RadiSys
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R400EX DATA SHEET

HIGH-INTEGRATION, COMPLETE, LONG-LIFE, PC-COMPATIBLE INTEL® 486 SYSTEM CONTROLLER

FEATURE SUMMARY

- Supports Intel486 CPUs including ULP486SX
- EDO/FPM DRAM controller supports from 1MB to 128MB
- Supports L1 write-back cache
- Two integrated 16550-compatible UARTs
- Integrated real-time clock
- Enhanced IDE interface or DRAM parity support
- Keyboard and mouse controller
- Power management
- SMI support
- 5V or 3.3V operation
- Complete PC-engine logic
- Supports seven PC-compatible DMA channels
- Supports fifteen PC-compatible ISAbus interrupts
- Integrated 8254-compatible timer/counter
- Supports local bus and ISAbus peripherals
- Four programmable I/O chip selects
- ROM or flash ROM interface
- BIOS shadowing
- Speaker interface
- 208-pin PQFP
- Watchdog Timer

The power-management capabilities of the R400EX include clock-source switching, halt detection, SMI event generation, and a programmable clock-restart delay. The processor clock source can be switched between the CLK2OSC input and the 32.768kHz real-time clock oscillator to reduce power consumption.

The RadiSys web site features a PC-compatible reference design that is a good starting point for systems using the R400EX.

PRODUCT OVERVIEW

The RadiSys R400EX High-Integration Intel486 System Controller is a member of the RadiSys family of long-life embedded core logic. Designed specifically to support Intel486 processors, the R400EX is a true third-generation embedded chip set that addresses the functional needs of embedded applications, as well as their requirement for a long product life. The R400EX incorporates features needed for a PC-compatible embedded system design and provides a simple, low-cost, seamless interface to additional chips such as video controllers or PCMCIA controllers. RadiSys is committed to long-term support for the R400EX.

The functional design of the R400EX is based on PC architecture. The DRAM controller is compatible with both Fast-Page-Mode (FPM) and Extended-Data-Out (EDO) DRAM. The keyboard/mouse controller and real-time clock are PC-compatible. The enhanced IDE interface supports a maximum transfer rate of 7.33MB per second.

The ISAbus controller has a separate data bus, and manages the ISA signals to ensure a quiet bus for cycles not directed to the ISA address space.

ORDERING INFORMATION

Call for pricing and availability.
Refer to the order codes below.

DESCRIPTION:

R400EX (ordered in 96 unit lots)
ORDER CODE: R400EX-02

SPECIFICATIONS

FEATURE	FUNCTION	DESCRIPTION
Processor Support	-	486SX
		486DX
		Intel486DX2
		486DX4
		486ULP
Bus Support	IDE	EIDE
	ISA	-
	Serial Ports	Two
	DMA	-
I/O Support	Counter/Timer	-
	RTC	-
	Interrupt Controller	Two
	I/O Chip Select	Four programmable
	Mouse Controller	-
	Keyboard Controller	-
Memory Management	DRAM Support	512KB-128MB
	Flash Support	4MB
	BIOS Shadowing	
	Cache	L1Writeback
Power	5V and 3.3V	-
	Compatibility	-
	Power Management	-

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