VIA VX700 - Making Your World Portable

Continuing VIA's trend for setting new standards for high levels of integration and performance for today's core logic solutions, the VIA VX700 system media processor, a powerful unified IGP chipsets, pushes the technology envelope to deliver a remarkable all-round feature set. Designed specifically for today's ultra thin'n'light notebooks and ultra mobile devices, the VIA VX700 integrates all the cutting-edge features of a modern chipset's North and South bridges, including rich video graphics, HD audio, and DDR2 and SATA II support, into a single, compact and highly power-efficient package measuring just 35mmx35mm.

Complementing the power-efficient VIA C7®-M and C7®-M ULV processors it supports, the VIA VX700 is based on a highly sophisticated power efficient architecture that enables such rich integration into a compact package with a maximum power envelope of just 3.5 watts. A number of key power management technologies are incorporated that monitor activity and dynamically control power according to system load requirements.

The VIA VX700 utilizes the VIA UniChrome™ Pro Integrated Graphics Processor (IGP) ensuring optimal performance for all multimedia, entertainment, and productivity applications. With an internal data flow equivalent to the latest AGP 8X graphics cards, a 200MHz 2D/3D graphics engine and features dedicated 128-bit data paths for pixel data flow and texture/command access.

The VIA UniChrome Pro IGP graphics core also features the Chromotion™ video engine raising the bar for digital entertainment support on PC systems. The Chromotion™ video engine employs a multi-faceted approach to displaying multimedia content, implementing a number of advanced tools at every stage of video processing. These include integrated MPEG-2 decoding, for flawless digital video playback with ultra-low CPU-utilization, and advanced rendering tools such as Adaptive De-Interlacing and Video Deblocking, which ensure clearer playback of digital content on all display devices.

Features of the VIA VX700 System Media Processor

Features	VIA VX700
Processor Support	VIA C7®-M and VIA C7®-M ULV processors
Front Side Bus	533/400MHz
Memory Support	DDR2 533/400/333 or DDR400/333
Max Memory	2 GB
Graphics Core	VIA UniChrome™ Pro
Hardware Video Acceleration	MPEG-2, MPEG-4, WMV9 HD

HDTV Support	Yes
LVDS/DVI Transmitter	Yes
Dual Monitor Support	Yes
Video De-blocking	Yes
Hardware Display Rotation	Yes
High Definition Audio	Yes
USB 2.0	6 ports
PCI Devices/Slots	4 Slots
Serial ATA	2 x SATA 150 devices or 2 x SATA II devices
IDE	1 EIDE channel up to 2 devices

Benefits of VIA VX700

VIA UniChrome™ Pro Graphics Core

With an internal data flow equivalent to what is available to the latest AGP 8X graphics cards, VIA UniChrome Pro has a separate 128-bit data path between the North Bridge for pixel data flow and texture/command access. Separate 128-bit 2D and 3D graphics engines ensure optimal performance for all multimedia, entertainment, and productivity applications.

Flawless Digital Media Playback

VIA UniChrome Pro includes native support for the most popular digital video and audio formats through hardware MPEG-2/MPEG-4 playback as well as support for WMV9 acceleration. The VIA VX700 also provides a high-end audio experience with the highly acclaimed VIA Vinyl HD Audio suite, supporting up to eight high definition channels delivering a richer all-around digital media experience.

Multiple Display Configurations

Flexibility is extended to display technologies, with the VIA VX700 integrating a multi-configuration LVDS/DVI transmitter as well as an integrated HDTV encoder for studio grade HDTV output.

Advanced Memory Controller

VIA's renowned memory controller technology has been incorporated into the VIA VX700, with support for DDR and DDR2 memory (up to 533MHz). The VIA VX700 supports up to 2 memory modules for a total of up to 2GB of total system memory of 64-bit as well as 32-bit support in order to extend performance, design and cost flexibility to designers.

