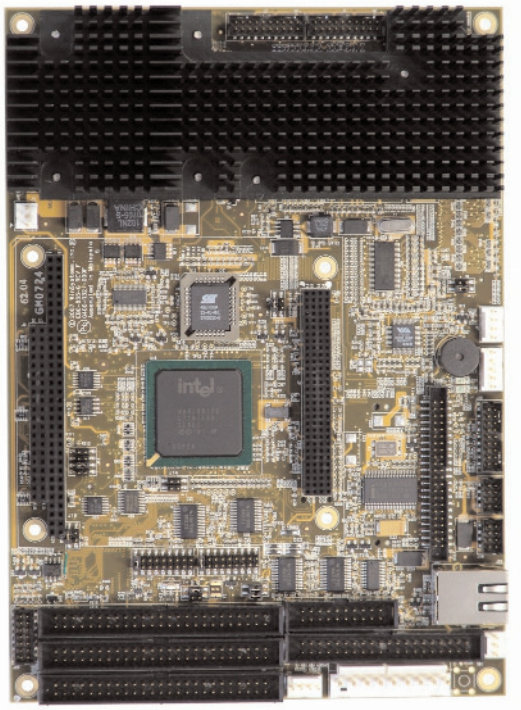
WinSystems®
EMBEDDED EBX COMPUTERS

EBC-855
High Performance Industrial Fanless SBC

FEATURES

- Intel® ZCD 1GHz CPU or 1.8GHz Pentium® M
- Industrial operating temperature range
  -40°C to +70°C: 1.0GHz SBC without fan
  -40°C to +85°C: 1.0GHz SBC with fan
  -40°C to +70°C: 1.8GHz Pentium®M SBC with fan
- EBX-size board, 5.75" x 8.00" (146-mm x 203-mm)
- Up to 1GB of system PC2700 DDR SDRAM supported in a 200-pin SODIMM socket
- Type I and II CompactFlash cards supported
- PC-compatible supports Linux, Windows® XP embedded, plus other x86-compatible RTOS
- Integrated graphics utilizing Intel® Extreme Graphics 2 technology supports resolutions up to 2048 x 1536
- Simultaneous CRT and LVDS flat panel supported
- Backlight power supported
- Custom splash screen on start up
- 10/100 Mbps Intel Ethernet controller
- Four serial ports; two with RS-232/422/485 and two with only RS-232 interface
- 48 bi-directional TTL digital I/O lines (WS16C48)
- Bi-directional LPT port supports EPP/ECP
- Four USB 2.0 ports
- Two IDE ports with ATA100 for hard disk and CompactFlash memory storage
- 3.5-inch floppy disk drive supported
- 802.11a/b/g wireless supported via miniPCI socket
- PC/104 and PC/104-*Plus* expansion connectors
- AT keyboard controller support
- AC97 Audio (six channel/5.1 surround sound)
- Real time clock
- Activity LEDs onboard for visual status
- Two interrupt controllers and 7 DMA channels



RoHS compliant

- Up to 300 second reset with watchdog timer
- +5 volt only operation
- Performance upgrade to WinSystems' EBC-BX and EBC-LP
- RoHS compliant
- Long-term product availability

The EBC-855 is a highly integrated, single board computer (SBC) designed for rugged, performance driven applications. It operates over a temperature range of -40° to +70° C without a fan and is designed for applications including industrial automation, security, MIL/COTS, medical/diagnostic equipment, test and measurement, and transportation.

WinSystems' design is based upon chipsets from Intel's long life embedded road map to ensure longevity of the core technology.

WinSystems' Applications Engineers are available to provide technical support with initial board selection and assistance during the design-in and production phase of your project.

