VIA K8T800
PERFORMANCE CHIPSET

Features	K8T800 Server/Workstation	K8T800 Performance PC
Processor	AMD Opteron™ Single/Dual Processor Support	AMD Athlon™ 64 Single Processor support
Front Side Bus	800MHz HyperTransport Bus Link	800MHz HyperTransport Bus Link
Memory Support	128-bit Dual Channel DDR memory controller integrated directly into processor	64-bit Single Channel DDR memory controller integrated directly into processor
AGP Support	AGP 8X/4X	AGP 8X/4X
South Bridge	VT8237	VT8237
North/South Bridge Link	8X V-Link (533MB/s)	8X V-Link (533MB/s)
Audio	VIA Vinyl™ Audio 5.1 surround sound (AC'97) VIA Vinyl™ Gold Audio 7.1 surround sound (PCI)	VIA Vinyl™ Audio 5.1 surround sound (AC'97) VIA Vinyl™ Gold Audio 7.1 surround sound (PCI)
Network	VIA Gigabit Ethernet companion controller VIA integrated 10/100 Fast Ethernet	VIA Gigabit Ethernet companion controller VIA integrated 10/100 Fast Ethernet
Modem	MC'97	MC'97
PCI Devices/Slots	6 slots	6 slots
SATA	Dual PCI-X bus support through VIA VPX2 I/O expansion bridge Dual Channel Serial ATA supports 2 SATA devices SATALite™ interface for two additional SATA devices (4 total)	Dual Channel Serial ATA supports 2 SATA devices SATALite™ interface for two additional SATA devices (4 total)
V-RAID	RAID 0, RAID 1, and RAID 0+1* & JBOD (SATA)	RAID 0, RAID 1, and RAID 0+1* & JBOD (SATA)
PATA	Dual Channel Parallel ATA133 (up to 4 devices)	Dual Channel Parallel ATA133 (up to 4 devices)
USB	8 ports	8 ports
I/O Protocols	I/O APIC / LPC Super I/0	I/O APIC / LPC Super I/0
Power Management	ACPI/APM/PCI/PM	ACPI/APM/PCI/PM

Benefits

VIA Modular Architecture Platform

To best exploit the rapid pace of innovation in the PC industry, particularly with reference to I/O technology, VIA have opted for a classic North/South Bridge configuration allowing for the most scalable mainboard design, enabling new functionality to be integrated in an expedient and practical manner, thus providing the fastest time to market with new features and system performance enhancements.

Native Serial ATA/RAID Support

The VIA DriveStation™ Controller Suite with native dual channel Serial ATA/RAID controller, provides direct support for two 150MB/s Serial ATA devices and its unique SATALite™ interface expands support for two additional SATA devices. The V-RAID controller features native RAID 0, RAID 1, RAID 0+1* and JBOD, ensuring optimum data integrity and system performance. The user friendly V-RAID software interface enables easy disk array configuration and management.

VIA Vinyl Multichannel Audio Suite

Delivering rich, warm surround sound at resolutions as high as 24/96 through up to six- or eight-channel outputs, the VIA Vinyl Audio 5.1 surround sound and VIA Vinyl Gold Audio 7.1 surround sound enables crisp, clear performance, representing the highest levels of audio quality in a mainstream integrated or onboard solution.

Unified VIA Hyperion 4in1 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.

Features

- Supports full range of AMD Opteron™/Athlon™ 64 processors
- 800MHz HyperTransport FSB
- Support for AGP 8X/4X
- V-Link 533MB/s high bandwidth North/South Bridge interconnect
- Support for VIA Vinyl 5.1 & Vinyl Gold 7.1 Audio
- Serial ATA support for up to 4 devices
- Integrated V-RAID with RAID 0, RAID 1, RAID 0+1*, and JBOD (SATA) support
- Parallel ATA133/100/66 support for up to 4 devices
- Support for up to 8 USB 2.0/USB 1.1 ports, UHCI compliant
- Support for VIA Gigabit Ethernet companion controller & Integrated 10/100 Fast Ethernet
- Integrated MC'97 Modem
- Advanced power management capabilities including ACPI/OnNow
- 578-pin BGA North Bridge
- 539-pin BGA VT8237 South Bridge

