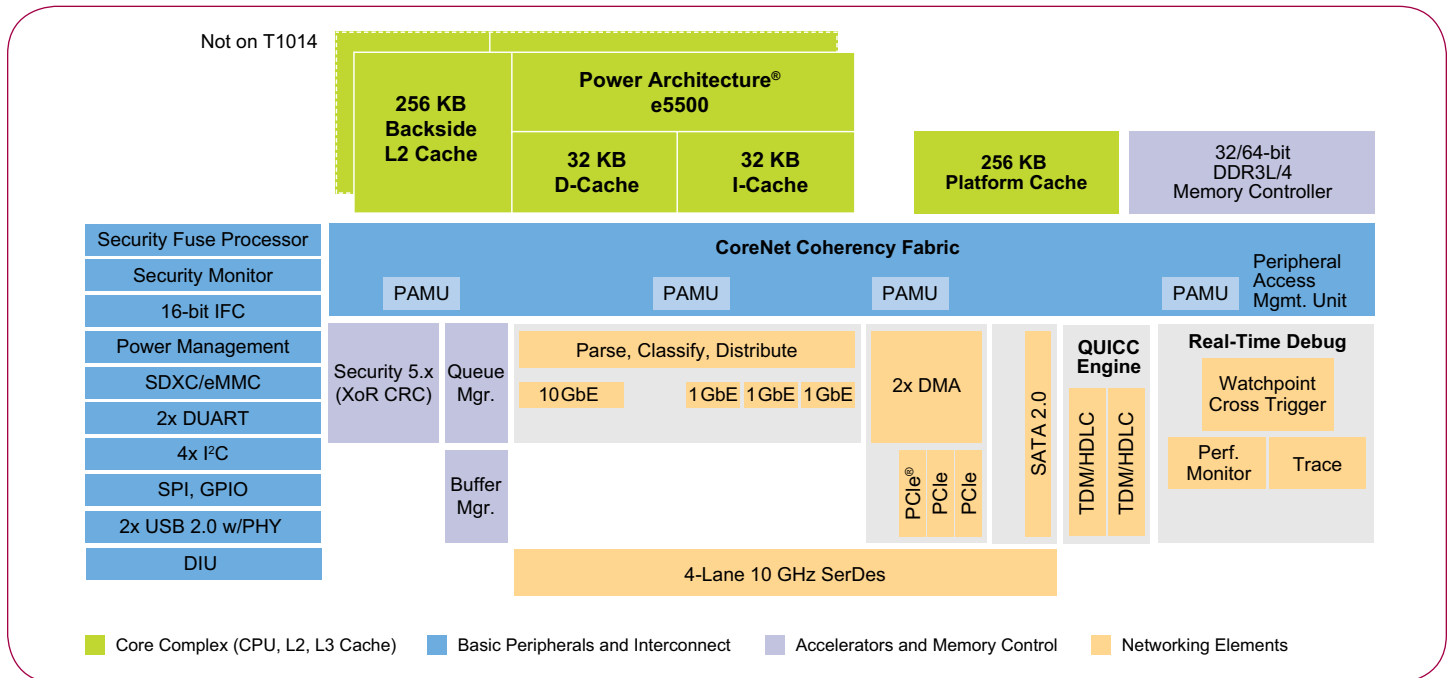- Professional services and support
  - Commercial services
  - Linux SDK support package
  - Reference design software (RDS) support package
- Third-party software and tools
  - Enea, Green Hills, Mentor Graphics and Wind River

QorIQ P1020 AND T102X PROCESSORS COMPARISON TABLE

	P1020/11	T1023/13	T1024/14	T1042
Core	1-2 x e500v2	1-2 x e5500	1-2 x e5500	4 x e5500
Power ISA	32-bit	64-bit	64-bit	64-bit
Max MHz	800	1400	1400	1400
L2 Backside Cache	–	256 KB	256 KB	256 KB
Platform Cache	256 KB	256 KB	256 KB	256 KB
DDR Type and Speed	2/3 1333MTs	3L/4 1600MTs	3L/4 1600MTs	3L/4 1600MTs
DDR Speed	to 1333MTs	to 1600MTs	to 1600MTs	to 1600MTs
DDR Width	36 b	36 b	36 b/72 b	36 b/72 b
SerDes	4	4	4	8
PCIe Lanes	2 x 1 v1	3 x 1 v2	3 x 1 v2	4 x 1 v2
GbE	up to 3	up to 4	up to 4	up to 5
10GbE I/O	–	1	1	-
MACSEC		All ports	All ports	All ports
Hardware Offload	–	DPAA	DPAA	DPAA
Crypto	SEC 3.x	SEC 5.x	SEC 5.x	SEC 5.x
Pattern Matching	–	–	–	Yes
QUICC Engine TDM/HDLC, ISDN, Industrial	Yes	–	Yes	Yes
SATA	–	2.0 x 1	2.0 x 1	2.0 x 2
USB	2.0 x 2	2.0 x 2 w Phy	2.0 x 2 w Phy	2.0 x 2 w Phy
Lossless Deep Sleep	–	–	Yes	Yes
Auto Response	–	–	Yes	Yes
Display Interface	–	-	Yes	Yes
Single Clock Source	–	Yes	Yes	Yes
Package	31 x 31 PBGA	19 x 19 FCBGA	23 x 23 FCBGA	23 x 23 FCBGA
Pin Compatible	No	No	Yes	Yes