FUNCTIONAL CAPABILITY

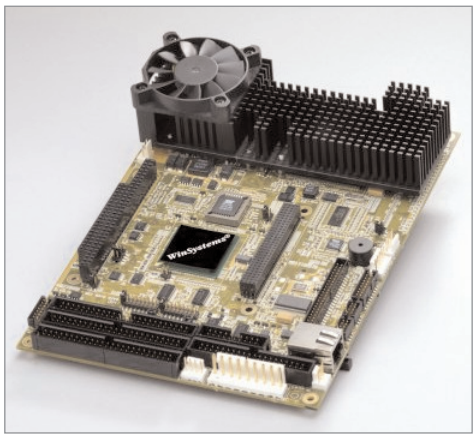
The EBC-855 is a full-featured, high-performance single board computer with a variety of on-board peripherals which eliminate the need for additional standard I/O peripheral cards. It is based on the Intel's popular 855GME chipset with the ICH4 communications controller and integrated Extreme Graphics 2 video 3D controller. The EBC-855 features an Intel 1GHz Celeron®M-based ZC Dothan or 1.8GHz Pentium® M processor. Both the CPU and system controller are supplied from Intel's Embedded Architecture Division for long-term availability. It supports a maximum of 1GB of industry-standard PC2700 SDRAM, CompactFlash plus support for IDE hard and 3.5" floppy disk drives.

The EBC-855 offers a full set of I/O interfaces including a 10/100BaseT Ethernet port (with remote boot and WOL capability), VGA and dual channel LVDS flat panel video, a miniPCI connector that supports an optional 802.11 wireless networking module, four USB 2.0 ports, four serial COM ports, AC97 audio (5.1 codec), LPT and a PS/2 port for keyboard and mouse. Also onboard is a software programmable, 48-line digital I/O controller that provides input, output or output with readback for each I/O line. The board has PC/104 and PC/104-*Plus* connectors for support of additional off-the-shelf or user-designed specialty I/O modules.

Processor and Chipset - The EBC-855 is based upon the Intel® 855GME GMCH and Intel® ICH4. These chips are ideal for embedded computing applications requiring high-performance and full x86 Pentium compatibility. The EBC-855 features a low-power Intel® ZC Dothan or Intel® Pentium® M processor with up to 1GB of DDR 333MHz system memory. The Intel 855GME GMCH is designed, validated, and optimized for the Intel Pentium M and Intel Celeron M processors and associated micro architecture.

Advanced Thermal Management - The processors are soldered directly to the EBC-855 and have an advanced heat sink and thermal dissipation design. The heat sink material, fin size and density have been carefully engineered to provide a low thermal impedance interface so that heat can be efficiently removed from the devices.

The 1GHz ZC Dothan is Intel's 90-nanometer (nm) process from its Celeron family of CPUs. It draws very low power (only 5.5W max.) which allows it to operate from -40°C to +70°C without the need for a fan or the necessity to slow down the CPU clock frequency. However, if a fan is added, then the upper limit of the operational temperature range is extended to +85°C operating at 1GHz.



The EBC-855-G-1.8-1 and EBC-855-1G-1 units include fan and heatsink.

The 1.8GHz Pentium® M processor is a 90 nm CPU that offers very high-performance. It includes a 2MB L2 cache on-chip. Operational temperature of the board with the 1.8GHz CPU is -40°C to +70°C with a fan.

It is important to note that these temperature figures are with no airflow across the board other than what the onboard fan generates. Also, these operational temperature specifications are at the full rated board speed. No automatic CPU clock speed reduction is necessary at elevated temperatures. The EBC-855 supports active fan management. The fan is not turned on if the CPU is less than 55°C which extends fan life.

Power Management - The EBC-855 supports four standard power management modes to control and bring the power down on the board automatically. S0 is the full power-on mode. S1 is the standby mode. Change of state of the keyboard, mouse, USB mouse and keyboard, wake on LAN or wake on Ring will wake the system up out of Power On Suspend to Full On. S4 suspends to disk before powering down. S5 turns all the power off (ATX mode only).

The BIOS supports the Enhanced Intel® SpeedStep® technology enabling the processor to switch between multiple frequency and voltage points. This allows optimal performance and the lowest power. It also supports the circuitry for catastrophic thermal protection. If detected, the Vcc supply to the processor is turned off to prevent permanent silicon damage due to thermal runaway.

Memory - The system memory bus is 64-bits wide with a 400MHz front size bus. It operates at a speed of 333 MT/sec and uses Double Data Rate (DDR) synchronous dynamic RAM. Up to 1Gbyte of non-registered, unbuffered, PC2700 DDR SDRAM with gold plated fingers can be installed for the main systems memory.

The board is shipped from the factory with no memory installed. A 200-pin SODIMM connector permits the user to either install and/or upgrade the memory capacity in the field. WinSystems can supply the SODIMM200-G-27-128, 256, -512, and -1G which are 128MB, 256MB, 512MB, and 1GB RoHS-compliant memory devices qualified for use on this board.

