

P1020EWLAN Enterprise IEEE® 802.11N Access Point/Wireless Router

The P1020EWLAN access point/router is a complete production-ready, bill of materials (BOM)-optimized solution that can support single- or dual-radio 802.11 a/b/g/n devices through MiniPCI or Mini PCI Express® interfaces. The solution features a 3 x 3 MIMO design, dual Gigabit Ethernet ports, USB 2.0 and is backwards compatible with 802.11 a/b/g products.

IEEE® 802.11N WLAN radios are capable of supporting wireless data rates up to 300 Mbps per radio and the P1020 communication processor is ideally suited to maximize performance for two radios up to 600 Mbps while still meeting the power and cost budgets required by this application. The P1020EWLAN can be powered over a single Ethernet cable in 3 x 3 MIMO mode using a single 802.3af Power over Ethernet (PoE) link.

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.

Create an Extensive Appliance Roadmap

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

Solution Advantages

- Power over Ethernet (PoE) eliminates the need to run 110/220 VAC power to wireless access points
- Single- and dual-core solutions allow for a portfolio with a wide range of end products at varying price points
- Highest performance SoCs in the industry under 3.5W
- BOM-optimized, production-ready systems from Industry-leading ODMs

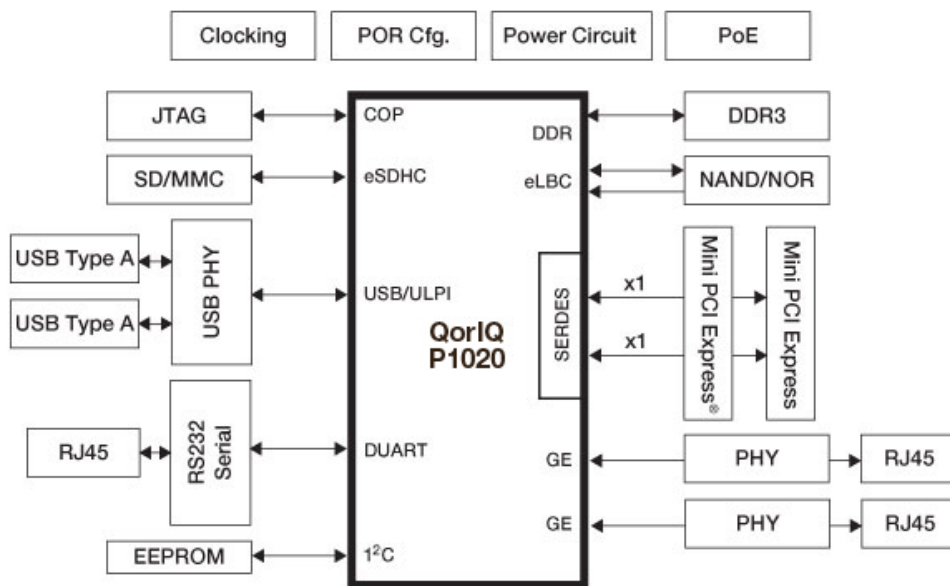
Ordering Information

Ordering part number: P1020EWLAN

ODM Partners

For a list of ODM contacts that customize and/or supply volume quantities of this product, contact your local Freescale sales office.

QorIQ P1020 Wireless LAN Access Point Block Diagram



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 security software optimized for multicore processors
- Integrated security engine (SEC 3.1)
 - Crypto algorithm support includes 3DES, AES, RSA/ECC, MD5/SHA and FIPS deterministic RNG
 - Single pass encryption/message authentication for common security protocols (IPsec, SSL, SRTP, WiMAX) and XOR acceleration
- Cost-optimized BOM by hardware ODMs
- FCC Class A certified, ready to ship
- Complete appliance portfolio from low to high end

QorIQ P1020 Wireless LAN Access Point Specifications

Processor	<ul style="list-style-type: none">• QorIQ P1020 processor in 45nm SOI• 533-800 MHz dual core e500 processor• 32 KB L1 Instruction cache and 32 KB L1 data cache per core• 256 KB L2 cache with ECC
Memory	<ul style="list-style-type: none">• 256 MB to 512 MB DDR3 SDRAM• 64 MB NOR flash memory• 256 MB or NAND flash memory
WLAN Connectivity	<ul style="list-style-type: none">• Dual MiniPCI Express® (PCIe) connectors for 802.11 a/b/g/n dual band dual cards• Support Atheros AR93xx series and Ralink MiniPCIe card• 3 x 3 MIMO solution
Connectivity	<ul style="list-style-type: none">• 2 x 10/100/1000 Base-T with POE, USB Type A connector
Certification	<ul style="list-style-type: none">• FCC/CE Class B certified• Mini-ITX form factor PCB
OS/BSP	<ul style="list-style-type: none">• Linux® 2.6xx or later with redundant boot process from flash memory
Wireless Wi-Fi®	<ul style="list-style-type: none">• 802.11 b/g/n compatible
Wireless Modules	<ul style="list-style-type: none">• Atheros support: AR93xx
Wireless Security	<ul style="list-style-type: none">• PSK, WEP, WPA2, authentication with Radius
System Configuration and Management	<ul style="list-style-type: none">• Web browser based, TFTP: FTP and Telnet, system configuration restore in flash memory (firmware update)
Protocols	<ul style="list-style-type: none">• IPv4 and IPv6, RIP v1/v2, TCP/IP, UDP, PPTP, PPPOE, DMZ, VLAN, bridging, NAT/PAT, IGMP, VPN, firewall, ACL, IDS
Documentation	<ul style="list-style-type: none">• Hardware quick start guide, hardware user manual, software user manual
Hardware Deliverables	<ul style="list-style-type: none">• Schematics, gerbers and complete BOM
Software Deliverables	<ul style="list-style-type: none">• Software binaries, source and release notes



Learn More:

For current information about Freescale products and documentation, please visit freescale.com/QorIQ.



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