

LionsGate USB 2.0 Extension ASIC

The LionsGate USB 2.0 Extension ASIC enables true plug and play, long reach USB 2.0 connectivity over wired media including Cat 5 and Fiber Optics.

Features

Enables USB 1.1 and USB 2.0 extension over various wired media at distances well beyond the 5m cable limit imposed by the USB specification. Typical implementations enable 100m over Cat 5 and 10km over Fiber Optics.

Supports USB 1.1 (low-speed, full-speed) and USB 2.0 (high-speed) host controller and device connections.

Supports all USB transfer types: Bulk, Isochronous, Control and Interrupt.

True plug-and-play, no additional PC software drivers are required for operation.

Operates with all major PC platforms and operating systems: Windows 2000, XP, Vista, Mac OSX, Linux.

Same device used for Local (host PC) side and Remote (USB device) sides of extension system.

Integrated USB 2.0 compliant PHY for connection to USB host, hub or device.

Flexible parallel link interface enables embedded connection to various physical layer solutions:

- MII - 10/100Mbps Media Independent Interface
- GMII - 10/100/1000Mbps Gigabit MII

Parallel link interface with flow control enables packetized link communications.

- 1, 2, 4 or 8 bits wide operating at up to 75MHz

TBI (Ten bit Interface) 8B10B encoded parallel interface for connection to external SERDES devices provides high data rate links from 600Mbps to 1.25Gbps.

Serial link interface for single pair connectivity operating at 12, 24, or 36MHz.

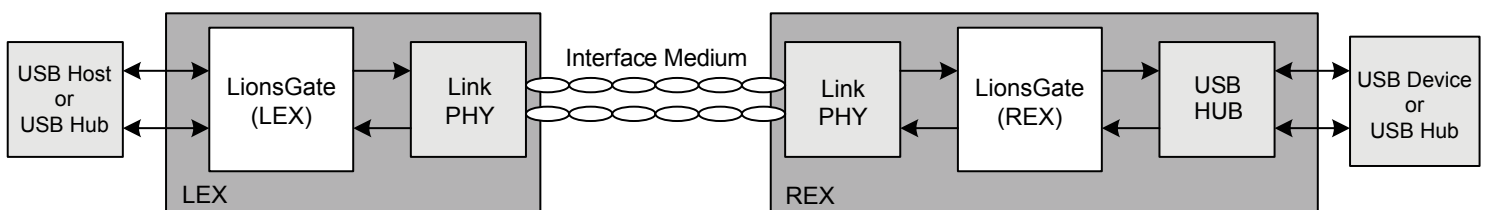
Integrated MDIO for configuration and control of standard Ethernet physical layer devices.

Standard 5-pin JTAG interface for test and boundary scan.

Implemented in a 10mm x 10mm 144 pin TFBGA package.

Standard 0.13um CMOS device with 1.2V core and 3.3V tolerant I/O.

System Architecture

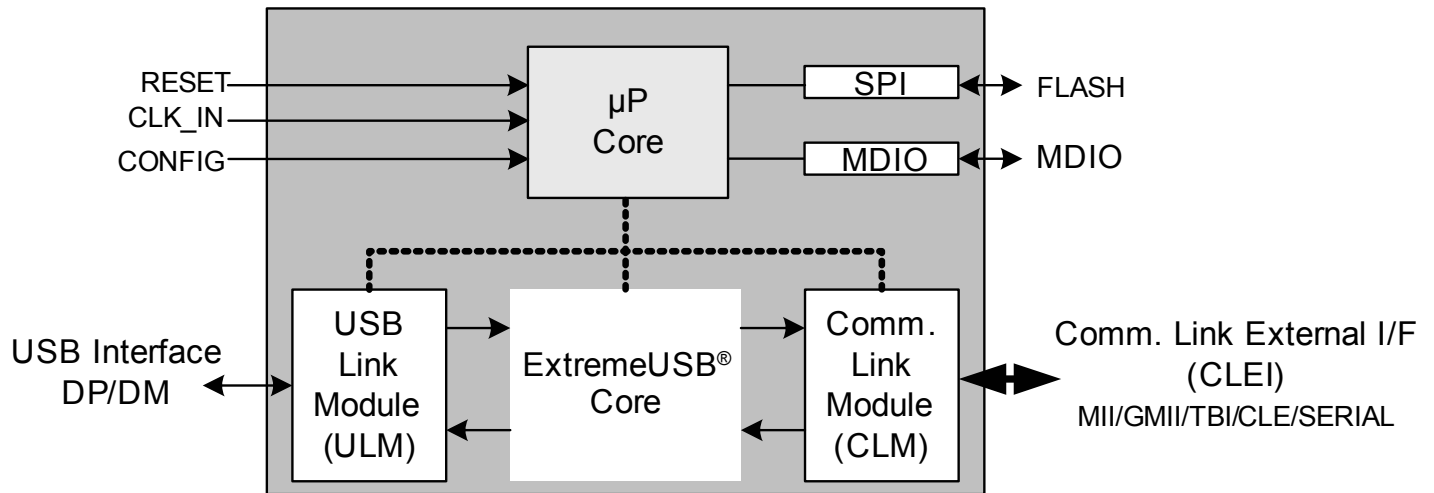


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Applications

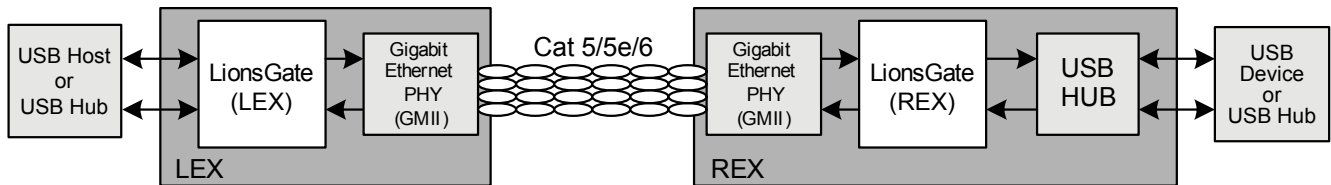
- USB 2.0 Cat 5 Extender (one pair or multi-pair connectivity)
- USB 2.0 Fiber Optic Extender
- KVM Extender
- Remote Desktop USB Connection
- Isolated USB
- Industrial Control
- Automotive Telematics
- Medical Devices
- Security Devices
- USB Video and Audio connectivity
- Home Network Integration

Device Block Diagram



Typical Applications

100m USB 2.0 Cat 5 Extender



Isolated USB 2.0