CompactFlash - A connector is on the board that will accept Type I and II CompactFlash (CF) cards. The connector is wired to the IDE secondary controller. A designer can use CompactFlash cards as data storage for applications where the environment is too harsh for rotational hard disks or floppy disk drives while offering significant speed advantage. The EBC-855 can boot from a CompactFlash device.

WinSystems offers industrial-grade CompactFlash (CF) cards that provide operational SSD storage from -40° to +85°C for high capacity harsh embedded applications. The sustained data transfer rate is very fast, plus an on-card wear leveling algorithm extends the number of write cycles to the part. These RoHS-compliant cards will fit into any computer, SBC, or instrument with a CF socket. www.industrialcompactflash.com

BIOS - The EBC-855 uses the Phoenix Trusted core BIOS. It supports advanced features such as custom splash screen, APM 1.2 and ACPI 1.0b power management modes, PXE boot and multi-language support. The BIOS also contols the fan speed and will turn the fan on and off for the EBC-855-1.8G-1 and EBC-855-1G-1.

The BIOS also supports legacy operation of a USB keyboard and mouse, as well as booting from a USB floppy disk, USB keys, and other USB-connected mass storage devices.

The BIOS is located in an EEPROM that can be customized without removing the storage device from the board. It will support diskless, keyboardless, and videoless operation. Other customizable features such as a customer logo displayed during startup and customizable BIOS setup parameters are supported.

Remote Booting - The EBC-855 supports remote booting for use as a diskless network computer. Contact a WinSystems' Applications Engineer for companies that supply remote boot software.

Floppy Disk Support - A 3.5" floppy disk drive is supported by connecting it through the LPT interface. An optional CBL-308-G-1-1.5 is available from WinSystems to interface the 3.5" drive to the LPT connector. Alternatively, a USB floppy disk drive can be attached which also has legacy boot support.

IDE Interface - The EBC-855 incorporates a fast IDE interface for hard disks, CompactFlash and other ATA-compatible devices. Each IDE device can have independent timings. The IDE interface supports PIO IDE transfers up to 16 Mbytes/sec and Ultra ATA transfers up to 100 Mbytes/sec. The IDE interface integrates 16x32-bit buffers for optimal transfers.

The IDE primary controller is wired to the 0.100" header while the secondary controller is wired to the 2-mm header and CompactFlash connector. An LED blinks automatically while data is transferred to provide visual status information.

Video - The EBC-855 is based upon Intel's Extreme Graphics 2 integrated graphics technologies that deliver 3D graphics with sharp images, fast rendering, smooth motion and extreme detail. Intel's Extreme Graphics 2 supports the latest 2D and 3D APIs, delivering real-life environment and character effects. A 256-bit internal path enables up to four textures per pixel on a single pass for super light maps, atmospheric effects, and more realistic surface details. Flexible display capabilities enhance the personal computing experience, offering significant benefits for applications requiring 32 bpp and higher display resolution.

The EBC-855 supports both a dual LVDS flat panel interface as well as a standard analog SVGA interface simultaneously. The controller also will allow separate, independent video to be displayed on LVDS and SVGA displays. The video uses up to 64MB of system memory. A 350MHz DAC provides a resolution up to 1600 x 1200 @ 85Hz or up to 2048 x 1536 @ 72Hz for both CRT and flat panels. The color depth for the flat panel is 18 bpp.

Video Interface - The CRT video output signals are wired to a 14-pin dual-in-line connector at the edge of the board. An optional CBL-234-1 interface cable adapts it to a standard female 15-pin "D-Sub" type connector commonly used for VGA. Simultaneous operation of the CRT and LCD is supported with two different video images can be displayed as well. This feature is equivalent to a second video controller card onboard.

WinSystems' Flat Panel Embedded PC

Flat Panel Display Support - The EBC-855 supports most flat panel display technologies. The board properly sequences the power for logic voltage and the backlight inverter to provide intelligent and safe power sequencing to the panel. Please contact an WinSystems' Applications Engineer or visit www.winsystems.com for the most current listing.

WinSystems uses a dual LVDS flat panel interface system that connects to different panel technologies and suppliers. It has power, timing, and control signals for various panel types. The logic levels are 3.3 volts but are 5.0 volts tolerant.

