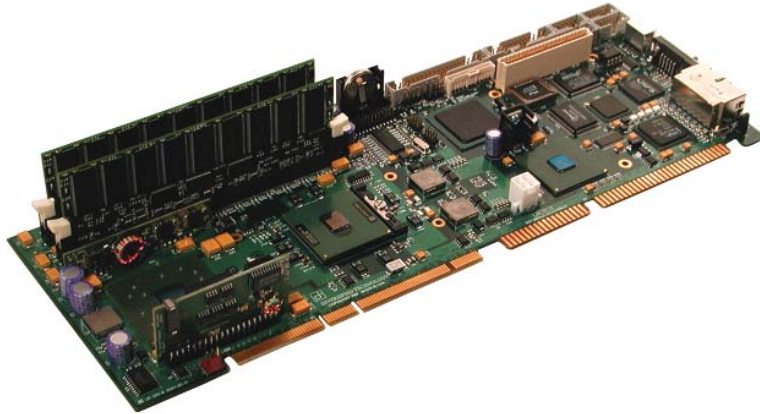


PCI/ISA Single Board Computer

LBC-9116



- Intel® Pentium®M Processor with speeds up to 2.0GHz and 2MB L2 Cache
- Intel® E7501 Chipset with 400MHz Front Side Bus
- Up to 4GB DDR200 SDRAM
- Video with 8MB for CRT and LVDS Flat Panel
- Dual Gigabit Ethernet
- Ultra ATA/100 EIDE and FDD
- Optional Ultra320 SCSI
- USB, Serial, and Parallel Ports
- ISA/PCI/PCI-X Bus Support

Offering outstanding performance at low power, Diversified Technology's LBC-9116 features a Pentium M processor and E7501 chipset, up to 2MB L2 cache, dual Gigabit Ethernet, and Ultra320 SCSI for thermally constrained communication and embedded computing applications.

The LBC-9116 features a high performance, low power Intel Pentium M processor with on-die Advanced Power Management including Enhanced Intel SpeedStep® technology including dynamic frequency/voltage control, up to 2MB L2 Advanced Transfer Cache Architecture, power-optimized 400MHz system bus, Micro-Ops Fusion and Dedicated Stack Manager, the Intel E7501 chipset, and up to 4GB Double Data Rate (DDR200) DIMMs on two sockets. Onboard are a high performance graphics controller with concurrent, independent CRT and LVDS display, dual 10/100/1000Base-TX Ethernet auto-negotiating controllers, PCI Ultra ATA/100 IDE interface, as well as Universal Serial Bus (USB 1.1) ports, serial/parallel ports, and floppy drive interface. An Ultra320 SCSI LVD/SE daughter card on the Hub Link 2.0 1GB/s bus is optional.

The LBC-9116 at 1.6GHz performs many applications comparable to 2.4GHz but with lower power (~24.5W) and supports onboard PCI and PCI-X (used by GbE) busses as well as an off-board PCI/32-bit/33MHz or 64-bit/66MHz buss. A PCI to ISA bridge supports ISA bus mastering with up to 20-slot drive capability. At only 1.48 inches wide, it is easily accommodated in 1U/2U platforms and 4U multisegmented passive backplane chassis.

The AMI BIOS, in field upgradeable Flash ROM, supports peripheral enable/disable, serial/parallel port re-mapping/disable, keyboard disable, and is PnP compliant onboard ISA interrupts. Other features include a hardware monitor (voltages, temperature, and fan), three-stage programmable watchdog timer, diagnostic LEDs, and a 2 year limited warranty.

The Intel Pentium M/E7501 combination delivers outstanding performance per watt and dynamic power control necessary for efficient operation in systems requiring high availability and energy conservation. Diversified Technology's LBC-9116 industrial PC is an ideal choice for application developers addressing TEMs, NEMs, broadcast/media, telecom, messaging/IVR/CTI, IC&A, instrumentation, medical/imaging, and COTS defense/aerospace markets.



 **Diversified
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SPECIFICATIONS

CPU / Cache

- Intel Pentium M processor with max speeds of 2.0GHz and up to 2MB L2 cache
- Primary 32KB Instruction Cache and 32KB write-back data cache
- Intel E7501 chipset

Bus Interface

- 400MHz Front Side Bus
- 32-bit/33MHz or 64-bit/66MHz PCI and 64-bit/66 to 133MHz PCI-X Busses;
- 16-bit/8.33MHz ISA Bus
- High drive ISA buffers, up to 20 slots

Memory

- Two 184-pin latching DIMM sockets
- Up to 4GB using 64/128/256/512 x 72 with ECC DDR200 (2.5V)

Data Path

- 64-bit/400MHz on CPU and memory bus
- 32-bit/33MHz on onboard PCI bus
- 64-bit/66,100,133MHz onboard PCI-X bus
- 32-bit/33MHz or 64-bit/66MHz off-board PCI bus
- 16-bit on off-board ISA bus
- 1GB/s Hub Link 2.0