QORIQ T1014 AND T1024 COMMUNICATIONS PROCESSOR

QorIQ T1023/24 PROCESSORS FEATURES LIST

Two or four e5500 single-threaded cores built on Power Architecture technology	• Up to 1.4 GHz with 64-bit ISA support • Low latency, per core, core clocked 256 KB dedicated cache • Hybrid 32-bit mode to support legacy software and transition to a 64-bit architecture • Nap, wait and doze low-power modes
CoreNet platform cache	• 256 KB shared platform cache for stashing support
Hierarchical interconnect fabric	• CoreNet fabric supporting coherent and non-coherent transactions with prioritization and bandwidth allocation amongst CoreNet endpoints • QMAN fabric supporting packet-level queue management and quality of service
64-bit DDR3L/4 SDRAM memory controller with ECC support	• 32-bit or 64-bit low power DDR up to 1600 MT/s
DPAA incorporating acceleration for the following functions	• Full L2/3 tunneling and en/decrypt offload support for functions such as WLAN • CAPWAP/DTLS secure wired links • Packet parsing, classification and distribution • Queue management for scheduling, packet sequencing and congestion management • Hardware buffer management for buffer allocation and de-allocation • Cryptography acceleration (SEC 5.x)
SerDes	• Four lanes at up to 10 Gbit/s • Supports SGMII, 2.5 Gbit SGMII, QSGMII, XFI, 10G BASE-KR, PCI Express® and SATA
Ethernet interfaces	• Up to 4 x Ethernet MACs
QUICC Engine module	• Integrated support for legacy WAN protocols TDM, HDLC, UART, ISDN and industrial protocols
High-speed peripheral interfaces	• Three PCI Express 2.0 controller
Additional peripheral interfaces	• One serial ATA (SATA 2.0) controller • Two high-speed USB 2.0 controllers with integrated PHYs • Enhanced secure digital host controller (SD/MMC/eMMC) • Enhanced serial peripheral interface • Two I²C controllers • Four UARTS • Integrated flash controller supporting NAND and NOR flash memory
DMA	• Dual four channel
Support for hardware virtualization and partitioning enforcement	• Extra privileged level for hypervisor support
QorIQ trust architecture	• Secure boot, secure debug, tamper detection, volatile key storage
Single source clocking	• For BOM cost reduction

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  T1024RDB-PC   T1014NSN7MQA   T1024NXE7MQA   T1024NXN7MQA   T1024NXN7PQA   T1024NSN7KQA

T1014NXN7PQA   T1024NSN7MQA   T1024NSE7KNA   T1013NXE7MQA   T1014NSE7MQA   T1014NSN7MQPA

T1024NXE7KQA   T1014NXE7PQA   T1023NXN7PQA   T1013NXE7KQA   T1013NXE7PQA   T1023NXN7MQA

T1013NXN7PQA   T1014NSN7PQA   T1024NXE7PQA   T1013NXN7KQA   T1013NXN7MQA   T1023NXE7PQA

T1023NXE7KQA   T1023NXN7KQA   T1023NSE7KQA   T1024NSE7KQPA   T1024NSE7KQA   T1024NSN7KQPA

T1014NSE7KQA   T1013NSE7KQA   T1024NSN7MQPA   T1013NSN7PQA   T1014NXE7MQA   T1024NSE7PQPA

T1013NSN7KQA   T1023NSN7KQA   T1014NSE7MQPA   T1013NSE7MQA   T1023NSE7PQA   T1023NXE7MQA

T1023NSN7PQA   T1023NSE7MQA   T1014NSE7PQA   T1024NSE7MQPA   T1013NSE7PQA   T1024NSE7MQA

T1023NSN7MQA   T1013NSN7MQA