Connectivity - The EBC-855 has both onboard and PC/104 module population options for wired and wireless communications. One 10/100 Ethernet, four USB 2.0 ports, two RS-232/422/485 COM channels, and two RS-232 COM channels are standard connectivity features.

For wireless communications, this board supports a number of plug-in modules. An onboard miniPCI socket allows an 802.11 a/b/g card to be installed. A separate PC/104-*Plus* module is supported for either a GSM or CDMA cellular modem. Another WinSystems' PC/104 module supports ZigBee-based communications.

10/100 Ethernet - The board uses the MAC inside the Intel ICH4 controller plus a DA82562ET PHY to provide a 10/100 Mbs wired Ethernet connection. The controller is Intel 8255x-compatible for use with standard software drivers. It supports an IEEE 802.3 and 10BASE-T/100BASE-TX compliant physical layer with IEEE 802.3u Auto-Negotiation support and Wake On LAN. There are three LEDs on board that provide status information. The red LED indicates 100BaseT, the yellow indicates Link, and the green is the Rx/Tx data.

USB 2.0 - The EBC-855 supports four USB 2.0 ports that comply with the Universal Serial Bus Specification revision 2.0 and Open Host Controller Interface (OHCI) Specification for full-/low-speed signaling and Intel's Enhanced Host Controller Interface (EHCI) Specification for high-speed signaling.

Each port has overcurrent and in-rush protection provided by a National Semiconductor LM3526 power switch. Each device is a dual stage design including a thermal protection circuit. During a short-circuit/over-current event, the switch dissipating excessive heat is turned off, allowing the second switch to continue to function uninterrupted. Therefore, a fault on one channel will not affect the other. No fuses are required since protection is done electronically by the circuit.

The four USB ports are wired to two, 8-pin 2-mm connectors. The CBL-275-2 is the optional interface cable adapter that has two standard female USB connectors.

Serial Communications - Four independent, full-duplex, RS-232 serial asynchronous channels are onboard. All serial channels are configured as Data Terminal Equipment (DTE). Both the send and receive registers of each channel has a 16-byte FIFO. This device is a dual 16C550 compatible UART that offers software compatibility with PC-type driver programs.

Independent control of transmit, receive, line status, and data set interrupts are on all channels. Each channel is setup to provide internal diagnostics such as loopback and echo mode on the data stream. Plus an independent on-chip software programmable baud rate generator is selectable from 50 through 115.2 kbits/sec. Modem handshake control signals are supported for all channels.

All of the COM ports support RS-232 interface levels. The RS-232 drivers have an on-chip charge pump to generate the plus and minus voltages so that the EBC-855 only requires +5 volts to operate. COM1 and COM2 also have jumper selectable RS-422/485 support. The RS-422/485 provides separate balanced transmit and receive signal pairs. For RS-485 multi-drop lines, one signal pair can be used for "party line" network structures.

802.11 Wireless - The EBC-855 is shipped with an empty miniPCI socket so the user can select and install their own 802.11 cards from Intel, Broadcom, Foxconn (Atheros), and others; or the EBC-855 can be populated with an Intel® PRO/Wireless 2200BG card installed by WinSystems. Normally 802.11 cards are automatically recognized by operating systems such as Windows® XP. Also, the individual miniPCI card manufacturer will typically supply drivers. Please contact the card's manufacturer directly for their supported operating systems.

An optional Intel PRO/Wireless 2200BG card can be supplied by WinSystems. It is a standards-based and Wi-Fi Certified wireless local area network (WLAN) solution that allows up to 54 million bits of data to be transferred per second. It is designed to maintain high throughput at longer ranges depending upon the type of antenna used.

The Intel PRO/Wireless 2200BG is also software upgradeable to provide future security and other service enhancements. The Intel PRO/ Wireless 2200BG network connection fully supports today's security standards such as Wi-Fi Protected Access (WPA) and can be upgraded via software downloads as future security standards such as 802.11i become available.

48-line parallel I/O - The EBC-855 contains a highly versatile WS16C48 digital I/O controller. Each I/O line is individually programmable for input, output, or output with read-back operation. Each output channel is latched and has an open collector driver (with a pull-up resistor) capable of sinking 12mA of current.

