

X1000

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Architecture

X1000 Gateway hardware architecture is shown in Figure 1. It is based on the microprocessor Au1550 which is a versatile high-performance, low-power, high integration security network system-on-a-chip (SOC) designed for wired and wireless applications where security is important. This security network processor accelerates networking applications such as gateways and network addressable storage (NAS) units, wireless access points, and voice over internet Protocol environments.

The network processor is a complete SOC based on the MIPS32 instruction set and runs at Linux operating system. It integrate a variety of periphery interface, including interrupt control, DMA controller, PCI interface, USB host, I2C, SPI, SRAM controller, DDR/SDR SDRAM controller, UART, 10/100 Ethernet MAC,GPIO, 32-Bit PCI interface and so on.

CC1000 is a true single chip UHF transceiver designed for very low power and low voltage wireless communications with sensors. It operates at 418MHz and 433MHz frequency by programmed different firmware via an easy-to-interface serial bus with a microcontroller.