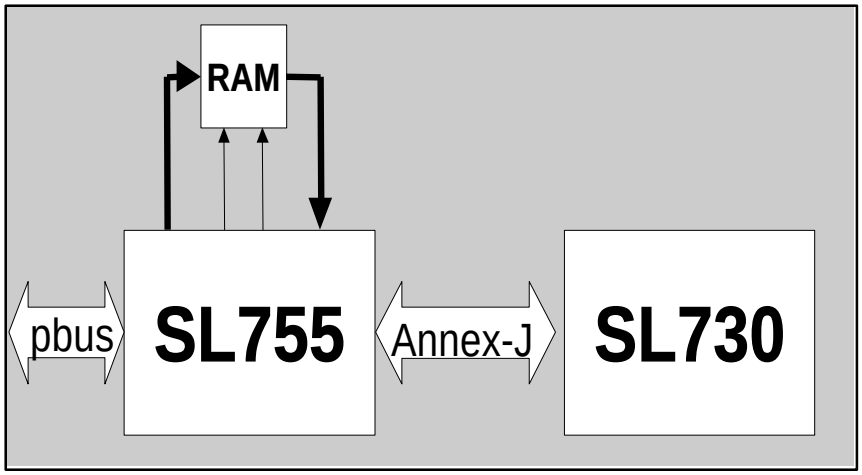
SL730
IEEE1394a Mixed Signal PHY Layer

Bus Interface

D A T A S H E E T



SL730 Physical Layer (PHY) for IEEE 1394a Block Diagram

Major product features:

- Compliant with IEEE 1394a V2.0 specification
- Interoperates with 1394-1995 devices
- Supports transfer rates of 100, 200 or 400 Mbps
- Includes both analog and digital portions
- Interoperates with FlexFire application-specific Link Layer cores
- Configurable number of ports and port speeds
- Supports 1394a advanced power management and all arbitration and concatenation enhancements

IEEE 1394 Mixed Signal PHY Layer

What is IEEE-1394?

IEEE-1394, known as FireWire, is a high-speed digital serial interface bus standard that allows video and audio consumer devices to communicate quickly, reliably and inexpensively with a PC and with each other. Scalable performance and the support of both asynchronous and isochronous transfers makes FireWire an ideal technology for a wide variety of peripherals and applications including disk controllers, digital cameras, audio/video devices, small networks, high speed printers and entertainment equipment.

FlexFire™ Architecture

The FlexFire architecture is based on a set of parameterized building blocks that can be quickly and easily configured to support a wide range of 1394 applications. The FlexFire 1394a core family includes general purpose and application-specific cores for both Link Layer and PHY Layer controllers.

SL730 Mixed Signal PHY Layer Controller

The SL730 includes both the analog and digital logic for the 1394a-compliant PHY Layer Controller and is capable of operating at transfer rates up to 400 Mbps.

The digital portion of the SL730 implements the arbitration and decoding logic and synchronizing FIFO and is available as synthesizable RTL.

The analog portion implements the transmit and receive logic and can be ported to commercially-available digital CMOS processes of 0.35µ or smaller.

The SL730 is compatible with the FlexFire 1394a-compliant Link Layer cores for a complete 1394 solution.

The SL730 includes a comprehensive test bench and validation suite, synthesis scripts and user documentation.

Additional Features:

- Proprietary skew management techniques ensure timing requirements are met
- Extensive testing includes IDDq, alternate frequency operation, ultra-slow operation, precise clock control, scan, and on-Tester Transceiver Transmit / Receive Mode

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