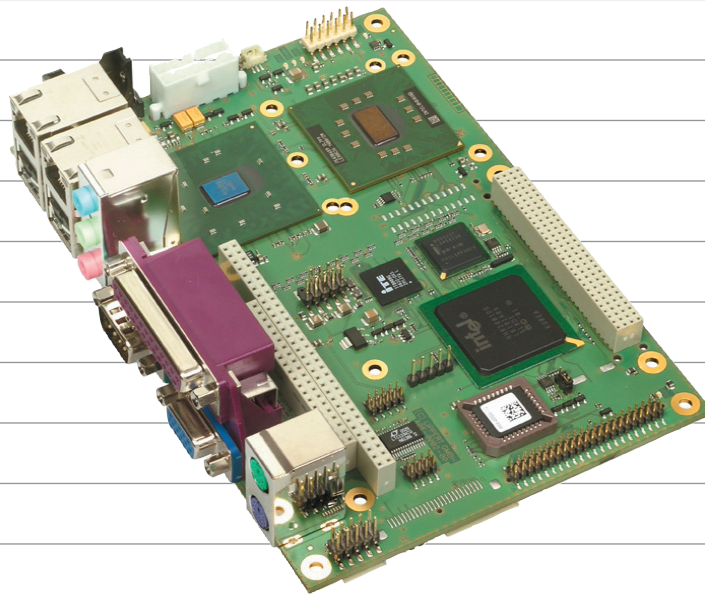


Preliminary

# Hurricane-PM

## EPIC Single Board Computer

### Intel® Pentium® M, Intel® Celeron® M Processor



#### Features

Intel Pentium M, Intel Celeron M
2 x RS232/RS422/RS485 serial ports
1 GB DDR333 RAM max.
Graphics up to 2048 x 1536 pixel
VGA, LVDS
IDE Ultra ATA100
Two Ethernet ports
6 x USB 2.0 host ports
AC97 sound
Only 20 W power consumption
Extended temperature range -40 ... +85°C

The Hurricane-PM is a high-performance EPIC board using Intel's Pentium M processor for portable computers. This processor has very low power requirements and is therefore very well suited for embedded applications. The board combines all peripherals needed to build an embedded PC on a small 115 mm x 165 mm (4.5" x 6.5") printed circuit board.

The Hurricane-PM combines the Pentium M with the 855GME northbridge and an ICH4 hub. These devices incorporate already most of the standard PC peripherals. There is a graphics controller with VGA and LVDS adapters, connecting to many display types. Backlighting is provided for LCD modules.

Two fast 100/10BaseT Ethernet ports, RS232/RS422/RS485 serial ports, and six USB 2.0 host ports connect to external devices. PS/2 connectors for keyboard and mouse as well as a parallel printer port are also available. AC97 Sound I/O is supported, too. An IDE ATA100 adapter connects with hard disk or CD drives. Applications that require non-moving storage can use the built-in uDOC interface and connect a suitable FlashDrive to it.

System expansion is easily done using the PC/104 and PC/104-Plus connectors and adding suitable specialized I/O modules.

The Hurricane-PM is powered by a micro ATX supply and supports ACPI, advanced power management and PCI power management.

The Hurricane-PM runs Windows, Linux and VxWorks operating systems.

#### More Features

- PC/104, PC/104-Plus buses
- Watchdog



LiPPERT is an independent design house and manufacturer that develops and builds special customer specific solutions. Please ask for a specific quotation.

LiPPERT GmbH  
Hans-Thoma-Str. 11  
D-68163 Mannheim  
Phone +49 621 43214-0 · Fax +49 621 43214-30  
sales@lippert-at.com · www.lippert-at.com

LiPPERT Embedded Computers Inc.  
5555 Glenridge Connector, Suite 200  
Atlanta, GA 30342  
Phone (404) 459 2870 · Fax (404) 459 2871  
ussales@lippert-at.com · www.lippert-at.com

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the embedded PC Company

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## EPIC Single Board Computer

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#### Technical Specifications

<b>Board Format</b>	EPIC, 115 mm x 165 mm (4.5" x 6.5")	<b>Sound I/O</b>	AC97: Line-in, Line-out, Mic-in
<b>Processor</b>	Pentium-M: 1.4 GHz, 1.8 GHz Celeron M: 1.0 GHz	<b>Watchdog</b>	yes
<b>Speed</b>	1.0GHz/1.4GHz/1.8GHz	<b>Status LED</b>	HDD, power, live, standby
<b>Core logic</b>	82855GME ICH4	<b>Operating temperature</b>	-20°C ... +60°C (standard) -40°C ... +85°C (optional)
<b>RAM (max.)</b>	1 GB DDR333-SODIMM	<b>ISA Bus</b>	PC/104
<b>RAM clock</b>	333 MHz	<b>PCI Bus</b>	PC/104-Plus
<b>Graphics</b>	Integrated in 855GME up to 64 MB video memory	<b>LPC Bus</b>	Available
<b>CRT</b>	Analog VGA 2048 x 1536 pixel at 75 Hz max.	<b>Power Supply</b>	5 V ±5% 10 pin mini-ATX power connector All necessary voltages are generated on-board.
<b>LVDS</b>	Dual channel, 24 bits 1600 x 1200 pixel at 60 Hz max.	<b>Power Consumption</b>	1.0 GHz: ~20 W 1.4 GHz: ~25 W 1.8 GHz: ~35 W
<b>USB</b>	6 x USB 2.0 host (4 on I/O panel)	<b>Cooling</b>	Depending on processor speed and temperature range
<b>Ethernet</b>	10/100MBit using i82562 10/100MBit using i82551	<b>MTBF</b>	>100.000h (tbd.)
<b>Serial</b>	2 x RS232/RS422/RS485	<b>BIOS</b>	Phoenix FirstBIOS Parameters are saved in FPR0M
<b>LPT</b>	Parallel printer port	<b>Supported OS</b>	Windows XP, XP Embedded, Windows CE, Linux, VxWorks
<b>IDE</b>	1 x Ultra ATA100 (ATA6) port		
<b>uDOC</b>	10 pin header for USB 2.0 Flash Drives, shared with USB4/5		

#### Ordering Information

Ordering Number	Description
f10-0002-10	EPIC board with Intel Celeron M 1.0 GHz, 6xUSB2.0 RTC, IDE, 2xCOM, PS/2 keyboard and mouse, watchdog, VGA, LVDS, 2 x Fast Ethernet, AC97 Sound. Passive heatsink
810-0003-10	EPIC board with Intel Pentium M 1.4 GHz, 6xUSB2.0 RTC, IDE, 2xCOM, PS/2 keyboard and mouse, watchdog, VGA, LVDS, 2 x Fast Ethernet, AC97 Sound. Passive heatsink
810-0004-10	EPIC board with Intel Pentium M 1.8 GHz, 6xUSB2.0 RTC, IDE, 2xCOM, PS/2 keyboard and mouse, watchdog, VGA, LVDS, 2 x Fast Ethernet, AC97 Sound. Active heatsink

**Note:** **f** denotes the temperature range. Substitute with **8** for standard and **9** for extendend temperature range

LiPPERT GmbH  
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Phone (404) 459 2870 · Fax (404) 459 2871  
ussales@lippert-at.com · www.lippert-at.com

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