grandma can do it

When Will Coax Bridging Be Available?

- 4 Parts to the Standard
 - Part 1: PHY/MAC – Chips Available from Pulse~LINK
 - Support for 400 Mbps using CWave™ UWB
 - Same chipsets also support wireless HDMI, wireless 1394, Powerline Carrier
- Parts 2, 3, 4: In Draft: Approval June 2008
- The High Definition A/V Network Alliance (HANA) and Samsung demonstrated coax bridging using Pulse~LINK's CWave at CES 2008

HANA Coax Demo Configuration



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What Else Are We Doing?

- Higher Speeds: S1600, S3200
- VersaPHY, Reduced complexity 1394 using existing 1394 ICs
- BaseBand 1394 over Coax
- S400 and S800 over CAT5
- Pro-Audio



Watch for the launch of our
completely redesigned Web Site
this summer with improved support
for our customers, members, and
the 1394 industry
www.1394TA.org

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