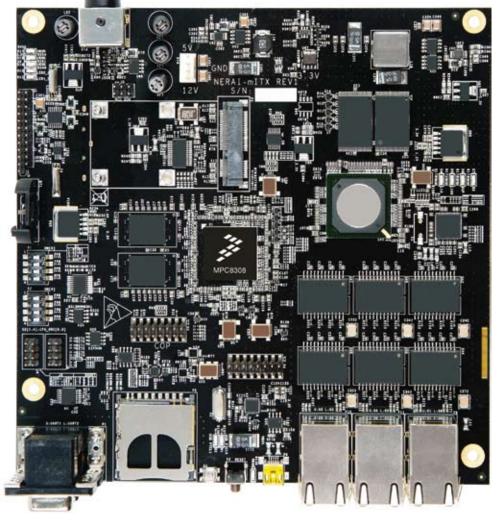
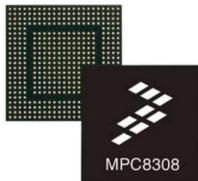
MPC8308-RDB Reference Platform

Overview

The MPC8308-RDB reference platform is ideal for hardware and software development for embedded applications, including consumer printers, wireless access points, industrial control and factory automation equipment. It leverages the low-cost MPC8308 PowerQUICC[®] II Pro communications processor, built on Power Architecture® technology, which is designed to meet the requirements of several low-end embedded networking applications with high-speed peripherals while striving for low power consumption and a small-footprint package design. The MPC8308-RDB integrates leading-edge external components: 5 x Gigabit Ethernet ports, 1 x USB 2.0, x1 mini PCI Express® connector and an SD/MMC card interface. The MPC8308 microprocessor supports dual 10/100/1000 Mbps Ethernet controllers, single-lane PCI Express, USB 2.0 controller, enhanced SDHC controller for SD memory interface, dual universal asynchronous receiver/transmitter (DUART), serial peripherals, general-purpose I/O and system timers. This high level of integration in the MPC8308 processor helps to lower overall system costs, improve performance and simplify board design. The highspeed peripheral mix, combined with cost effectiveness, makes the MPC8308 processor a unique offering in the marketplace.

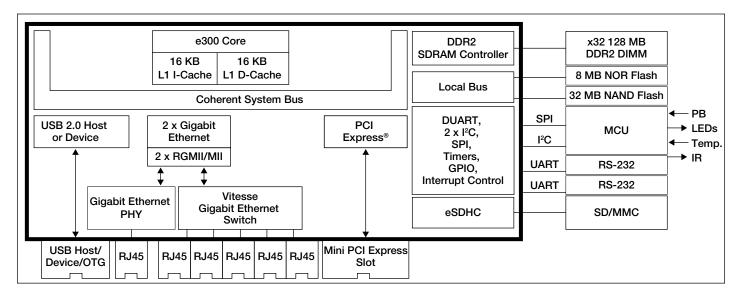
The MPC8308-RDB incorporates a preinstalled board support package (BSP) containing a boot loader (u-boot)—a generic Power Architecture technology system based on the Linux[®] kernel. The u-boot and Linux kernel reside in the on-board flash memory and launch when the board is powered up.







MPC8308-RDB Block Diagram



Board

The MPC8308-RDB BSP takes advantage of the Linux Target Image Builder (LTIB)-a suite of tools that leverages existing open source configuration scripts and source code packages combining them all into a single BSP generation bundle. The source code packages, include boot loaders and Linux kernel sources, as well as many user-space source code packages, to build a complete BSP. The LTIB also provides compiler packages required to build the BSP. Freescale developers use the LTIB to create BSPs for a multitude of Freescale development markets. The LTIB leverages as many BSP elements as possible for all Freescale markets supported, while offering the flexibility necessary to customize components that require platformspecific modifications.

Many third-party applications are available for the MPC8308-RDB. They are typically built on top of the BSP delivered by Freescale and can be installed on the hard disk. To see demonstrations or to acquire details of Freescale's third-party applications for this platform, please contact your local Freescale sales office.

MPC8308-RDB Features

- MPC8308 PowerQUICC II Pro processor up to 333/266 MHz (CPU/DDR2)
- Ethernet
 - · 4-port Gigabit Ethernet switch, supporting RGMII/MII
 - Single Gigabit Ethernet PHY (RGMII)
- PCI Express interconnect
 - Mini PCI Express for WLAN
- Two I²C
 - Connected to real-time clock
 - May be eliminated using the MCU
- Dual UART
 - Connectors for debug connectivity
- · Local bus
- NAND flash/NOR flash memory
- High-Speed USB 2.0
 - Single USB 2.0 supporting host, device or OTG

- Memory
 - 32-bit DDR2 with population option for 16-bit
- eSDHC
 - Single-port SD/MMC connector
- IEEE® 1588v2 support for timing synchronization

The MPC8308-RDB reference platform contents:

- MPC8308-RDB board
- Cables
- Power supply
- · Bill of materials
- Schematics
- · Gerber files
- User guide
- · Free six-month evaluation license for CodeWarrior[™] tools

The MPC8308-RDB is \$299USD.

Learn More:

For current information about Freescale products and documentation, please visit www.freescale.com.



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