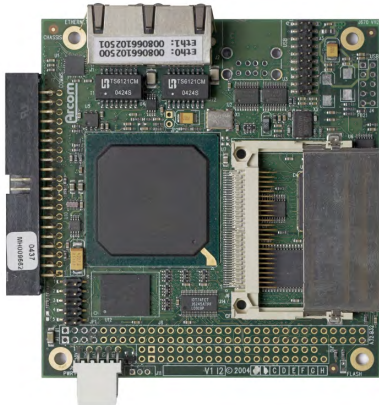


# VULCAN-Lite



## Low cost Intel® IXP420 XScale® communications processor

The VULCAN-Lite is a low power single board computer based on the Intel IXP420 XScale network processor. The IXP420 is an implementation of the ARM compliant, Intel XScale microarchitecture combined with communication peripherals including: two high speed Ethernet MACs, two high speed serial ports, a local PCI interface and a DMA controller.

The VULCAN-Lite board adds to the basic IXP420 features with a real time clock and a CompactFlash (CF+) expansion port for memory and network cards.

## Typical applications

The VULCAN-Lite provides a cost effective solution for a range of applications including:

- Communications gateway. The VULCAN-Lite is ideal for high speed embedded communications solutions which require secure encryption and authentication. Use the CF+ port to connect Wi-Fi cards or a wireless cellular modem to implement rugged industrial wireless gateway products.
- Remote data acquisition. Using the VULCAN-Lite, it is now possible to remotely connect to equipment situated out in-the-field to retrieve critical data which previously may have required an engineer to visit the site. Alternatively, the VULCAN-Lite could be used to automatically dial out and alert service personnel that the site needs attention.

## Features

- Intel IXP420 XScale 266MHz network processor
- Up to 64MB of soldered SDRAM (133MHz 32-bit data bus)
- Up to 32MB of soldered AMD MirrorBit™ Flash
- 256kB battery-backed SRAM (using external battery)
- Dual 10/100baseTx Ethernet MACs (RJ45 jacks with Speed and Link/Activity LEDs)
- Second Ethernet port includes hardware accelerated cryptography (encryption/authentication)
- Two serial ports:
  - 16550 UART: up to 921.6kb/s – (64byte Tx/Rx FIFO) – RS232
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- Type II CompactFlash expansion (CF+ for both memory cards, Wi-Fi and Bluetooth® with hot swap support)
- Watchdogs:
  - Watchdog timer #1 generates complete board reset on timeout (selectable from 1ms to 60s)
  - Watchdog timer #2 generates CPU reset or interrupt on timeout (selectable up to 64s using a 32-bit register)
- Eight buffered digital inputs/eight buffered digital outputs (+5V tolerant)
- Real time clock, accuracy 1 minute/month @ 25°C
- Dimensions: industry standard PC/104 format – 96mm x 91mm (3.8" x 3.6")
- Power requirements: 2.5W @ +5V only supply (typical)
- Operating temperature range:
  - -20°C to +70°C (-4°F to +158°F) standard
  - -40°C to +85°C (-40°F to +185°F) industrial
- Humidity: 10% to 90% (non-condensing)

## Industrial Compact Enclosure

The VULCAN-Lite can be supplied within a rugged industrial compact enclosure (VULCAN ICE) offering easy-to-use system solutions for embedded SBC applications.

## Development Kits

The VULCAN-Lite is supported with a rapid application Development Kit for embedded Linux.

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