


VIPER-Lite

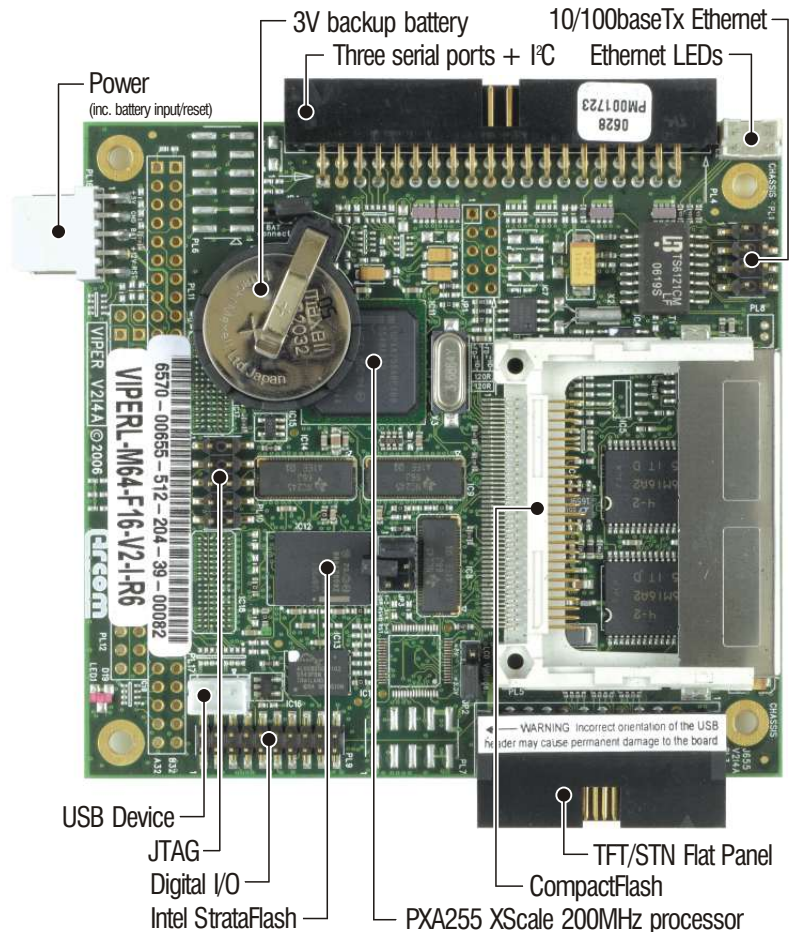
200MHz PXA255 XScale® embedded controller

Features

- PXA255 XScale 200MHz processor (ARM* architecture v.5TE compliant)
 - 32K data cache / 32K instruction cache
 - Low power RISC technology
- Up to 64Mbytes SDRAM
- Up to 32Mbytes Intel StrataFlash (P30)
- TFT/STN flat panel graphics controller (up to 640 x 480 x 16-bit color)
- 10/100baseTx Ethernet controller - SMSC 91C111
- Three high performance UART channels
 - 16550 up to 230.4Kbits/sec : full modem control lines via RS232 (this channel can be factory fitted for TTL signals)
 - 16550 up to 921.6Kbits/sec : Tx, Rx, CTS and RTS via RS232
 - 16550 up to 230.4Kbits/sec : Tx, Rx only via RS232
- 1 USB client (Device) port (PXA255)
- Integrated peripherals
 - battery backed real time clock
 - I²C controller
 - 48 channel programmable interrupt controller
 - 16 channel DMA controller
 - 4 channel interval timer (OS Timer)
 - watchdog timer (270ns to 19 minutes) with interrupt or reset generation
- Drive support
 - CompactFlash (hot swap Type II socket for memory and I/O cards)
 - Onboard resident Flash drive (with JFFS2 support for Linux, Transaction Safe FAT for Windows® CE and TrueFFS for VxWorks)
- 1Mbyte BootROM
- 8 buffered digital inputs / 8 buffered digital outputs (+5V tolerant)
- JTAG port for test and debugging
- Small footprint 3.8" x 3.6" (96mm x 91mm)
- 3V Lithium battery for backup of RTC
- Operating current: 340mA @ 5V (typical), 50mA @ 5V (deep sleep)
- RoHS compliant 

Description

The VIPER-Lite is an ultra low power single board computer based on the 200MHz PXA255 XScale® RISC processor. The PXA255 is an implementation of the Intel XScale microarchitecture combined with a comprehensive set of integrated peripherals including, a flat panel graphics controller, DMA controller, interrupt controller, real time clock and multiple serial ports. The VIPER-Lite board offers a long list of features making it ideal for power sensitive embedded communications and multimedia applications. The board has been designed to take advantage of the power saving modes of the PXA255 RISC processor and other onboard peripherals to achieve an incredible 1.5W maximum power consumption. The VIPER also supports a very low power standby mode.



