PowerQUICC® III Processor with TDM, DDR, PCI, 1 GB Ethernet, Security, CPM with UTOPIA

MPC8541E

新規採用非推奨
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Last Updated: Apr 9, 2022

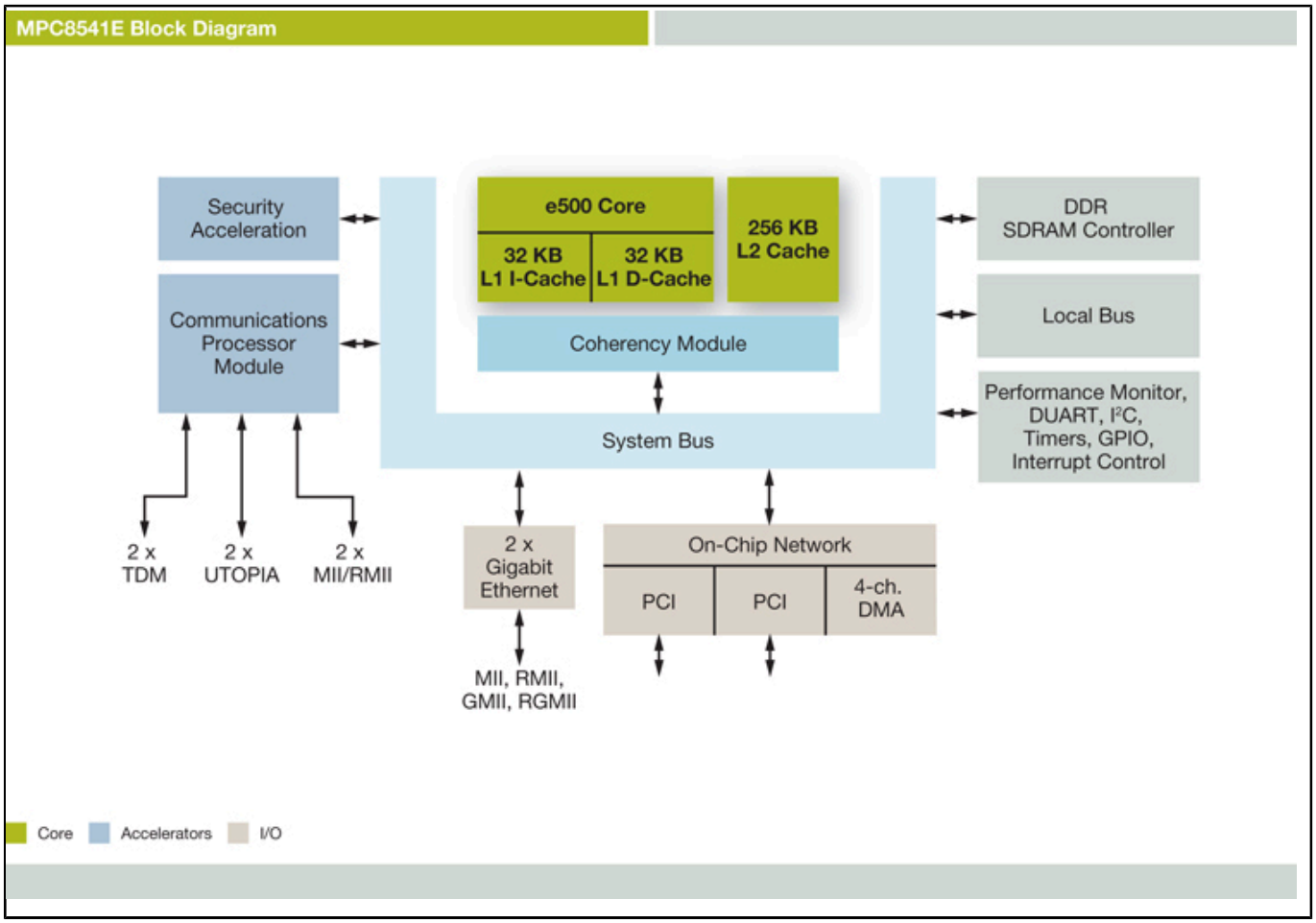
Our MPC8541E PowerQUICC® III host processor integrates a wide range of advanced NXP® technologies, modular cores and peripherals. Leveraging Our system-on-chip (SoC) PowerQUICC III platform architecture, the MPC8541E combines a high-performance e500 core and communications peripheral technology to balance processor performance with I/O system throughput. The processor is designed to offer clock speeds scaling from 533 MHz to 1 GHz.

Our MPC8541E processor integrates a high-performance e500 core built on Power Architecture® technology, designed to reduce power consumption and offer a more balanced approach to processing than traditional processor architectures. The MPC8541E device's high level of integration helps simplify board design and enhances system-level bandwidth and performance. In addition, the MPC8541E features an integrated security engine, a double data rate SDRAM (DDR SDRAM) memory controller, dual Gigabit Ethernet (GbE) controllers, dual 10/100 Ethernet, a four-channel direct memory access (DMA) controller, dual asynchronous receiver/transmitters (DUART) and a 64-bit PCI controller that can also serve as two 32-bit PCI ports. Dual on-chip PCI support provides a cost-effective alternative to separate, discrete PCI bridges and chipsets for I/O-intensive applications that require multiple PCI interfaces. The MPC8541E also provides a local bus controller, dual I²C support, and serial peripheral interface (SPI).

The MPC8541E processor features a security engine that supports DES, 3DES, MD-5, SHA-1, AES and ARC-4 encryption algorithms, as well as offering a public key accelerator and on-chip random number generator. This embedded security core is derived from Our security coprocessor product line and offers the same DMA and parallel processing capabilities, as well as the ability to perform single-pass encryption and authentication as required by widely used

security protocols, such as IPsec and 802.11i. Integrated security makes the MPC8541E an optimal integrated processor solution for applications that require security features in concert with high performance and low system-level cost.

Freescale PowerQUICC MPC8541E Communications Processor Block Diagram Block Diagram



View additional information for PowerQUICC® III Processor with TDM, DDR, PCI, 1 GB Ethernet, Security, CPM with UTOPIA.

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