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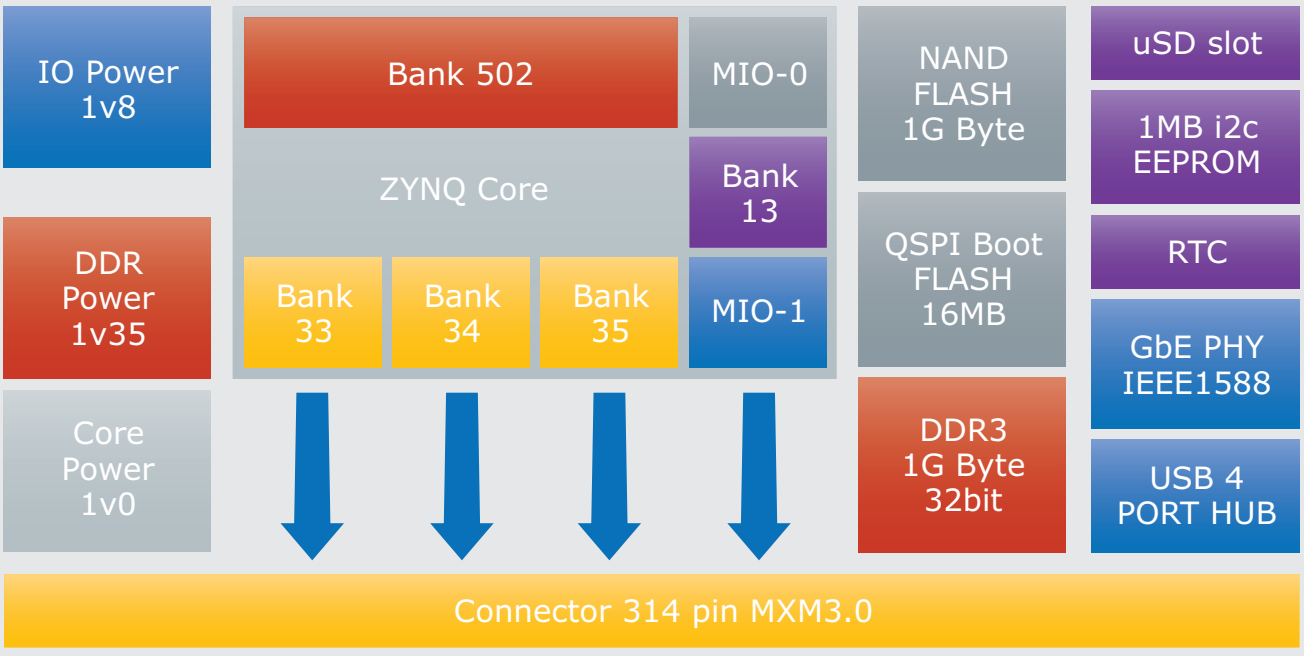
The new eSi-ZM1 module from EnSilica is a small form factor System-on-Module built around the Xilinx Zynq Extensible Processing Platform.

It enables low-risk and fast time-to-market hardware development without sacrificing differentiation, integration or flexibility. Combining a powerful dual-core ARM® A9 subsystem running embedded Linux together with the Xilinx Series-7 FPGA fabric means you can design smarter systems demanding real time hardware performance.

It provides a broad range of advanced I/O including gigabit ethernet, USB, I2C and SD-card. This allows excellent connectivity, whilst the programmable logic creates unlimited possibilities to add virtually any peripheral or create custom accelerators to extend system performance to suit the target application.



134 IO signals
User levels

12 MIO signals
1v8 levels

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Features

- Powered by ARM® dual-core Cortex™ A9 MPCore
- Built around Xilinx XC7Z020 Extensible Processing Platform
- Small form factor 82 mm x 50 mm
- Commercial and Industrial temperature grade
- Preloaded uSD card with Linux BSP

Applications

- Automotive electronics
- Consumer equipment
- Industrial automation
- Broadcast
- Medical imaging
- Wired communications

Benefits

By encompassing the challenging part of an embedded system into a small module, it dramatically simplifies your baseboard development both in terms of number of layers and layout complexity. The module is flexible enough to be used across a range of applications and hardware designs with simple integration effort. This reduces your overall hardware development effort and re-spin risk.

The EnSilica module is unique in providing an exceptionally high I/O count through an MXM3.0 connector, delivering the full capability of the FPGA fabric without sacrificing signal integrity. Utilising the latest low-voltage memory and peripherals it takes full advantage of the Zynq's low voltage I/O. For demanding designs it includes a gigabit ethernet PHY with 1588 time stamping, a 4 port USB hub and micro-SD card holder.

Full firmware and software support is provided by EnSilica including a compatible BSP and embedded Linux build preloaded on SD-card. The module is ready to use out-of-the-box, however for a custom development EnSilica has extensive experience in working with Zynq and can offer the design services to complement.

Key Features

- Built around Zynq XC7Z020
  - Powered by ARM® dual-core Cortex™ A9 MPCore processor @ 666 MHz.
  - 85 K logic cells
  - 560 KB block RAM
  - 220 DSP Slices
  - CLG484 package type
- 33.333 MHz oscillator
- 1 GB, 1.35 V, 32-bit wide DDR3 SDRAM @ 533 MHz
- 1 GB, 1.8V, 8-bit wide NAND FLASH
- 16 MB QSPI flash
- Real Time Clock
- 1 Kb I2C EEPROM
- uSD card slot
- RGMII Gigabit Ethernet PHY with 1588 time stamping
- 4-port USB 2.0 hub
- Up to 8 differential analogue inputs
- 12 MIO pins
- 134 EMIO pins with user defined I/O voltage
- PJTAG debug connector for comprehensive software debug capability
- UART for terminal connection
- Single 3.3 V supply
- Small form factor (82 mm x 50 mm)

XILINX ZYNQ

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