RadiSys

DATASHEET

Endura LS855

Endura 855GME uATX Pentium M Motherboard

FEATURE SUMMARY

- Designed for low power applications

ADVANCED PERFORMANCE

Based on Intel mobile technology, the Endura LS855 motherboard is targeted specifically at low power embedded computing applications. The Intel Pentium M processor has been designed with a high performance, low power micro-architecture and includes a power optimized 400MHz System Bus and 1MB level 2 cache. Using Enhanced Intel SpeedStep™ technology, this enables the Pentium M to achieve mobile performance at very low power using real-time dynamic switching of the voltage and frequency between multiple performance modes.

"SILENT" OPERATION

The Endura LS855 is able to provide automatic fanspeed control based on thermal monitoring under control of the BIOS software. This is ideal for "silent PC" applications where the processor fan can be run at very low speed using subject to the performance demands of the application.

DUAL DISPLAY INTERFACES

The on-board LVDS flat panel display interface can be used in conjunction with the integrated Intel Extreme Graphics 2 analog VGA output to provide dual independent display interfaces. With the use of an ADD card it is also possible to provide a digital display interfaces such as DVI or a TV-out interface. This is particularly useful for transaction terminal applications such as ATMs and kiosks, point of sale applications and industrial control systems.

LOW COST OF OWNERSHIP

With long life products (5+ years), revision control, product life cycle management, engineering support, high quality design and manufacture, RadiSys is able to meet the true needs of the embedded market place, enabling customers to achieve a low cost of ownership with Endura motherboards.

Endura LS855 Specifications

FEATURE	FUNCTION	DESCRIPTION
PROCESSOR	Type	Support for Intel® Pentium® M and Celeron® M processors
	Socket	479-pin PGA socket
	FSB	400MHz system bus
CHIPSET	Type	Intel® 855GME chipset with Intel ICH4
MEMORY	Type	Two sockets for DDR200 (PC1600), DDR266 (PC2100) and DDR333 (PC2700) DIMM modules
	Capacity	Up to 2GB of system memory
	ECC	Standard and ECC memory support
VIDEO	Type	Integrated Intel® Extreme graphics 2
	Resolution	1600 x 1200 pixels with 32-bit color support at 85Hz
	LVDS	On-board 24-bit single channel LVDS flat panel interface
		30-pin shielded connector for VDL / VCL
		7-pin backlight control connector (DBL)
	AGP/ADD	AGP 4X / ADD slot with integrated retension mechanism
		Dual DVO channels (single or wide)
		Supports LVDS, DVI, DFP, TV-out via ADD cards
AUDIO	AC97	Analog Devices AD1885 for AC97 v2.1 CODEC
	Rear Connectors	Mic, Line Out and Line In jacks on rear panel
	On-board Connectors	CD In, AUX In, Line Out ATAPI connectors on-board
NETWORK	Controllers	Intel 82551ER for single 10/100 Ethernet (without Wake on LAN not support)
		Intel 82551QM for single 10/100 Ethernet (with Wake on LAN support)
	Connectors	RJ45 rear panel connectors, on-board header for external LEDs
EXPANSION	PCI	3 dedicated bus master 32-bit PCI 2.2 slots
POWER MANAGEMENT	PCI PME, ACPI 1.0b, APM 1.2	

SYSTEM MANAGEMENT	Monitoring	Voltage, temperature and fans
		Automatic fanspeed control based on thermal monitoring
		Anti-tamper security
	Watchdog	Programmable watchdog timer
	SMbus	SMBus header
POWER SUPPLY	Type	Support for hard- and soft-switched power supplies
		Must conform to ATX12V specification, no requirement for -5V supply
BATTERY	Lithium coin cell (5 years operating life typical)	
BIOS	Customizable Phoenix FirstBIOS™ notebook Pro-based	
	Customizable logo and BIOS settings	
I/O	USB	Six USB 2.0 ports – four on rear I/O panel and two on headers
	GPIO	13-bit General Purpose I/O header with LCD character display support
	Serial Ports	COM1 on 9-pin D-type, COM2 via 10-way header
	Parallel Port	25-pin D-type supporting bi-directional EPP and ECP modes
	Keyboard & Mouse	Swappable PS/2 connectors, on-board header connectors
	Front Panel	Connectors for power control and status, Reset, LAN LEDs, IDE activity LED
IDE	Devices	Two Ultra ATA100 interfaces via 40-way boxed header
	Device Types	Supports ATAPI, LS120 and ZIP drives
FLOPPY	Types	Supports standard 3.5" and 3-mode floppy drives
OPERATING SYSTEMS	Windows 2000	
	XP	
	XPe	
	Linux	
	Others upon request	
SAFETY COMPLIANCE	Evaluated in accordance with UL60950, EN60950 and IEC60950	
EMC COMPLIANCE	Evaluated in accordance with EN55022, EN55024 and FCC Part 15 Class B	

PHYSICAL SPECIFICATIONS

ENVIRONMENT	Temperature	Operating	0˚C to 55˚C
		Storage	-40˚C to 85˚C
	Relative Humidity	5% to 95% non-condensing	

Ordering Information

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

DESCRIPTION:

LS855 with 82551ER Ethernet controller (without WoL) and no processor, RoHS
Product Code: LS1L03-0-0

LS855 with 1.6GHz Pentium M, RoHS
Product Code: LS1L03-P16-0

LS855 with 1.6GHz Pentium M and 512MB memory, RoHS
Product Code: LS1L03-P16-512

LS855 with 82551QM Ethernet controller (with WoL) and no processor, RoHS
Product Code LS1W03-0-0

LS855 with 1.8GHz Pentium M 745, RoHS
Product Code: LS1W03-P18-0

I/O Shield
Product Code ATX-L BG IOSHLD

Embedded Processor Support
1.3GHz Celeron M Processor 320
1.6GHz Pentium M Processor 725
1.8GHz Pentium M Processor 745