

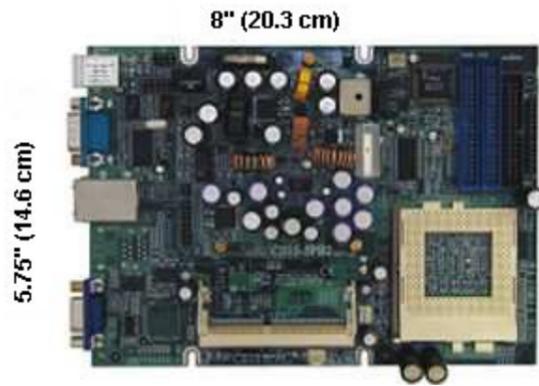
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CS15 Series

REVISION CONTROLLED MOTHERBOARDS

EBX format. Socket 370-based Intel® Pentium® III and Celeron® processors. 0 or 3 Ethernet. Video. Watchdog Timer. Thermal monitor. 0 to 3 PCI expansion.



Photograph (GCS15-SL) with 1 LAN, 1 PCI, and 12VDC power.

FEATURES:

- **Revision Control.** Revision control extends motherboard projected availability to four years or longer from first shipment.
- **Industrial-grade.** Enhanced for rigorous industrial applications by using long life and extra margin capacitors, superior PCB substrates, and improved heat sinks.
- **Watchdog timer.** Configurable 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.** One or three Ethernet 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 and stable life cycle.** Revision control helps customers avoid the expenses of changing and recertifying their products.
- **Dependability.** DFI-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 DFI-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.

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

- [Click here for Motherboard vs CPU Table](#)
- Socket 370-based Intel®
- Intel® Pentium® III processors w FC-PGA packaging
- Intel® Celeron® processors w FC-PGA packaging
- Intel® Celeron® processors w PPGA packaging
- Socket detects required processor voltage (1.30V to 2.05V)
- [Click here for Intel® CPU Reference Table](#)

CHIPSET

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

CACHE MEMORY

- On Intel® Pentium® III processors: 256 KB, Intel® Celeron® processors: 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

- 2 Intel® 82559 and 1 Intel® 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 Controllers)

DAMAGE FREE INTELLIGENCE

- Monitor and alarm for CPU/system temperature
- Monitor and alarm for 5VSB/VBAT/1.5V/3.3V/5V/±12V voltages
- Monitor, alarm, and on/off control for processor and chassis fans
- 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 (82562 channel)
- 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 humidity (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)

• 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)

SAFETY

- UL: UL-1950
- CSA: UL-1950
- FCC: Part 15 Class B
- CE: 98



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