



QorIQ Processing Platforms

QorIQ P1020 UTM/Security Appliance Solution



Networking security solutions

Freescale's universal threat management (UTM) and security appliance solution exemplifies our solutions-centric approach by bringing together all three elements needed for the development of a complete UTM security appliance—processors, software and an ecosystem of hardware and software partners—providing our customers a complete solution to deliver differentiated products to market. This solution brings together our QorIQ processor family, our VortiQa software optimized for performance delivered with the help of our hardware ODM partners for the best performance at the lowest power levels and most cost-effective bill of materials (BOM).

The Freescale QorIQ P1020-based UTM appliance enables ODMs and customers to develop a production-ready, BOM-optimized, certified, off-the-shelf UTM appliance solution. It allows our customers to leverage a high-performance multicore QorIQ silicon and VortiQa software optimized for multicore for UTM security appliances.

The Freescale UTM appliance solution has been adopted by leading ODMs who offer commercial off-the-shelf appliances. Our

hardware and ODM partner ecosystem is intended to deliver extended support to our customers in hardware engineering, turnkey manufacturing and fulfillment, and pre-built hardware manufacturing, among other services and products. Off-the-shelf UTM appliances from major ODMs are FCC, UL and CE certified and ready to ship, enabling customers to focus on differentiated value-added services and leveraging the performance offered by multicore processors. Our solution provides customers with access to low-power, high-performance multicore processors that deliver improved margins with minimal integration and development costs.

Key Benefits

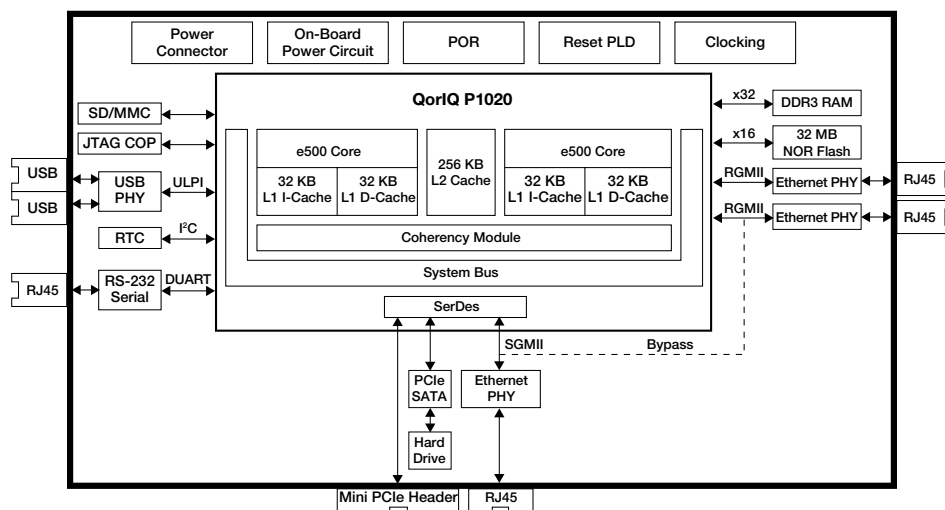
Accelerate Time to Revenue

Demonstrate time to market with fully integrated security and networking functionality that allows you to simply develop with no impact to schedule. Accelerate time to revenue by reaching new markets faster.

Bend the Cost-Performance Curve

Achieve multiple performance enhancements by leveraging our solutions-centric approach at similar price levels of current generation appliances. Tap into the expertise of Freescale's ecosystem partners to customize and optimize your solution.

QorIQ P1020 UTM/Security Appliance Block Diagram



Create an Extensive Appliance Roadmap

Using our multicore QorIQ processors running VortiQa software, showcase scalable performance at industry-leading performance to power ratios.

Target Applications

- Security appliances
- UTM appliances
- VPN routers
- Business gateways
- WLAN routers

Features

- Freescale's high-performance QorIQ P1020 processor in 45 nm SOI technology
- VortiQa software for enterprise equipment optimized for multicore processors
- Integrated security engine (SEC 3.1)
- Integrated security engine: protocol support includes SNOW, ARC4, 3DES, AES, RSA/ECC, RNG, single-pass SSL/TLS, Kasumi
- Cost-optimized BOM by hardware ODMs
- FCC, UL and CE certified and ready to ship
- Complete appliance portfolio from low to high end

QorIQ P1020 UTM Security Appliance Specifications

Processor	QorIQ P1020 <ul style="list-style-type: none">• 800 MHz e500 dual core• 32 KB L1 instruction cache and 32 KB L1 data cache per core• 256 KB L2 cache with ECC• 36-bit physical addressing• 3.5W typical power
Memory	<ul style="list-style-type: none">• 1 GB DDR3 32-bit• 32 MB on-board flash memory
Ethernet	Total of three Gigabit Ethernet ports
Ethernet Bypass	Bypass between one Ethernet port pair
Storage	<ul style="list-style-type: none">• 160 GB SATA 2.5" HDD• SD card reader on-board
USB	Two USB headers
Mini PCI Express®	One Mini PCI Express header
Serial Port	Two RJ45 connectors
Debug	JTAG header
LEDs	Power, bypass, status, Ethernet link and activity
RESET	Reset switch
Power Supply	100–240V 45W
Enclosure	Desktop and 1U form factors
Operating Environment	Temperature: 0°C to 40°C Humidity: 10% to 90% RH
Storage Environment	Temperature: -20°C to +70°C (-4°F to +158°F) Humidity: 5% to 95% RH
Regional Compliance	U.S., Canada, Europe
Certification	FCC Class A/UL/CE
Dimensions	Desktop: 10.5 x 8.5 x 1.75 inches 1U: 17.5 x 10.25 x 1.75 inches



To learn more about Freescale QorIQ communications platforms, please visit freescale.com/QorIQ

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