* RAID Level 0+1 requires four Serial ATA drives; support for the two additional drives can only be implemented with two external Serial ATA ports enabled through a SATALite PHY.
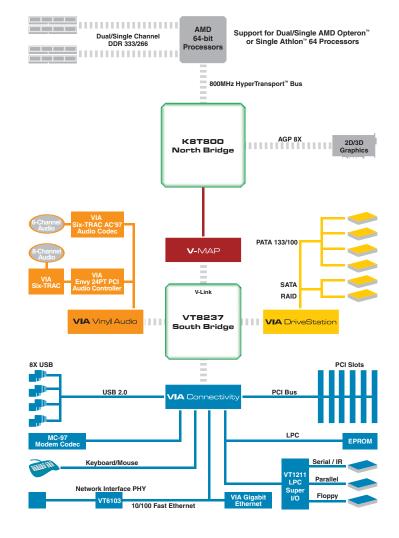
VIA K8T800

PERFORMANCE CHIPSET

Powering the AMD 64-bit Revolution

The VIA K8T800 chipset is powering next generation 64-bit compatible platforms based around the new AMD Opteron™ and Athlon™ 64 processors, including Dual Opteron processor based workstations and servers, and Athlon 64 processor based performance PC platforms. The K8T800 combined with the VIA VT8237 South Bridge and VIA companion chips enables an unparalleled range of cutting edge I/O and multimedia features, including an 800MHz HyperTransport Bus Link, AGP 8X, native Serial ATA/RAID, 7.1 surround audio, and Gigabit Ethernet.

Featuring the VIA DriveStation™ Controller Suite, the VIA VT8237 South Bridge provides the most comprehensive support high-performance integrated storage interface technologies available on the market today. In addition to enabling high-speed 150MB/s dual channel connections to Serial ATA Hard Drives while retaining support for up to four Parallel ATA-133 devices, it combines exceptionally fast disk data transfer rates and optimal data integrity with easy installation and manageability through V-RAID, the first native RAID controller integrated into a South Bridge supporting multiple RAID Level 0, RAID Level 1, RAID 0+1, and JBOD configurations. The VT8237 also features the VIA Vinyl™ Multichannel Audio Suite for superlative integrated and onboard 5.1 and 7.1 surround sound, while the VIA Advanced Connectivity Suite offers a host of high-bandwidth connectivity options, including support for the VIA Gigabit Ethernet companion chip, integrated 10/100Mbps Fast Ethernet and up to eight high-speed USB 2.0 ports.

The K8T800 benefits from VIA's unique V-MAP (VIA Modular Architecture Platform) architecture that facilitates faster product development and speeds up time to market, and features the high-throughput V-Link interconnect running at speeds of up to 533MB/s between the North and South Bridge.

Block diagram labels:

- Dual/Single Channel DDR 333/266
- AMD 64-bit Processors
- Support for Dual/Single AMD Opteron™ or Single Athlon™ 64 Processors
- 800MHz HyperTransport™ Bus
- K8T800 North Bridge
- AGP 8X
- 2D/3D Graphics
- 6-Channel Audio
- VIA Six-TRAC AC'97 Audio Codec
- V-MAP
- PATA 133/100
- 8-Channel Audio
- VIA Six-TRAC
- VIA Envy 24PT PCI Audio Controller
- V-Link
- SATA
- RAID
- VIA Vinyl Audio
- VT8237 South Bridge
- VIA DriveStation
- 8X USB
- PCI Slots
- USB 2.0
- VIA Connectivity
- PCI Bus
- MC-97 Modem Codec
- LPC
- EPROM
- Keyboard/Mouse
- Serial / IR
- VT1211 LPC Super I/O
- Parallel
- Floppy
- Network Interface PHY
- VT6103
- 10/100 Fast Ethernet
- VIA Gigabit Ethernet