CN71XX 11ac Wireless Security Router/ Business Gateway Reference Board and Reference Design Kit
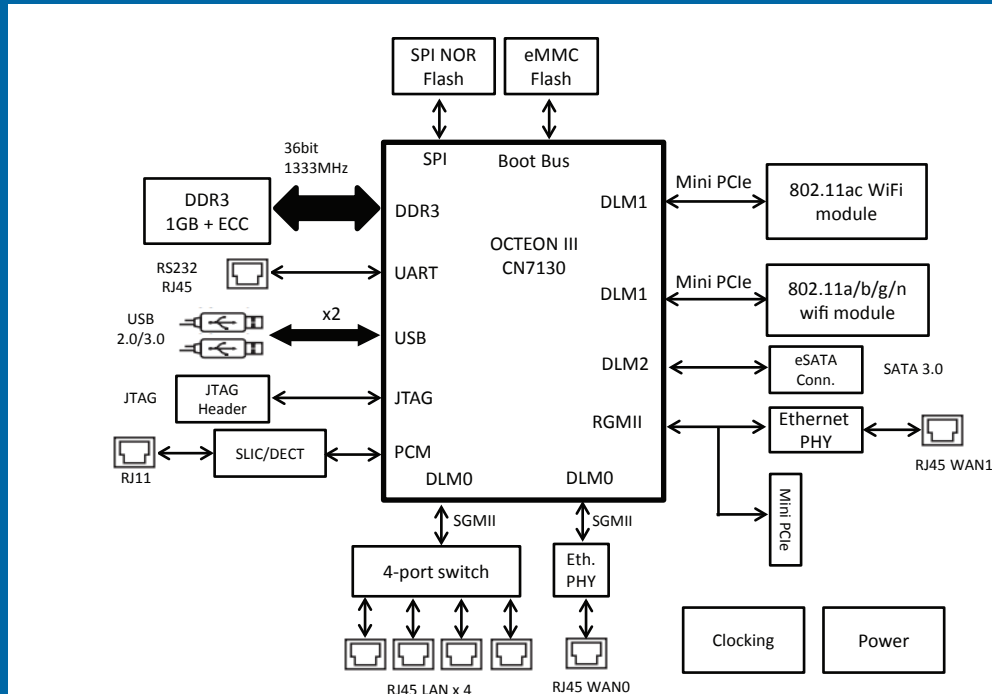
Product Brief

OVERVIEW

The Cavium CN71XX Wireless Security Router/ Business Gateway solution is a complete production-ready, bill of materials (BOM)-optimized solution based on OCTEON III CN71XX low-power multi-core processor. The solution features single or dual 802.11 ac and 802.11 a/b/g/n 3 x 3 MIMO radios through miniPCI Express interface, four Gigabit Ethernet LAN ports, two Gigabit Ethernet WAN ports, two USB 3.0 ports, eSATA port, and one mini PCIe connector for MOCA/ xDSL/WLAN module over RGMII interface.

Cavium's OCTEON III single and dual SoCs CN70XX deliver an unprecedented amount of compute performance per chip enabling superb throughput and headroom to handle a broad range of applications including wireless security router and business gateway. These low-power processors are the world's first to include up to four MIPS64® cores with full hardware virtualization, Deep Packet Inspection (DPI), Packet processing, Security and QOS capabilities in a highly integrated System on a Chip.

Feature Highlight:

- OCTEON CN7130 4-core 1.5 GHz quad core processor for maximum performance
- Suitable for fanless design with plastic enclosure
- 2 x miniPCI Express (PCIe) connector for 802.11 a/b/g/n dual band cards and 801.11ac cards
- Support QCA9880/QCA9890 and QCA9850 WiFi chipset
- 6 x 10/100/1000 Based-T ports. LAN/WAN separation is supported
- Option to insert MOCA/xDSL/WLAN mini PCIe module over RGMII interface
- 1 GB DDR3 SRAM
- 2 x USB 3.0 ports
- Cost-optimized BOM by hardware ODMs
- Comprehensive software packages including device drivers (WLAN, Ethernet PHY, Cavium SDK 3.1 and ADK 3.1 supporting Linux 3.10.

Reference Design Block Diagram

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Ordering Information

Ordering number	Description	Deliverables
CN7000-REF-ROUT-BOARD	CN71XX Wireless Security Router/ Business Gateway Reference Board (enclosure not included)	- PCB board (6.5in x 7.5in) - 12V power supply - RS232 serial cable - QCA 802.11ac WiFi mini PCIe module - QCA 802.11n WiFi mini PCIe module - 2.4G and 5G antenna - Documentation (Quick start guide, User guide, Software release note) - Optional plastic casing
CN7000-RDK-ROUT	CN71XX Wireless Security Router/ Business Gateway Reference design kit	- Reference design files (schematics, layout, BOM, enclosure and thermal simulation) - Peripheral device driver - Cavium SDK 3.1 (Linux kernel 3.10) - Cavium ADK 3.1