Specifications

Temperature

- Operating -20°C to +70°C (-4°F to +158°F) standard
- Operating -40°C to +85°C (-40°F to +185°F) extended

Humidity

- 10% to 90% (non-condensing)

Real Time Clock stability

- +/- 1min/month @ 25°C (77°F)

Firmware

- RedBoot for embedded Linux
- Eboot for Windows CE

Dimensions

- 3.775" x 3.550" (96mm x 91mm)

Weight

- 96 grams

Associated Products

VIPER ICE Enclosure

Arcom's range of **Industrial Compact Enclosures (ICE)** offers our customers easy to use system solutions for embedded SBC applications. The VIPER ICE is available as two options:

- a simple low cost aluminum enclosure which provides easy connection to all the onboard devices and includes the VIPER-UPS power supply system.
- similar design enclosure with a 5.5in color TFT Q-VGA (320 x 240) flat panel display and analog touchscreen mounted in the lid. This can easily be attached to an existing front panel assembly to create a ready-to-go panel PC solution.
 - Input voltage range 10 - 36V DC (10 - 25V AC)
 - Battery backed operation for over 2 hours of normal operation
 - RJ45 Ethernet connector with activity and link LEDs
 - 4 D-sub 25 connector positions for I/O expansion
 - 5 D-sub 9 connectors for serial ports
 - Space for 2 PC/104 expansion modules and OEM wired/wireless modem
 - Audio jacks for full audio support
 - 2 USB connectors
 - Standard VESA mounting plate locations



Check our website for more details

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Specifications are subject to change and do not form part of any contract. All trademarks are recognized.

Ordering Information

VIPER-Lite-M64-F16-R6

VIPER-Lite-M64-F16-I-R6 (industrial temperature range -40°C to +85°C)

VIPER-Lite-M64-F32-R6

VIPER-Lite-M64-F32-I-R6 (industrial temperature range -40°C to +85°C)

RoHS Compliance (EU Directive 2002/95/EC)

The VIPER-Lite SBC is fully RoHS-6 compliant.



Typical Applications

Multimedia interface panel

Use the VIPER-Lite in space constrained enclosures or mounted directly behind a flat panel for Windows CE based multimedia machine control applications. The ultra-low power dissipation means you don't need a fan or ventilation for system cooling.

Communications gateway

The combination of embedded Linux with three serial channels and the Ethernet port makes the VIPER-Lite ideal as a communications gateway, protocol converter or wireless network management device.

Telematics

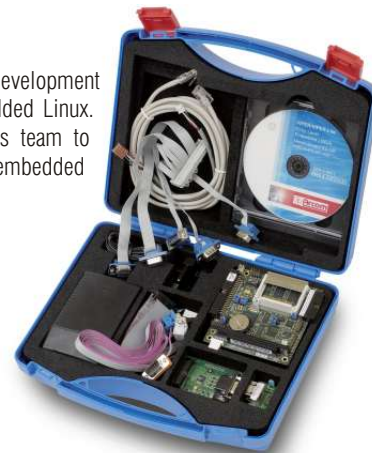
The low power consumption, wide operating temperature range of the VIPER-Lite combined with VIPER-UPS (un-interruptible power supply) product serves as a reliable platform for telematics solutions including taxis, trucks, railway wagons and buses.

VIPER-Lite Development Kits

Arcom offers ready-to-run rapid application Development Kits supporting Windows CE 5.0 and embedded Linux. Contact the Arcom Design & Build services team to discuss your support requirements for other embedded operating systems.



Arcom is a **Gold level** partner in the Windows Embedded Partner program



VIPER-UPS (wide input voltage, un-interruptible power supply)

The VIPER-UPS serves as a 5V DC power supply and battery back up system for the VIPER. The UPS accepts between 10 - 36V DC (10 - 25V AC) input and generates the +5V supply for the VIPER and display. In addition to this, it includes an intelligent battery charger/switch capable of using either the onboard 500mAh NiMH battery or an external sealed lead acid rechargeable battery. The onboard NiMH battery will maintain normal VIPER operation for more than 2 hours or 18 hours when the VIPER enters its standby mode.