The major feature of this controller is its ability to monitor all 24 of the 48 lines for both rising and falling digital edge transitions, latch them and then interrupt the processor notifying it that a change-of-input status has occurred. Transition polarity is programmable and enabled on a bit-by-bit basis. Each line's transition is latched by the event so that even short duration pulses will be recognized.

An interrupt ID register is maintained for each line for writing more efficient Interrupt Service Routines. This is an efficient way of signaling the CPU of real-time events without the burden of polling the digital I/O points.

The EBC-855 has its I/O lines connected to two, 50-pin connectors. Twenty-four data lines are alternated with 24 ground lines for reduced noise and crosstalk. Also +5 volts and ground are included in the cable. The pinout is compatible with the industry standard 4 to 24 position I/O module mounting racks (Dataforth, Opto-22, etc.) for use with high-level AC and DC optically isolated solid state relays. An optional CBL-115-4, 50-pin conductor ribbon cable connects the EBC-855 to one I/O rack.

Line Printer Port - The EBC-855 has a parallel port that may be operated in standard (SPP) bi-directional as well as Extended Capabilities Port (ECP - IEEE-1284) and Enhanced Parallel Port (EPP) modes. The output drivers can support 14mA per line.

The printer port can also be used as two additional general-purpose I/O ports or the floppy disk drive interface if a printer is not required. The first port can be configured as 8 input or output only lines. The other port can be configured as 5 input and 3 output lines.

AC97 Audio - The EBC-855 has an AC97 digital audio controller that supports 5.1 surround sound. An 18-pin, 2-mm connector provides access to Line Out, stereo Audio In, and stereo Microphone In.

Keyboard/Mouse Controller - An 80C42-type controller supports a PC/AT-compatible keyboard. Also, a standard PS/2 mouse is supported through a separate I/O cable. The mouse and keyboard also can be attached via the USB cable if the operating system you choose supports this feature.

Interrupts - Two 82C59A compatible interrupt controllers accept inputs from the onboard peripherals and the PC/104 bus for a total of twelve software selectable interrupt sources. Four PCI interrupt sources are supported on the PC/104-*Plus* bus which are PnP-compliant. Also an APIC interrupt controller is included for operating systems that support APIC functionality.

Status LED - A green status LED is also available to monitor system activity. Under a user's program control, it can indicate error conditions or blink different patterns to provide a visual indication of system status.

Real Time Clock - An MC146818A-compatible clock supports a number of features including periodic and alarm interrupt capabilities. The time and date keeping information is stored in its CMOS RAM which can be battery backed up by using WinSystems' optional battery pack that is plugged into the EBC-855. The battery is a 1600 mAH 3.6V unit that works from -40° to +85° C.

Watchdog Timer - A software enabled, retriggerable watchdog timer is provided. The timeout period is software adjustable with options of 30 or 300 seconds available from the CMOS set up for boot. If enabled, it must be updated at least once during the period otherwise a failure is assumed and the board will be reset. This circuit is important for use in remote and unattended applications.

Speaker - An onboard speaker is available for sound generation. A beep code is generated that corresponds to any BIOS error codes (if required) during the power up or reset sequence

Power - Power is supplied to the board through a 9-pin Molex connector. Both ±12 volts are wired directly to the PC/104 and PC/104-*Plus* connector. The +12V is also wired to the switch for the panel back light control. The ±12V power is not used on the board. Signaling is supplied through a separate 4-pin connector.

Power Management - The EBC-855 supports ACPI and APM power management modes S1 and S4.

Reset - A precision voltage monitors the +5 volt status. Upon detection of an out-of-tolerance condition, the board is reset. This action is critically important in order to detect brownout or power fail conditions. The reset circuit also ensures that the power is nominal before executing a power-on reset.

Battery - An optional off-board battery supplies the EBC-855 board with standby power for the real time clock and CMOS setup RAM. The power supervisory circuit senses the off-board voltage and automatically switches to internal power when it drops below normal.

The board will operate without a battery since there is an EEPROM on board to store the CMOS set up data. However, current time and date information would not be maintained when the main +5V power is not present.

Replacement for WinSystems' SBCs - The EBC-855 is designed to be an upgrade and high-performance replacement for current users of WinSystems' EBC-BX and EBC-LP. For questions about any differences in the boards or new software drivers that may be needed, please contact the factory.

Engineering Support - WinSystems provides free technical phone support to assist customers with system integration of our SBCs and I/O modules.

