



# ISI-758

## 1394a Link Layer IP like the TI GPLynx™ Controller

### IEEE 1394

IEEE 1394 is a high-speed serial bus standard that allows video and audio consumer devices to communicate quickly, reliably, and inexpensively with a PC and with each other.

### FlexFire™ Architecture

Innovative Semiconductors' 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 family includes general purpose and application-specific cores for Link Layer Controllers as well as a PHY.

FlexFire offers a fast and convenient way to incorporate Firewire capabilities into products such as digital cameras, set-top-boxes, audio/video devices, disk controllers, and other PC peripherals.

### ISI-758 Link layer

The silicon-proven ISI-758 provides the interface to connect devices to the high speed 1394 serial bus, at speeds up to 400 Mbits/sec.

The core is register and pin like the Texas Instruments TSB12LV31 GPLynx chip, and includes support for the Isochronous Port Date Mover and Byte Stacker Microprocessor Interface. The ISI-758 interoperates with commercially- available PHY layer chips, and with Innovative's ISI-736 Mixed Signal PHY Layer core.

The ISI-758 is available in synthesizable RTL, and includes a comprehensive test bench and validation suite, synthesis scripts, and user documentation.

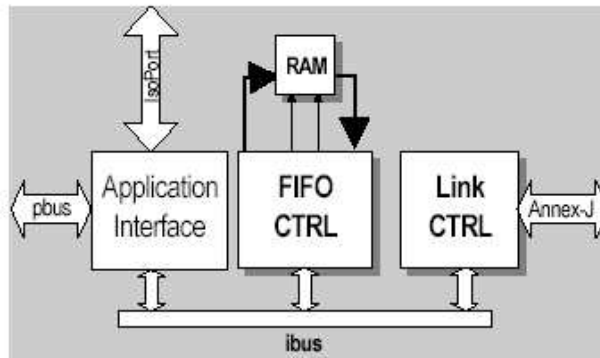
### Features

- Compliant with IEEE 1394a Link Layer specification
- Verified in silicon
- Register and pin like the Texas Instruments TSB12LV31 GPLynx chip
- Provides a superset of Texas Instruments' IsoPort functionality including support for S400
- Processor interface can be configured to 8 or 16 bits wide, and can operate at up to 50 MHz
- FIFO can be configured for up to 256 quadlets
- Interoperable with Texas Instruments' TSB11LV01 and TSB21LV03 PHY Layer Controller chips
- Interoperable with Texas Instruments' software drivers
- Supports 100, 200, and 400 Mbits/sec transfer rates
- Operates at 50MHz on commercial .5µ or smaller digital CMOS processes
- Based on parameterized building blocks that can be configured for a wide range of Link Layer applications
- Performs 32-bit CRC generation and checking

### PRODUCT BRIEF

### FlexFire™ 1394a Core Family

- *ISI-755: General purpose Link*
- *ISI-758: Link compatible with Texas Instrument's GPLynx™*
- *ISI-770: Audio/Video Link with 5C encryption*
- *ISI-736: 1394a Cable PHY*
- *ISI-738: 1394 Backplane PHY*



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