

	Performance/Mainstream Desktop Chipsets				
	Intel® 850E Chipset	Intel® 850 Chipset	Intel® 845E Chipset	Intel® 845G Chipset	Intel® 845 Chipset
HOST	850E Chipset	850 Chipset	845E Chipset	845G Chipset	845 Chipset
Target Segment	Entry-level Workstation, Performance PC, Mainstream PC	Entry-level Workstation, Performance PC, Mainstream PC	Performance PC, Mainstream PC	Performance PC, Mainstream PC	Mainstream PC
Processor	Pentium® 4 or Celeron® processor	Pentium® 4 or Celeron® processor	Pentium® 4 or Celeron® processor	Pentium® 4 or Celeron® processor	Pentium® 4 or Celeron® processor
System Bus	533/400 MHz (data)	400MHz (data)	533/400 MHz (data)	533/400 MHz (data)	400MHz (data)
Processor Package	mPGA478	mPGA478, mPGA423	mPGA478	mPGA478	mPGA478
Number Processors	1	1	1	1	1
MEMORY CONTROLLER HUB	850E Chipset	850 Chipset	845E Chipset	845G Chipset	845 Chipset
Type	82850E MCH	82850 MCH	82845E MCH	82845G MCH	82845 MCH
Package	615 OLGA	615 OLGA	FC-BGA 593	760 FC-BGA	FC-BGA 593
MEMORY	850E Chipset	850 Chipset	845E Chipset	845G Chipset	845 Chipset
Memory Modules	4 RIMMs	4 RIMMs	2 double-sided DIMMs DDR	2 double-sided DIMMs DDR, 2 double-sided DIMMs SDR	2 double-sided DIMMs DDR, 3 double-sided DIMMs SDR
Memory Type	533MHz FSB - PC800-40 RDRAM 400MHz FSB - PC800-40, PC800-45 RDRAM	PC800-40 PC800-45 PC600-40 RDRAM	DDR 200/266	DDR 200/266 PC133 SDRAM	DDR 200/266 PC133 SDRAM
Max Memory	2 GB	2 GB	2 GB	2 GB DDR or SDR	2 GB DDR 3 GB SDR
Number of Rows/Devices	32 RDRAM/channel (64 total)	32 RDRAM/channel (64 total)	4 rows	4 rows	4 rows DDR 6 rows SDR
Mbit Support	288/256 Mbit, 144/128 Mbit	288/256 Mbit, 144/128 Mbit	512/256/128/64 Mbit	512/256/128 Mbit	512/256/128/64 Mbit
Error Correction	ECC/Non-ECC	ECC/Non-ECC	ECC/Non-ECC	Non-ECC	ECC/Non-ECC
EXTERNAL GRAPHICS	850E Chipset	850 Chipset	845E Chipset	845G Chipset	845 Chipset
Interface	AGP (1.5V)	AGP (1.5V)	AGP (1.5V)	AGP (1.5V)	AGP (1.5V)
INTEGRATED GRAPHICS	850E Chipset	850 Chipset	845E Chipset	845G Chipset	845 Chipset
Type	N/A	N/A	N/A	Intel® Extreme Graphics	N/A
Dynamic Video Memory	N/A	N/A	N/A	64MB ¹ if > 128MB RAM, 32MB if <= 128MB RAM	N/A
Zone Rendering	N/A	N/A	N/A	Yes	N/A
Video / Display	N/A	N/A	N/A	350MHz DAC 2x12bit DVO ²	N/A
I/O CONTROLLER HUB	850E Chipset	850 Chipset	845E Chipset	845G Chipset	845 Chipset
Type	ICH2	ICH2	ICH4	ICH4	ICH2
ICH Package	360 EBGA	360 EBGA	421 µBGA	421 µBGA	360 EBGA
PCI Support	PCI 2.2	PCI 2.2	PCI 2.2	PCI 2.2	PCI 2.2
PCI Masters	6	6	6	6	6
IDE	ATA/100 IAA ³	ATA/100 IAA ³	ATA/100 IAA ³	ATA/100 IAA ³	ATA/100 IAA ³
USB Ports/Controllers	4 ports, USB 1.1	4 ports, USB 1.1	6 ports, Hi-Speed USB 2.0	6 ports, Hi-Speed USB 2.0	4 ports, USB 1.1
LAN MAC/PNA	Yes	Yes	Yes	Yes	Yes
AC'97 Digital Circuits	Audio/Modem	Audio/Modem	Audio/Modem	Audio/Modem	Audio/Modem
I/O Management	SMBus / GPIO	SMBus / GPIO	SMBus 2.0 / GPIO	SMBus 2.0 / GPIO	SMBus / GPIO