Long-Life Availability - This board is based on chipsets from Intel's long life embedded roadmap to ensure longevity of the core technology.

PC/104 Expansion - The EBC-855 has both a 16-bit PC/104 and a 32-bit PC/104-*Plus* interface and connector. PC/104 is electrically equivalent to the ISA bus and PC/104-*Plus* is equivalent to the PCI bus for I/O functions requiring higher data transfer speeds.

The EBC-855 provides a common computer core from which engineers can add off-the-shelf or user-designed, application-specific PC/104 and PC/104-*Plus* modules. PC/104 modules are self-stacking and plug together in a "piggy back" configuration to serve as a mezzanine expansion bus.

PC/104 modules are very compact, measuring only 3.6 x 3.8 inches, and are offered by WinSystems and a number of third party companies worldwide. Module functions include communications specialty serial I/O, digital I/O, analog I/O, GPS, GSM or CDMA cellular modems, ZigBee, SCSI, etc. More PC/104 information including white papers, products, and specifications are on our web site at http://pc104.winsystems.com/products/pc104/index.html.

Enclosure - The EBC-855 can be housed in a low-cost enclosure designed specifically for EBX-based single board computers. The interior of the ENC-EBC-1000 enclosure is large enough to install any PC/104 modules, even modules with latching I/O connectors.

This lightweight, durable aluminum enclosure allows a designer to package a variety of system configurations quickly and easily. The ENC-EBC-1000 can be attached vertically on a wall, on a table, under a counter or inside a larger piece of equipment. For additional information please visit the ENC-EBC-1000 product page or contact a WinSystems' application engineer.

SOFTWARE

The EBC-855 is an x86-compatible SBC. It is designed to run both 16-bit and 32-bit x86 instruction set software and is compatible with Microsoft's Windows® XP embedded operating systems as well as the applications that run on them. It also supports Linux and many other PC-compatible x86 operating systems such as DOS, QNX, VxWorks, or other real-time executives that require a PC hardware environment

Developer Kits - WinSystems' Developer Kits provide the necessary hardware, software and cables to begin program development with the EBC-855 board. The kit's packaging permits easy access to the SBC, PC/104 modules and peripherals during program development. The kit consists of a DVD-ROM drive, floppy disk drive, hard disk drive and power supply mounted in a black, lightweight, aluminum enclosure. Also included is the selected operating system, cables, and the PCM-POST, a PC/104 module, for debugging support.

Board Support Packages for select operating systems are also available with our Developer Kits. Currently Windows XP embedded, Linux and DOS/Sockets OS are supported. Additional support may be offered for other operating systems. Please contact a WinSystems' Applications Engineer if you need support for an OS that is not listed above.

In general, Developer Kits provide a specific OS "sample image" that is preloaded on a Flash disk making it ready to run right out of the box. Most kits also include Quick Start Guides, documentation designed to lead you through the process of recreating the embedded OS sample image that was provided in the kit. These Quick Start Guides provide a wealth of valuable, time-saving information that will help you quickly overcome a large portion of the learning curve if you are new to a particular operating system. Please visit the Developer Section of our website for more details about each individual Developer Kit

SPECIFICATIONS

Electrical

EBC-855 CPU Clock: 1GHz w/Intel Celeron ZCD or 1.8GHz with Intel Pentium® M

PC/104 Interface: 16-bit, non-stackthrough
PC/104-*Plus* Interface: 32-bit PCI, non-stackthrough
Ethernet: 10/100 Mbits/second with RJ-45 connector
USB 2.0: Four ports with overcurrent protection
Serial Interface: Four serial channels, all have RS-232 levels; two channels also support RS-422/485
802.11: User installed miniPCI card supported
Audio: AC97 with MIC, six speakers and Line In
LPT Interface: Bidirectional LPT with ECP/EPP
Parallel Interface: 48 I/O lines, TTL compatible
EIDE Interface: Supports two drives
Floppy Disk Interface: Supports one 1.44M drive
Keyboard: Standard PS/2 or USB interface
Mouse: Standard 5-pin or USB interface
Vcc = +5V ±5% at 2.1A typical @ 1GHz
+5V ±5% at 4.25A typical @ 1.8GHz

System Memory

Addressing:	Up to 1Gbyte 200-pin SDRAM (supplied and installed by user)

