FirePHY SW3080 | *Product Brief*

Key Features

High Speed
- IEEE 1394b S800 (800 Mbps data rate)
- S200 (200 Mbps) over CAT-5 cable (SW3085)
- 3 bilingual ports

Backward Compatible
- IEEE 1394-1995
- IEEE 1394a-2000
- FireWire (® Apple) = i.LINK (® Sony) = IEEE 1394

Highly Integrated
- Integrated oscillator
- Selectable port speed and control/status signals
- Open Host Controller Interface (OHCI) compliant

Port Intelligence
- Plug and play functionality
- Negotiates optimum transfer speeds with each networked node
- Utilizes efficient packet transfer protocols (BOSS arbitration)
- Tolerates connectivity loops in 1394b device networks
- Supports suspend mode for 1394b, 1394a ports
- Supports standby mode for 1394b ports

Low Power
- Industry-leading power consumption
- < 500mW peak | < 1mW standby

Ultra Small Package
- 64-pin QFN

Power Capable
- Embedded power-over-cable (up to 45 watts)

Roadmap to S1600
- Pin-compatible with next generation S1600 (1.6 Gbps) device sampling in Q208

Symwave's FirePHY product family offers high performance device connectivity solutions for video, audio and storage applications in the Personal Consumer and Consumer Electronic markets. The FirePHY SW3080 is a fully integrated, 1394b-compliant, bilingual physical layer IC capable of transmitting 800 Mbps data. The FirePHY SW3080 offers world-class performance and robustness above and beyond current 1394b PHY solutions in the market.

Value-Added Solution

Integrated Oscillator | The FirePHY SW3080 features an on-chip oscillator that enables optimal clock recovery and jitter performance with the industry's lowest BOM cost. An external 24.576 MHz crystal is all that is needed.
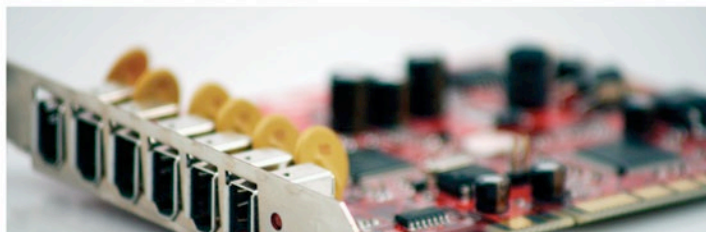
Multi-port Capable | The FirePHY SW3080 includes three bilingual (1394a-compatible) ports offering users maximum flexibility for their device connectivity needs.
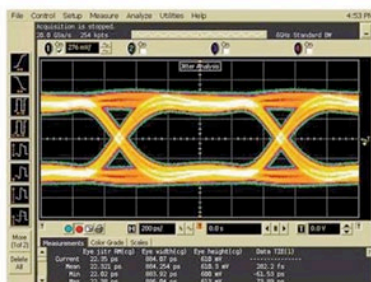
Performance | Symwave's superior analog technology results in industry-leading clock jitter performance, which dramatically improves signal integrity and simplifies PCB layout.

Compatibility | The FirePHY SW3080 is compatible with all existing 1394a and 1394b PHY and OHCI solutions on the market today.
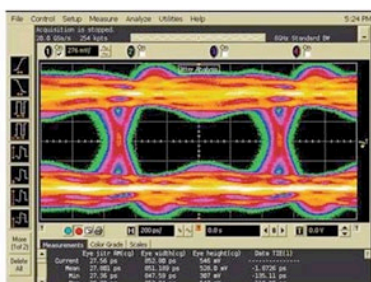
Complete Reference Design

Symwave offers complete reference designs for external 1394a/b hard drive interfaces. Customer evaluation kits come fully equiped with hardware design files, evaluation board, cables, documentation and firmware to reduce engineering investment and accelerate time-to-market.

Symwave's 1394b Eye-Diagram

Competitor's 1394b Eye-Diagram

FirePHY SW3080 | Product Brief

Enables New Applications

Personal Computer / Consumer Electronic

The FirePHY SW3080 represents the next generation in high-speed, high bandwidth connectivity for video, audio and storage applications in the PC and CE markets. With its isochronous and asynchronous data support and plug and play functionality, the FirePHY SW3080 is the optimum choice for end-users seeking a robust, simple, high performance interface between the PC and a wide range of CE devices.

Mass Storage

The FirePHY SW3080 enables a simple, robust, high throughput connectivity solution for mass storage applications. Access to three bilingual ports provides end-users with the flexibility to utilize multiple storage units and swap storage units without impacting system performance. The FirePHY SW3080 is the ideal solution for applications that place a premium on high data transfer capability such as PC-to-External HDD connectivity, stacked RAID systems and external PVRs or multimedia devices.

CAT-5 Networking

The SW3085 is a pin-compatible device in the SW3080 product family that enables reliable data transfer at S200 (200Mbps) speed over 50 meters of CAT-5 cabling without an external equalizer – an ideal solution for industrial and professional audio/video networking applications that desire a high speed all-digital connection over CAT-5 cables.

Product Line Card

Device	Ordering P/N	Marketing Name	Description	Applications
Integrated Circuits				
SW3080	SW3080Q	FirePHY S800	3-port 1394b, 64-pin QFN, S800	Single Port 1394b external HDDs and card readers
SW3080C	SW3080C-Q	FirePHY S800	3-port 1394b, 64-pin QFN, S800	Two or Three-Port 1394b external HDDs, Hubs, Repeaters, OHCI Cards & ExpressCards
SW3085C	SW3085C-Q	FirePHY S800 / CAT5	3-port 1394b, 64-pin QFN, S200 over Cat-5	S200 networking over Cat-5 cable
Customer Evaluation Kits				
SW3080C	SW-EVM-203	Blazer 924 HDD	SW3080C + Oxford 924DSB HDD Reference Design	External 1394b HDDs with Oxford 924DSB LLC
SW3080C	SW-EVM-203A	Blazer 924 HDD with eSATA	SW3080C + Oxford 924DSB HDD Reference Design	External 1394b HDDs with Oxford 924DSB LLC
SW3080C	SW-EVM-207A	Blazer 934 HDD	SW3080C + Oxford 934DSB HDD Reference Design	External 1394b HDDs with Oxford 934DSB LLC
SW3085C	SW-EVM-204	FirePHY CAT5 Repeater Hub	SW3080C CAT-5 Repeater Reference Design	A/V networking over CAT-5 cabling

symwave

Symwave, Inc.
10251 Vista Sorrento Pkwy., Suite 100 San Diego, CA 92121
Phone: (858) 450-2840   www.symwave.com