¹64MB of Dynamic Video Memory with [Intel® Extreme Graphics Driver 11.1](#), available on June 19, 2002.

²DVO = Intel® Digital Video Output Interface enables connection to TV or flat-panel displays

³[Intel® Application Accelerator](#): Accelerate boot time and disk I/O. Performs best on Pentium® 4 processor platforms.

The Intel® Pentium® 4 processor, Pentium® III Xeon™ processor, Xeon™ processor, Pentium® III processor, Celeron® processor, Intel® 860 chipset, Intel® 850 chipset, Intel® 850E chipset, Intel® 850G chipset, and Intel® 845 chipset 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.

Value Desktop Chipsets						
	Intel® 845GL Chipset	Intel® 815E Chipset	Intel® 815 Chipset	Intel® 815EP Chipset	Intel® 810E2 Chipset	Intel® 810E Chipset
HOST	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
Target Segment	Value PC	Value PC	Value PC	Value PC	Value PC	Value PC
Processor	Celeron® or Pentium® 4 Processor	Celeron® or Pentium® III Processor(.13µ and .18µ)	Celeron® or Pentium® III Processor(.13µ and .18µ)	Celeron® or Pentium® III Processor(.13µ and .18µ)	Celeron® or Pentium® III Processor(.13µ and .18µ)	Celeron® or Pentium® III Processor(.13µ and .18µ)
System Bus	400 MHz (data)	133/100/66 MHz	133/100/66 MHz	133/100/66 MHz	133/100/66 MHz	133/100/66 MHz
Processor Package	mPGA478	PGA370	PGA370	PGA370	PGA370	PGA370
Number Processors	1	1	1	1	1	1
MEMORY CONTROLLER HUB	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
Type	82845GL MCH	82815 GMCH	82815 GMCH	82815EP MCH	82810E GMCH	82810E GMCH
Package	760 FC-BGA	544 BGA	544 BGA	544 BGA	421 BGA	421 BGA
MEMORY	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
Memory Modules	2 double-sided DIMMs DDR or SDR	3 DIMMs	3 DIMMs	3 DIMMs	2 DIMMs	2 DIMMs
Memory Type	DDR 200/266, PC133 SDRAM	PC133/100 SDRAM	PC133/100 SDRAM	PC133/100 SDRAM	PC100/66 SDRAM	PC100/66 SDRAM
Max Memory	2 GB DDR or SDR	512 MB	512 MB	512 MB	512 MB	512 MB
Number of Rows or Devices	4 rows	6 rows	6 rows	6 rows	4 rows	4 rows
Mbit Support	512/256/128 Mbit	256/128/64/16 Mbit	256/128/64/16 Mbit	256/128/64/16 Mbit	128/64/16 Mbit	128/64/16 Mbit
Error Correction	Non-ECC	Non-ECC	Non-ECC	Non-ECC	Non-ECC	Non-ECC
EXTERNAL GRAPHICS	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
Interface	N/A	AGP 4X/2X	AGP 4X/2X	AGP 4X/2X	N/A	N/A
INTEGRATED GRAPHICS	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
Type	Intel® Extreme Graphics	Intel® 3D with Direct AGP	Intel® 3D with Direct AGP	N/A	Intel® 3D with Direct AGP	Intel® 3D with Direct AGP
Max Dynamic Video Memory	64MB ¹ if > 128MB RAM, 32MB if <= 128MB RAM	32MB	32MB	N/A	32MB	32MB
Zone Rendering	Yes	N/A	N/A	N/A	N/A	N/A
Video / Display Interface	350MHz DAC 2x12bit DVO ²	230MHz DAC 1x12bit DVO ²	230MHz DAC 1x12bit DVO ²	N/A	203MHz DAC 1x12bit DVO ²	203MHz DAC 1x12bit DVO ²
I/O CONTROLLER HUB	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
Type	ICH4	ICH2	ICH	ICH2	ICH2	ICH
Package	421 µBGA	360 EBGA	241 BGA	360 EBGA	360 EBGA	241 BGA
PCI Masters	6	6	6	6	6	6
PCI Support	PCI 2.2	PCI 2.2	PCI 2.2	PCI 2.2	PCI 2.2	PCI 2.2
IDE	ATA/100 IAA ³	ATA/100 IAA ³	ATA/66	ATA/100 IAA ³	ATA/100 IAA ³	ATA/66
USB	6 ports, Hi-Speed USB 2.0	4 ports, USB 1.1	2 ports, USB 1.1	4 ports, USB 1.1	4 ports, USB 1.1	2 ports, USB 1.1
LAN MAC/PNA	Yes	Yes	No	Yes	Yes	No
AC'97 Digital Circuits	Audio/Modem	Audio/Modem	Audio/Modem	Audio/Modem	Audio/Modem	Audio/Modem
MANAGEABILITY	845GL Chipset	815E Chipset	815 Chipset	815EP Chipset	810E2 Chipset	810E Chipset
I/O Management	SMBus 2.0 / GPIO	SMBus / GPIO	SMBus / GPIO	SMBus / GPIO	SMBus / GPIO	SMBus / GPIO