Solid State Disk

CompactFlash:	Socket supports Type I and Type II CompactFlash devices

Mechanical

Dimensions:	5.75" x 8.0" (147-mm x 203-mm)
Jumpers:	2-mm square post compatible

I/O Connectors

Serial, Parallel, Keyboard:	50-pin on 0.100" grid
COM 3 and 4:	20-pin on 0.100" grid
Floppy Disk Interface:	USB or LPT interface
EIDE Interface:	40-pin on 0.100" grid (Primary) 44-pin on 2-mm grid (Primary) 50-pin 2-mm CFlash connector
Parallel I/O:	Two, 50-pin on 0.100" grid
CRT:	14-pin on 2-mm grid
LVDS:	Two, 20-pin on 0.100" grid
Ethernet:	RJ-45
PC/104 Bus:	64-pin 0.100" socket 40-pin 0.100" socket
PC/104-*Plus:*	120-pin (4 x 30; 2-mm) stackthrough with shrouded header
USB:	Two, 8-pin 2-mm
Audio:	18-pin, 2-mm
PS/2 Mouse:	5-pin in-line Molex
Main Power:	9-pin in-line Molex
ATX Control Signals:	4-pin in-line Molex
Fan Power:	3-pin in-line Molex
External Battery:	3-pin in-line Molex
Backlight Power:	4-pin in-line Molex

Operating Temperature:

EBC-855-1.8G-1:	-40°C to +70°C (with fan)
EBC-855-1G-0:	-40°C to +70°C (without fan)
EBC-855-1G-1:	-40°C to +85°C (with fan)

Non-condensing relative humidity: 5% to 95%

ORDERING INFORMATION

EBC-855-G-1.8G-1:	1.8GHz Pentium®M SBC w/ fan
EBC-855-G-1G-0:	1.0GHz Intel ZC Dothan SBC
EBC-855-G-1G-1:	1.0GHz Intel ZC Dothan SBC w/fan

Developer Kits

DV-S-327-L20	Linux (2.6 kernel) Developer Kit, includes software, hardware, enclosure, and cables
DV-S-327-XP-SP2	Windows XPe Developer Kit, includes includes software, hardware, enclosure, and cables

System Memory - DDR PC2700 SDRAM

SODIMM200-G-27-128	128Mbyte RoHS compliant
SODIMM200-G-27-256	256Mbyte RoHS compliant
SODIMM200-G-27-512	512Mbyte RoHS compliant
SODIMM200-G-27-1G	1028Mbyte RoHS compliant

-40°C to +85°C Industrial CompactFlash Memory

CFLASH-G-128M-I	128MB CFlash - RoHS compliant
CFLASH-G-256M-I	256MB CFlash - RoHS compliant
CFLASH-G-512M-I	512MB CFlash - RoHS compliant
CFLASH-G-1024M-I	1GB CFlash - RoHS compliant
CFLASH-G-2048M-I	2GB CFlash - RoHS compliant
CFLASH-G-4096M-I	4GB CFlash - RoHS compliant
CFLASH-G-8192M-I	8GB CFlash - RoHS compliant

Cables

CBL-115-4	Opto rack interface cable, 4 ft.
CBL-126-G-10-2	ATA100 IDE disk cable
CBL-308-G-1-1.5	3.5-inch" floppy drive to LPT interface cable
CBL-SET-327-1	Cable set for the EBC-855
CBL-173-G-1-1	20-pin ribbon to two, 9-pin male D (COM3 and COM4) adapter cable
CBL-225-G-1-0.3	PS/2 mouse adapter cable
CBL-234-G-1-1	14-pin ribbon to 15-pin D-sub CRT adapter cable
CBL-236-G-2-1	Unterminated power cable
CBL-247-G-1-1	Multi-I/O adapter cable, 1 ft.
CBL-270-G-2-1	Stereo audio cable
CBL-275-G-2-0.50	Dual USB to 8-pin, 2-mm cable

Wireless Development Kit

KIT-SBC-WIRELESS-1	Kit includes a wireless module, antenna, and cable

Enclosure

ENC-EBC-1000	Enclosure for an EBX SBC

Optional Battery

BAT-LTC-E-36-16-1	External 3.6V, 1600 mAH battery with plug-in connector

WinSystems®
An Employee-Owned Company

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