

Intel® Desktop Board CC820

For the Intel® Pentium® III Processor

Advanced Technologies for Performance PCs

The Intel® Desktop Board CC820 features the new Intel® 820 chipset, offering system integrators the latest in PC technology, while enabling new and exciting performance capabilities. The Desktop Board CC820 supports the latest Intel® Pentium® III processors at 133-MHz system bus and SDRAM memory only. This allows integrators to capture many performance benefits of the Intel 820 chipset through proven SDRAM memory technology. In addition, the Desktop Board CC820 delivers enhanced system performance for the demanding system and Internet applications of today and tomorrow.



Product Brief

Upgrade to the Latest in Desktop PC Technology The Desktop Board CC820 features the new Intel 820 chipset, which combines support for leading-edge technologies—including a 133-MHz system bus, AGP 4X, Instantly Available PC and Ultra ATA/66—with the benefits of the Intel Pentium III processor to deliver a performance system solution. The friendly ATX design, five PCI slots, Audio/Modem Riser (AMR) connector and AGP connector give system integrators a stable and flexible platform. The Desktop Board CC820 also offers optional integrated Creative Labs* Sound Blaster* audio. System integrators benefit from Intel's extensive compatibility and validation testing that helps ensure consistent and reliable performance.

Delivering Design Flexibility and Easy Integration The Desktop Board CC820 also provides system integrators with maximum design flexibility by supporting both 133-MHz and 100-MHz system bus designs. The boxed Intel Desktop Board CC820 comes with many items needed to integrate a system, such as an Ultra ATA/66 capable IDE cable, a floppy cable, an I/O shield and product documentation. The Desktop Board CC820 also comes with the new Web-like CD user interface for fast and efficient installation of drivers. The Desktop Board CC820 product CD also comes standard with Norton Antivirus* and Internet Utilities.

Features	Benefits
Support for Intel® Pentium® III processor and Pentium® II processor	Supports the latest Pentium III processors at 133-MHz system bus. Also supports Pentium III and Pentium II processors at 100-MHz system bus.
Intel® 820 Chipset	Newest Intel chipset technology provides the flexibility to support both 133-MHz and 100-MHz system designs, plus new performance enhanced features.
AGP 4X Capability	Supports the latest in graphics technology.
Ultra ATA/66	Faster disk I/O with improved data integrity.
Five PCI slots	Expansion slots for custom system configurations and future add-in card upgrades.
Two 168-pin DIMM sockets	Supports legacy SDRAM memory. Will support a maximum of 512 MB of SDRAM. Note: Supports 100-MHz SDRAM only.
Creative Labs* Sound Blaster* AudioPCI 128 V (Optional)	Exceptional sound. PCI design, support for downloadable wavetable, 3D positional audio.
Audio/Modem Riser (AMR)	New technology which supports audio and/or modem riser cards to allow for system cost savings.
Hardware Management ASIC	Intel® LANDesk® Client Manager allows remote monitoring of system conditions for lower total cost of ownership.
Instantly Available PC (Suspend-to-RAM)	Power management mode to reduce PC power consumption. Allows PC to behave like consumer electronic appliance.
ATX form factor	Proven form-factor standard for easy integration.
Dual Universal Serial Bus (USB) connectors	Expand and simplify PC connectivity while enabling new peripherals.
Three-year limited warranty	Expanded investment protection.

The boxed Intel® Desktop Board CC820 includes:

- Desktop Board CC820
- Processor Retention Mechanism
- AGP Retention Mechanism (recommended for AGP 4X support)
- Quick Start Guide
- Configuration label, stickers, back-panel label and a battery warning label
- One IDE cable (Ultra ATA/66 capable), one floppy cable
- ATX compliant I/O shield
- CD-ROM with software drivers, warranty, Product Guide, Norton Anti-Virus* and Internet Utilities



Intel® Desktop Board CC820 Specifications

Processor/Cache

Processors supported:	Intel® Pentium® III processors 733 MHz to 533 MHz with 133-MHz system bus and 512 K of integrated L2 cache
	Intel Pentium III processors 600 MHz to 450 MHz with 100-MHz system bus and 512 K of integrated L2 cache
	Intel® Pentium® II processors 450 MHz to 350 MHz with 100-MHz system bus and 512 K of integrated L2 cache

Intel® Chipset

Intel® 82820 chipset consisting of:
Intel 82820 Memory Controller Hub (MCH)
Intel 82801AA I/O Controller Hub (ICH)
Intel 82802AB Firmware Hub (FWH)
Intel 82805AA Memory Translator Hub (MTH)

