CS15 Retired 01/06
Revision Controlled Motherboards

EBX format
Socket 370 for Intel Pentium III and Celeron
Video, Watchdog Timer, and Thermal monitor

Choice of One or Three LAN
Zero to Three PCI slots
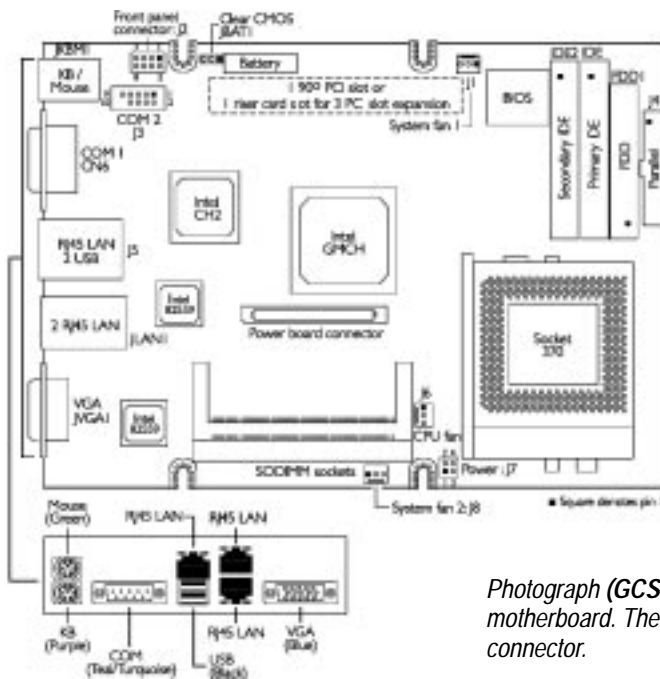
*Photograph (**GCS15-EN**) includes power conversion board which fits above the motherboard. The Illustration shows the location of the power conversion board connector.*

FEATURES

Revision Control: Revision control extends motherboard projected availability to three years or longer.
Industrial-grade: Enhanced for rigorous industrial applications by using long life and extra margin capacitors, superior PCB substrates, and improved heat sinks.
Watchdog Timer: Reboots the system and restarts the software in the event that noise spikes or other conditions suspend software or processor operations.
Thermal protection: Monitors processor and system temperature as well as cpu fan operation. Triggers alarms if operating conditions are exceeded.
PCI expansion: Up to 3 full length PCI cards depending on motherboard model.
On-board Ethernet (LAN): One or three Ethernet (LAN) depending on model.

BENEFITS

High performance: Front side bus speeds to 133 MHz. Tested with 1 GHz CPUs. Intel 815E chipset. Intel Hub architecture for fast I/O.
Long, stable life cycle: Revision control helps customers avoid the expenses of changing and recertifying their products.
Dependability: ITOX industrial-grade enhancements. Watchdog timer. Thermal monitor and alarm.

APPLICATIONS

Networking: Superb for high-density. 4 complete servers fit in a 1U height (see ITOX Twin Dragon).
Computer telephony: Up to three full length PCI slots for voice messaging and PBX stations.
Security: Three on-board LANs allow users to isolate internal, external, and control channels.
Embedded applications: The compact CS15 requires the same space as 5.25″ drive. Manufacturers of medical, process control, measurement and other products can take advantage of this small form factor to embed the CS15 in their products.
PC appliances: Motherboard is small and powerful. Watchdog timer maintains dependable operation in an adverse environment.

iTOX®
Applied Computing
a DFI company

CS15 Series

MODELS
- GCS15-BL   1 LAN, 0 PCI, 115V/230V via ATX supply
- GCS15-BN   3 LAN, 0 PCI, 115V/230V via ATX supply (not stocked, OEM only)
- GCS15-SL   1 LAN, 1 PCI, 12 VDC power
- GCS15-SN   3 LAN, 1 PCI, 12 VDC power
- GCS15-EL   1 LAN, 3 PCI, 115V/230V via ATX supply
- GCS15-EN   3 LAN, 3 PCI, 115V/230V via ATX supply

PROCESSOR
- Socket 370 FCPGA
- Intel® Pentium III FCPGA
- Intel® Celeron™ FCPGA
- Intel® Celeron™ PPPGA
- Socket detects required processor voltage (1.30V to 2.05V)

