

VIA VX800

Unified Digital Media IGP
Chipset



The highly integrated single-chip VIA VX800 combines state-of-the-art x86 computing capabilities with low power requirements in the size of 33 mm x 33 mm for creating performance small form factor designs.

The VX800 integrates a high performance DDR2 memory controller (supporting up to 667 MHz), 800/533/400 MHz FSB CPU interface, PCI Express, SATA (3Gbps), EIDE, USB 2.0, HD audio, and stunning DirectX 9.0 3D graphics.

The DirectX 9.0 3D graphics engine, unified video decoding accelerator, and high definition audio controller enables a totally immersive experience. Next generation devices can take advantage of its multimedia capabilities to create interactive graphics, mesmerizing video, and engulfing audio. With the unique integrated and advanced video processing capabilities, the VX800 can handle 3D applications, MPEG-2, MPEG-4, or WMV9/VC1 video stream playback while reducing the workload and the power consumption of the processor.

Complementing the VIA Nano™, C7® or Eden™ processor, the VX800 assists in reducing overall system power consumption with a maximum power envelope of just 5.5 watts. Power consumption is further reduced through the advanced power management features that vary its power consumption according to its workload.

The VX800 provides diversified connection options for various applications. In addition to the high speed USB 2.0 interface, VX800 supports low power interfaces including SDIO, UART, and SPI for power sensitive applications.

The VX800 is optimized for a broad range of embedded computing requiring enhanced graphics capabilities. Along with producing dazzling graphics and smooth video, connectivity and display flexibility, the VX800 performance chipset supports an unmatched feature set while only requiring a small footprint.

Key Features

Host Interface

- VIA Nano™ / C7® / Eden™ processor (up to 800 MHz FSB)

Memory Controller

- Supports up to two 64-bit DDR2 667 DIMMs (4 GB max)

High Definition Audio Interface

- Up to 32-bit sample depth at 192 kHz sampling rate
- Supports three codecs and eight streams
- Supports High Definition modem

Integrated 2D / 3D / Video Processor

- 250 MHz engine clock
- VIA Chrome9 HC3 DirectX 9.0 3D engine
- 128-bit 2D engine with hardware rotation capability
- High Definition video processor with VMR capability
- Up to 256 MB frame buffer

Unified Video Decoding Processor

- MPEG-2, MPEG-4, VC1, and DivX video decoding acceleration

Video Capture Port

- One 16-bit input or
- One 8-bit TS input + one Serial TS input or
- CCIR656/601 input + one Serial TS input
- Multiplexed with UART and IR ports

Display Interface

- Three 10-bit 350 MHz RAMDACs
- LVDS interface configuration in:
 - One Dual-channel or two Single-channels
- 18-bit TTL LCD interface
- Supports DuoView+™

Storage Interface

- Supports SATA (3Gbps) interface
- Supports UDMA IDE
- Supports SD/MS/MMC memory card interface

Peripheral Expansion Bus

- Supports PCI Express one 4-lane and two 1-lane ports
- Supports six USB 2.0 ports
- Supports PCI and LPC buses
- Supports SDIO and SPI
- Supports FIR
- Supports two UART ports

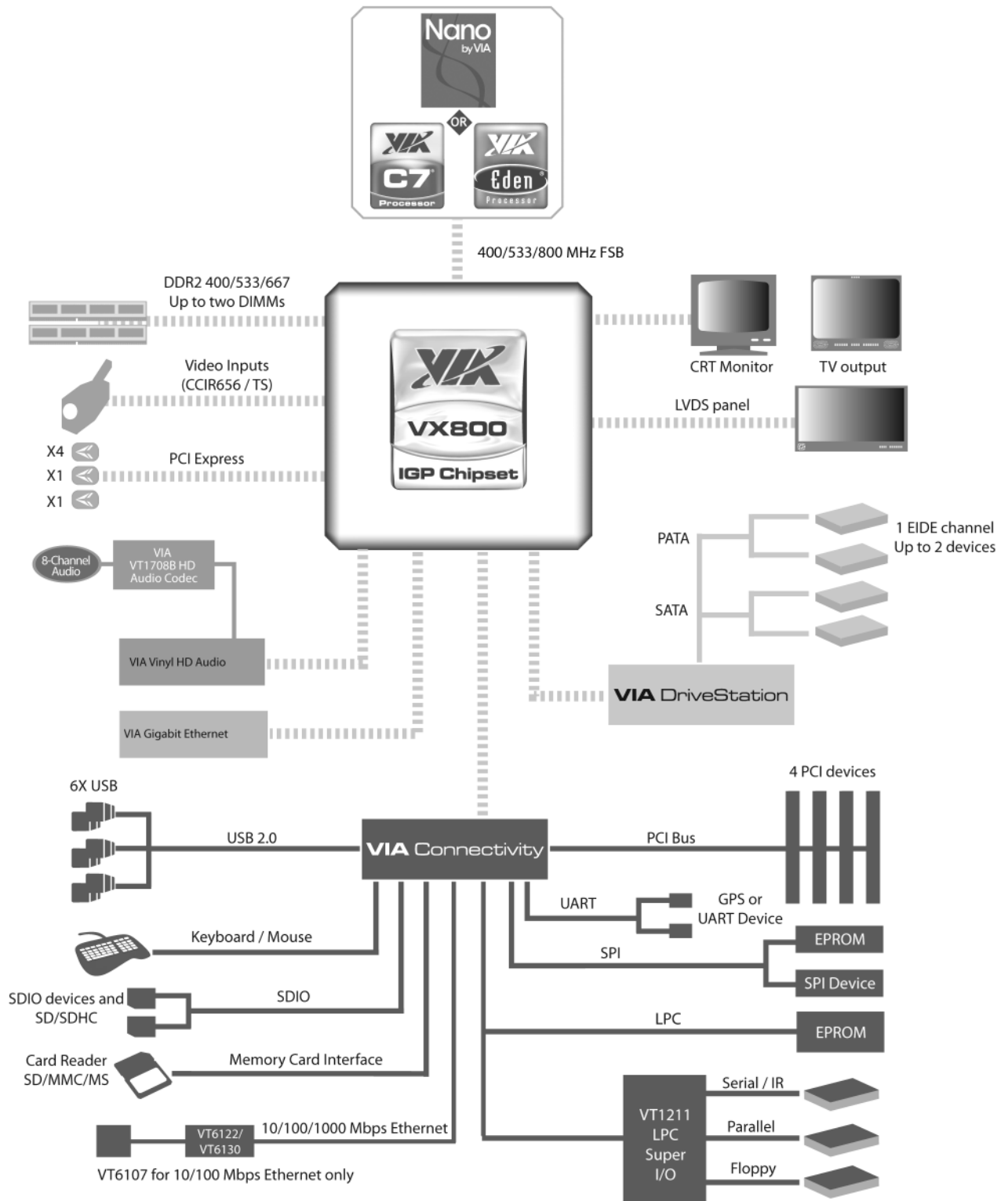
Power Management

- ACPI 3.0 and PCI Bus Power Management 1.1 compliant
- Extensive system power management

TDP Power

- TDP max: 4.4~5.5 W

VX800 Block Diagram



* All product specifications are subject to change without notice. Update: March 1, 2010.