Intel® 82820 Memory Controller Hub (MCH)

System Bus	Supports 100-MHz and 133-MHz system bus
AGP	AGP 2.0 Compliant Interface (1X, 2X or 4X)

System Memory

Memory Capacity	Two DIMM sockets for up to 512 MB SDRAM (32 MB minimum) ¹
Memory Type/Size	Supports Intel 4-clock, 64-bit non-ECC, unbuffered 100-MHz DIMMs
DIMM Sizes ¹	32 MB, 64 MB, 128 MB, 256 MB ¹ Only supports 64 Mb or 128 Mb SDRAM memory component densities
Memory Voltage	3.3 V only

Intel® 82801AA I/O Controller Hub (ICH)

Integrated IDE Accelerator	Two independent channels for four IDE devices Ultra ATA/66, Ultra ATA/33, PIO Modes 0, 3 & 4 and CD-ROM support
USB	Two stacked USB connectors

Intel® 82802AB Firmware Hub (FWH)

System BIOS	4-Mb Flash EEPROM with Intel/AMI® BIOS featuring Plug and Play, IDE drive auto-configure, Advanced Power Management (APM) 1.2, ACPI 1.0, DMI 2.0, Multilingual support, hardware random number generator
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Intel® 82805AA Memory Translator Hub (MTH)

DIMM Support	Supports 100-MHz DIMMs 64 Mb and 128 Mb SDRAM technology
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Integrated Super I/O

Controller	SMSC LPC47M102 Ultra I/O Controller
Serial Ports	Two FIFO serial ports Async, RS-232C, PC16450/16C550A compatible
Parallel Port	Compatible, Bi-directional, ECP, EPP (IEEE 1284 compliant)
Floppy Controller	1.44 MB, 2.88 MB, 3-Mode support
Keyboard/Mouse	8042A Compatible Controller
Real Time Clock	Century Reg. +/- 13 min/yr accuracy
APM/ACPI	Power ON/OFF, Sleep/Resume features Supports Instantly Available PC through Suspend to RAM

AGP Universal Connector

Supports AGP 4X, 2X or 1X

Integrated Audio (optional)

Creative Labs® Sound Blaster® ES 1373 PCI with 128-voice wavetable synthesis, compatible with Sound Blaster® Pro, Windows® Sound System and Roland® MPU-401®, supports Microsoft® DirectSound 3D, Ensoniq® 3D Positional Audio and Aureal® A3D®

Audio/Modem Riser (AMR) Connector

Supports add-in cards that meet revision 1.01 of the Audio/Modem Riser Specification

Enhanced Diagnostics

Four dual-color LED on back panel for hardware diagnostic decoding during power on self test

Jumpers and Front Panel Connectors

Connectors	Reset, Power LEDs, HD LED, power on/off, 3 Fans
Jumpers	Single jumper to set configuration mode for the BIOS Setup program

Expansion Slots (all full length)

Description:	5 dedicated PCI slots, 1 AGP universal connector and 1 Audio/Modem Riser (AMR) connector
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Mechanical

Board Style	ATX mounting holes and external connector placement
Board Size	12.0" x 8.2"

Baseboard Power Requirements

+3.3 V	Tolerance +/-5% 1.8A
+5 V	Tolerance +/-5% 2.0A
+5 V	Tolerance +/-5% 0.7A (standby)
-5 V	Tolerance +/-5% 0.8A
+12 V	Tolerance +/-5% 0.2A
-12 V	Tolerance +/-5% 0.6A

Environment

Operating Temperature	0°C to +55°C
Storage Temperature	-40°C to +70°C

Safety Regulations

U.S. and Canada	UL 1950 - CSA 950-95, U.S. and Canadian recognition component marks
Europe	UL Classified to IEC 950
EMI/RFI reg.	Intended for use in systems meeting the following EMI/RFI regulations:
U.S.	FCC Class B (DofC - Cover off testing)
Canada	IC Class B
Europe	EU Class B (Res, Com, Light Industry)
Japan	VCCI, Class B (ITE)
Australia	c-tick

Complies with U.S. CRF via EN55022 + 6 db in an open chassis and EU Directive 89/336/EEC via EN55022 and EN50082-1 in a representative chassis.

For the most current product information, visit Intel's Web site at:

<http://channel.intel.com/business/ibp/boards/cc820.htm>

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The Desktop Board CC820 may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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