MARVELL® MSB0110 Networking Connectivity South Bridge
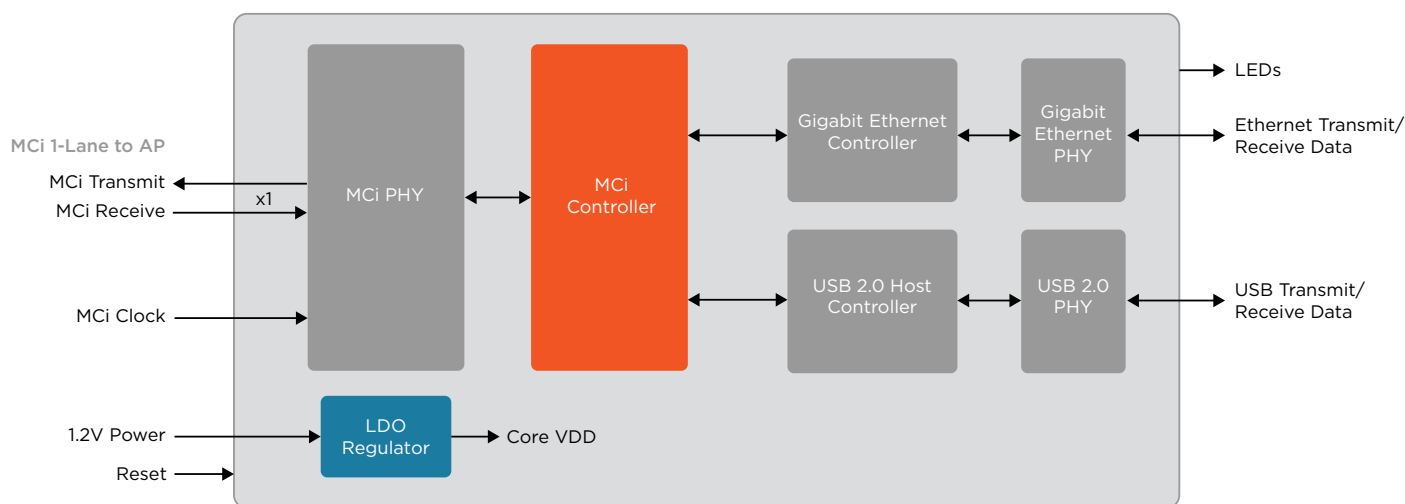
Low-cost Gigabit Ethernet (802.3) and USB 2.0 Connectivity

PRODUCT OVERVIEW

The Marvell® MSB0110 is a low-cost connectivity solution in Marvell's MoChi™ South Bridge (SB) family of products. The MSB0110 has an integrated Gigabit Ethernet (GbE) controller and PHY and also has a USB 2.0 Host controller and PHY. Utilizing this MoChi solution offers developers many advantages, including: 1) scalability across product needs, 2) possibility to add/replace features with drastically improved time-to-market, and 3) flexibility in board placement.

The MSB0110 is connected through its single-lane MoChi Interconnect (MCi) interface to Marvell's MCi-enabled Application Processor (AP). The MCi interface is transparent and, therefore, MSB0110 appears to the application as an integrated function in the AP.
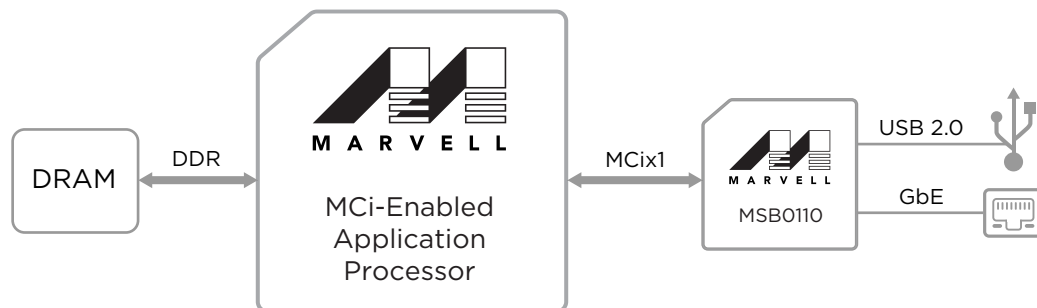
BLOCK DIAGRAM

Marvell MSB0110 Block Diagram

KEY FEATURES AND BENEFITS

FEATURES	BENEFITS
Package	• Small footprint 4x4 mm QFN (32 pin, 0.4 mm pitch)
MCi Interface	• 1 lane (up to 8 Gbps) • 25, 26, 30, or 40 MHz shared MCi clock
Power Supply	• 1.2V, 1.8V, and 3.3V supplies required • Built in, on-chip LDO regulator internal core supply
Low Power	• Complete power-down of AP with Wake On LAN (WOL) from MSB0110 Ethernet
Gigabit Ethernet Interface	• 10/100/1000 Mbps Gigabit Ethernet MAC and PHY • Energy Efficient Ethernet (EEE) • Precision Time Protocol (PTP) • Audio Video Bridging (AVB) • TCP, IP, UDP Checksum Offloading (CSO) • Receive Side Scaling (RSS) • IPv4/IPv6 Microsoft Large Send Offloading (LSO)
USB Host Controller	• 1 HS/FS/LS port compliant with USB 2.0 • Compliant with xHCI 1.0

TARGET APPLICATIONS

- I/O expansion in any Marvell MoChi platform
- Consumer electronic devices
- Internet of Things (IoT)
- Imaging platforms (printers, cameras)
- Gaming platforms
- Network devices (access points, routers, network-attached servers)