¹64MB of Dynamic Video Memory with [Intel® Extreme Graphics Driver 11.1](#), available on June 19, 2002.

²DVO = Intel® Digital Video Output Interface enables connection to TV or flat-panel displays

³[Intel® Application Accelerator](#): Accelerate boot time and disk I/O. Performs best on Pentium® 4 processor platforms.

The Intel® Celeron™ processor, Intel® 845GL chipset, Intel® 815E chipset, Intel® 815 chipset, Intel® 815EP chipset, Intel® 810E2 chipset and Intel® 810E Chipset 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.

Server/Workstation Chipsets				
	Intel® 860 Chipset	Intel® 460GX Chipset	Intel® E7500 Chipset	Intel® E8870 Chipset
HOST	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
Target Segment	Workstation	Server & Workstation	Server	Server
Processor	Intel® Xeon™ processor for DP workstations	Intel® Itanium® processor	Intel® Xeon™ processor with 512KB L2 cache	Intel® Itanium® 2 processor
Number Processors	1-2	1-4	1-2	1-4
System Bus	400MHz (data)	266/133 MHz	400 MHz	400 MHz (data)
MEMORY CONTROLLER HUB	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
Type	82860 MCH	82461GX, 82462GX	E7500 MCH	SNC
Package	1024 OLGA	567 OLGA	1005 FC-BGA	1357 OLGA-2B 12L
MEMORY	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
Memory Modules	4 RIMMs, up to 8 RIMMS with MRH-R	4 double-sided DIMMs	72-bit wide DDR SDRAM DIMM populated in pairs	72-bit wide DDR SDRAM DIMM populated in quads
Memory Type	PC800/600 RDRAM	PC100 SDRAM	DDR SDRAM	DDR SDRAM
Max Memory	4 GB (w/ 2 repeaters)	64 GB	16 GB	128 GB (w/4 DDR Memory Hubs)
Number of Rows/Devices	32 RDRAM/channel	32 DIMMs/memory card	1- 4 physical rows, 2- 8 DIMMs	32 DIMMs
Mbit Support	288/256 Mbit, 144/128 Mbit	256/128/64 Mbit	512/256/128/64 Mbit	512/256/128 Mbit and 1 Gbit
ECC/Parity	Yes	Yes	Yes	Yes
EXTERNAL GRAPHICS	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
Interface	AGP 4X/2X (1.5V)	AGP 4X/2X	N/A	N/A
I/O CONTROLLER HUB	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
Type	ICH2	IFB	ICH3-S	SIOH
ICH Package	360 EBGA	324 BGA	421 BGA	1012 OLGA2b
PCI Support	PCI 2.2	PCI 2.2	Up to three 64-bit PCI/PCI-X Controller Hub 2.0 each maximum bandwidth greater than 1 GB/s	Up to four 64-bit PCI/PCI-X controllers (P64H2) via HI 2.0 interface; maximum bandwidth greater than 1 GB/s per interface