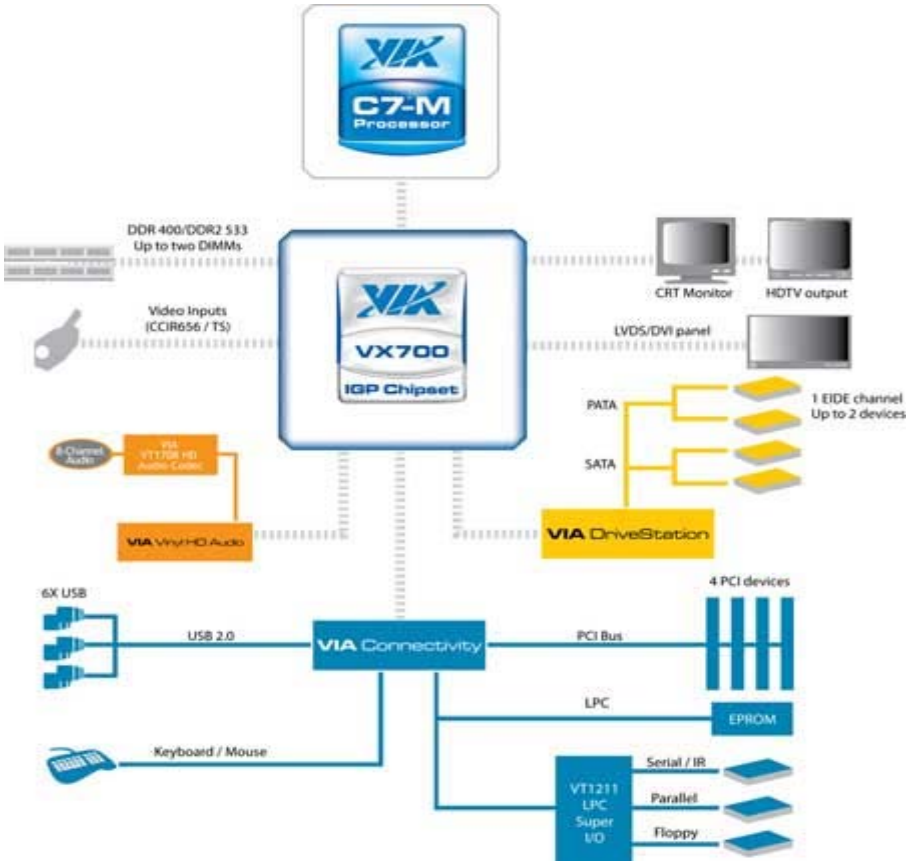
VIA Advanced Connectivity

The VIA VX700 offers broad connectivity with support for SATA, SATA II and PATA drives, two COM and six USB2.0 ports, and four PCI slots, allowing for considerable flexibility in board configuration. Additionally, developers can also integrate support for ISA through an ITE PCI bridge chip, combining legacy ISA connectivity with high bandwidth DDR2 memort support for more powerful embedded systems.

Unified VIA Hyperion Pro Drivers

VIA's unified approach to drivers has been established for eight generations of chipsets, allowing end users to benefit from seamless hardware and software compatibility.

Block Diagram



Key Features

» 533MB/sec Front Side Bus

» Supports up to 2GB DDR2 533/400MHz or DDR400/333/266MHz SDRAM

» Integrated VIA UniChrome Pro Graphics
» Chromotion™ video engine
» MPEG-2 decoding accelerator
» MPEG-4 decoding accelerator
» WMV9 decoding accelerator
» Video de-blocking
» Adaptive de-Interlace
» DuoView+™
» Video capture
» Optimized Unified Memory Architecture (UMA)
» 200MHz Graphics Engine Clock with separated 128-bit data paths
» 128-bit 2D and 3D graphics engine
» Multi-configuration LVDS/DVI transmitter
» Support for VIA Vinyl HD Audio
» Serial ATA support for up to 2 devices
» Parallel ATA133/100/66 support for up to 2 devices
» Support for up to 6 USB 2.0 ports