CHIPSET
- Intel® 815E
- Supports 66, 100 and 133 MHz front side bus

CACHE MEMORY
- On processor: Pentium III 256 KB, Celeron 128 KB

SYSTEM MEMORY
- Up to 512MB memory
- 2 connectors for 144-pin Stack SODIMM
- Supports x64 PC-133/PC-100 SDRAM

BIOS
- Award BIOS, Windows 95/98/2000 Plug and Play compatible
- 4 Mbit Flash EPROM allows BIOS upgrades
- Includes Symbios Logic SCSI BIOS, supports SCSI sequential boot-up
- Supports DMI 2.0 functions

COMPATIBILITY
- Microsoft PC'99 compliant
- VESA Display Power Management Signaling (DPMS)
- VESA DDC2B for Plug and Play monitors
- Supports PCI 2.2 specifications

ONBOARD GRAPHICS
- Intel Dynamic Video Memory Technology (shares 1 MB system memory)
- 3D hyper pipelined architecture
- 2D hardware and motion video acceleration
- 9-bit hardware motion compensation for software MPEG2 decode
- Software DVD
- 2D to 1600x1200
- 3 operand Raster BitBlts
- 64x64x3 color transparent cursor
- Flat and Gouraud shading
- MIP mapping with tri-linear anisotropic filtering
- Full-color specular / Z-buffering
- Fogging atmospheric effect
- 3D pipe 2D clipping / backface culling
- Software drivers: Windows® 95/98/2000, Windows NT® 4.0

PCI IDE INTERFACE
- Supports Ultra ATA/100 hard drives
- PIO Mode 4 Enhanced IDE with data transfer to 14 MB/sec
- Bus mastering reduces CPU use during disk transfer
- Supports ATAPI CD-ROM, LS-120, and ZIP

NETWORKING
- IEEE 802.3 10BASE-T and 100BASE-TX compatible PHY
- 1 Intel® 82559 Fast Ethernet Controller (L models)
- 2 Intel® 82559 and 1 82562 Fast Ethernet Controllers (N models)
- Full duplex support at both 10 and 100 Mbps
- Alert on LAN 1.0 for Intel® 82562 Fast Ethernet Controller

DAMAGE FREE INTELLIGENCE
- Monitor and alarm for CPU/system temperature
- Monitor and alarm for 5VSB/VBAT/1.5V/3.3V/5V/±12V voltages
- Monitor and alarm for cpu fan speed
- Watchdog comparison of all monitored values
- Read back to display temperature, voltage, fan speed
- Supports Intel processor thermal sensor
- Supports hardware random number generator for security

ENERGY EFFICIENT DESIGN
- Supports ACPI and OS Director Power Management
- Wake-ON keyboard, mouse, LAN (Intel® 82562 Fast Ethernet Controller)
- RTC timer for power-on
- CPU stopped clock control
- Hardware supported SMI green mode
- Microsoft / Intel APM 1.2 compliant
- Soft power supported, ACPI v1.0a specification
- AC power failure recovery

CONNECTORS
- 1 DB-9 COM1 serial (internal header for COM2 serial)
- 2 USB ports
- 1 or 3 RJ45 10/100MHz Ethernet ports
- 1 mini-DIN-6 PS/2 mouse port
- 1 mini-DIN-6 PS/2 keyboard port
- 1 DB-15 video port
- 2 connectors for CPU and system fans
- Supports 0 or 1 2.88MB floppy drive
- Parallel (internal header)

EXPANSION SLOTS
- 0, 1, or 3 PCI depending on model
- PCI cards are positioned below motherboard

PHYSICAL / PCB
- 6 layer EBX form factor PCB
- 5.75″ (14.6 cm) x 8″ (20.3 cm)

ENVIRONMENTAL
- Operation: 0 to 50 degrees Celsius (ambient) at 20% to 80% relative humidty (non-condensing)
- Storage: -20 to 75 degrees Celsius (ambient) at 10% to 95% relative humidity (non-condensing)
- MTBF: approx 100,000 hours at 45 degrees Celsius and 81,992 hours at 55 degrees Celsius (Standard Reliability Prediction method)

SAFETY
- UL
- CSA
- FCC, Class B
- CE

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