Flash Memory

- 8Mb (1MB) Flash ROM for BIOS field upgrade

I/O

- USB Ports: two, 1.1 compliant (via 4-pin headers)
- PS/2 mouse and keyboard (10-pin shrouded IDC header, 6-pin on faceplate)
- Serial Ports: two RS-232 (16C550) with 16 byte FIFO as COM1-2 with BIOS selectable IRQs and addressing, (two male 10-pin shrouded headers)
- Parallel Port: one bi-directional with all IEEE 1284 protocols supported and BIOS selectable IRQs and addressing, (male 26-pin shrouded header)
- Floppy Disk: support for two drives (360 KB to 2.88 MB), (male 34-pin shrouded header)
- EIDE: PCI Ultra ATA/100, support for two drives (master/slave configuration); PIO Mode 4, Bus Master IDE or DMA mode transfers up to 100MB/s, (male 40-pin shrouded headers)
- Gigabit Ethernet: 10/100/1000Base-TX (Intel 82546EB), (shielded RJ-45 on face plate with link and activity LEDs)
- Hub Link Expansion (80-pin socket): opt. Ultra320 SCSI LVD/SE card

Video

- PCI SVGA concurrent, independent CRT and LVDS flat panel controller with 8MB SDRAM memory (SM Lynx3DM+) (female DB-15 on face plate, 20-pin shrouded header)

Video (cont'd)

- Supports displays with resolution up to 800 x 600, 16.8M colors; 1024 x 768, 64K colors; or ECC 1280 x 1024, 256 colors, non-interlaced

Clock / Calendar

- Real-time clock with 256 byte battery backup CMOS RAM

Misc.

- Speaker (4-pin), reset (2-pin), HD activity LED (2-pin),
- Onboard Wake-on-LAN (S1)
- 12V CPU power (4-pin); CPU fan power (3-pin)
- Intruder alert (2-pin)

BIOS

- PCI 2.2 compliant field upgradeable AMI BIOS
- Boot from LAN (PXE 2.0)
- Supports memory hole at 15-16MB; PnP V1.0a compatible
- Setup console redirection to serial port (VT100 or ANSI mode) with CMOS setup access
- Onboard video, Ethernet enable/disable
- Diskless, keyboardless, and videoless operation extensions; system, video and third party option card ROM shadowing
- Advanced security features for floppy and HDD; S.M.A.R.T.; SMBIOS V2.3.1
- Advanced Intel SpeedStep technology (Auto Halt, Stop-Grant, Deep Sleep & Deeper Sleep), ACPI Rev 1.0b & 2.0 compliant
- Custom graphical boot, multi boot

Supervisory

- Three-stage programmable watchdog timer drives interrupt on 1st stage, NMI on 2nd stage, system reset on 3rd stage
- Hardware system monitor (voltages, CPU temperature, fan speed)

OS/Driver Compatibility

- Windows®98/ME/2000/XP/NT; Monta Vista Hard Hat and Red Hat Linux®

Mechanical

- 13.30 in. x 4.80 in. x 1.48 in. at CPU / fan (338 mm x 122 mm x 38 mm)
- Conforms to IEEE P996 PC/AT bus, PCI Rev. 2.2, PICMG 1.0 Rev. 2.0, & PCI-SIG PCI-X Addendum to the PCI Local Bus Specification, Rev. 1.0b standards

Power Requirements

Max Power Dissipation	76W
ICC typ.*	+5V 8A
	+12V 3A
	-5V 0mA
	-12V 0mA

*Measured with 1.6GHz CPU, 4GB DDR & HDD

Environmental

Operating

- Temperature: 0° to 50°C / 32° to 122°F
- Humidity (RNC): 5 to 95% @ 40°C / 104°F
- Altitude: 3048m / 10,000ft @ 35°C / 94°F
- Vibration: 1G 5-500Hz

Storage and Transit (in approved packaging)

- Temperature: -40° to 70°C / -40° to 158°F
- Humidity (RNC): 5 to 95% @ 40°C / 104°F
- Altitude: 15,240m / 50,000ft
- Shock: 30" free fall
- Vibration: 0.5G 5-50Hz, 3G 50-500Hz

Reliability

- MTBF: >170,000 hours @ 20°C / 68°F (Telecordia)
- 2 year limited warranty
- USB and keyboard/mouse voltage protected by self-resetting fuses

Regulatory Compliance

- Safety: UL/cUL 60950-1:2003, EN/IEC 60950-1:2001
- EMC Class A: FCC 47 CFR part 15-B, CISPR22:1997/EN55022:1998, EN55024:1998

Ordering Information

LBC-9116/1100 *

PCI/ISA SBC with 1.1GHz/400MHz Pentium M processor and 1MB L2 cache

LBC-9116/1600 *

PCI/ISA SBC with 1.6GHz/400MHz Pentium M processor and 1MB L2 cache

LBC-9116/16003 *

PCI/ISA SBC with 1.6GHz/400MHz Pentium M processor 735 and 2MB L2 cache

LBC-9116/1800 *

PCI/ISA SBC with 1.8GHz/400MHz Pentium M processor 745 and 2MB L2 cache

LBC-9116/2000

PCI/ISA SBC with 2.0GHz/400MHz Pentium M processor 755 and 2MB L2 cache

* long life-cycle support

Options

Low Profile DDR200 DIMMs
SDC-320 SCSI daughter card
Cables



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