

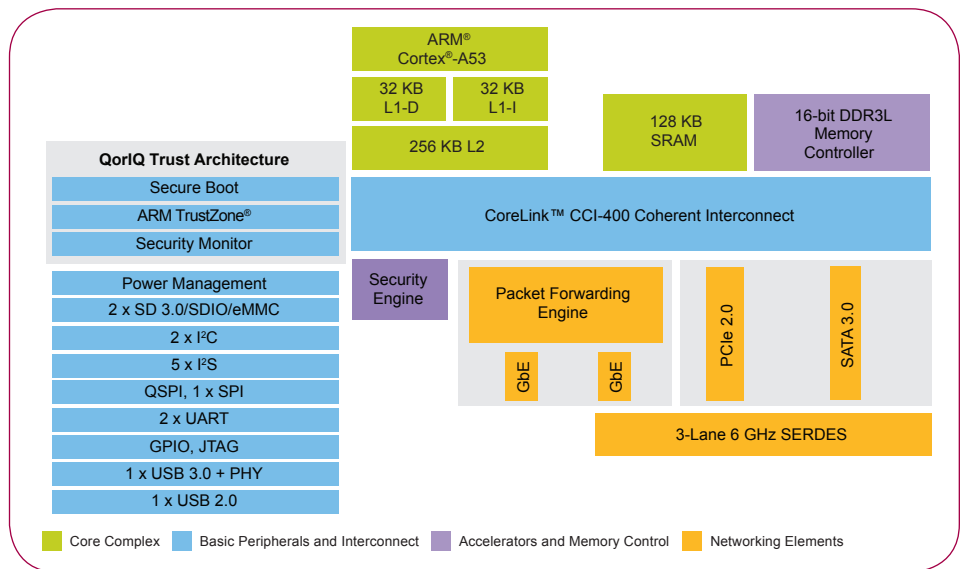
The LS1012A includes a hardware packet forwarding engine (PFE) which offloads processing of IP packets from the main CPU, yielding higher performance and lower power than pure software processing can achieve. The PFE is capable of 2 Gbit/s IP forwarding even with the smallest packets, with virtually no CPU load.

COMPLETE ENABLEMENT, RICH ECOSYSTEM

For customer evaluation, the QorIQ LS1012A processor will be supported by an evaluation board featuring an integrated on-board probe for further cost savings, along with third-party platforms developed by NXP's embedded board solution partners. Evaluation kits include a Linux® BSP with optimized drivers to support peripherals and a six-month evaluation license for CodeWarrior development tools.

All QorIQ LS series devices are supported by our Product Longevity Program to ensure long-term availability, as well as our extensive third-party ecosystem, the largest and most established in the communications market. In conjunction with our expertise and worldwide support infrastructure, the ecosystem helps customers accelerate their migration from both competitive solutions and from legacy Freescale devices, preserve investment costs and reduce time-to-market.

QorIQ LS1012A BLOCK DIAGRAM



QorIQ LS1012A FEATURES

64-bit ARM® Cortex®-A53 core	Extreme power efficiency, delivering over 3,000 CoreMarks® at 1 W typical power
ECC-protected cache memories	First 1 W typical power embedded processor featuring ARM Cortex-A53 core with ECC protected caches and coherent 256 KB L2 for high reliability applications
Rich connectivity and peripheral features including PCI Express® Gen2, USB 3.0, SATA 3, QuadSPI, SDIO	High integration that enables support for 802.11ac modules and high bandwidth connectivity for ASICs, 4G/LTE, SATA, low-cost NOR Flash
Packet acceleration engine	Delivers hardware acceleration for outstanding IP forwarding and NAS performance
Security and trust architecture	Support for ARM TrustZone® and secure boot, together with high performance cryptographic processing and manufacturing protection
Low-cost board designs	The LS1012A package is engineered to support low-cost, 4-layer board designs to minimize system costs

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