PCI Masters	6	N/A	Each P64H2 contains two independent 64-bit of maximum 133MHz PCI-X interface	Each P64H2 contains two independent 64-bit channels, capable of 133MHz PCI-X
IDE	ATA/100 IAA†	ATA/33	ATA/100	ATA/100
USB Ports/Controllers	4 ports, USB 1.1	1 controller: 2 ports	3 controllers: 6 ports	3 UHCI controllers; 1 EHCI controller for USB2.0 support: 6 ports
LAN MAC/PNA	Yes	No	Integrated 10/100	N/A
AC'97 Digital Circuits	Audio/Modem	Audio/Modem	AC'97 2.2 compliant	AC'97 2.2 compliant
Manageability	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
I/O Management	SMBus / GPIO	SMBus / GPIO	SMBus / GPIO	SMBus / GPIO
Workstation/Server I/O Expansion	860 Chipset	460GX Chipset	E7500 Chipset	E8870 Chipset
PCI Controller Type	PCI/Hub Interface Bridge, 64/32 bit (P64H)>	PCI eXpander Bridge (PXB), Wide and fast PCI eXpander Bridge (WXB)	PCI/PCI-X 64-bit Hub 2.0 (P64H2)	PCI/PCI-X 64-bit Hub 2.0 (P64H2)
Package	241 BGA	540 PLGA, 567 OLGA1	567 FC-BGA	567 FC-BGA
PCI Support	2-66MHz or 4-33 MHz PCI slots	One PXB and up to three WXB's	Up to three 64-bit PCI/PCI-X Controller Hub 2.0 each maximum bandwidth greater than 1 GB/s.	Up to four 64-bit PCI/PCI-X Controller Hub 2.0 each maximum bandwidth greater than 1 GB/s.
PCI Masters	Up to 6 PCI devices	The PXB supplies two 32-bit, 33MHz PCI interfaces. Each WXB supplies two 64-bit, 66MHz interfaces	Each P64H2 contains two independent 64-bit of maximum 133MHz PCI-X interface.	Each P64H2 contains two independent 64-bit of maximum 133MHz PCI-X interface.
RASUM	N/A	N/A	Memory ECC with Chipkill*, Hub Interface ECC, Hardware Memory Scrubbing	Hot Plug Modules for processor and memory, ECC protection & correction, Memory Scrubbing, Memory Device Failure Recovery (MDFR), Multiple redundant I/O paths and Error Logging

† [Intel® Application Accelerator](#): Accelerate boot time and disk I/O. Performs best on Pentium® 4 processor platforms.

The Intel® Xeon™ processor, Intel® Itanium processor, Intel® Itanium 2 processor, Intel® E7500 chipset, Intel® E8870 chipset, Intel® 460GX chipset and Intel® 860 chipset 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.