Intel® Server Building Blocks Matrix

Intel® Processors

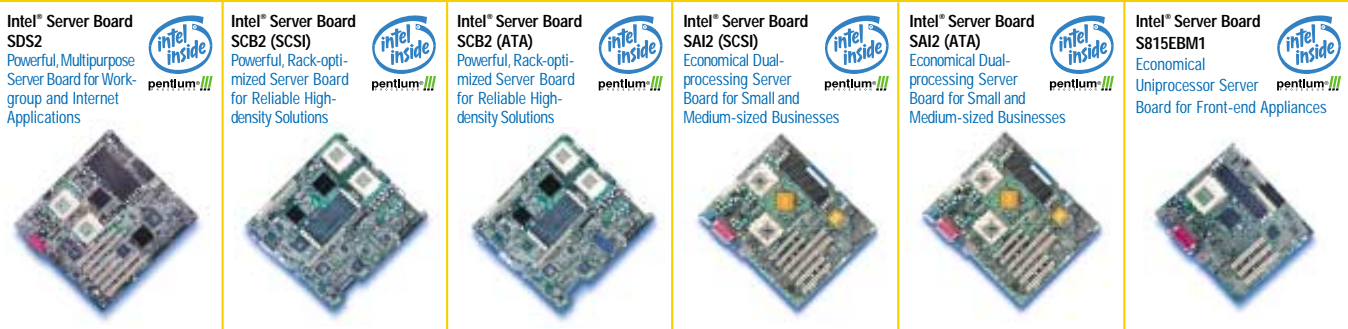|	Intel® Pentium® III Xeon™ Processor	Intel® Xeon™ Processor	Intel® Pentium® III Processor with 512KB Cache[1]	Intel® Pentium® 4 Processor
	Multiprocessing Powering Servers to High Levels of Performance	**Dual-Processing** Unparalleled Value and Flexibility for Small and Medium-sized Business Server Applications	**Dual-Processing** Performance Ideally Suited for Internet and Server Applications	**Uniprocessing** Advanced Processor Performance for the Technology Environments of Today and Tomorrow
	The Intel® Pentium® III Xeon™ processor provides the performance, power, and scalability for mid-range and back-end servers. It also supports glueless 2-way and 4-way SMP operation.	Designed to deliver superior performance, scalability, and reliability, the Intel® Xeon™ processor is ideally suited for today's Internet infrastructure and departmental server applications in small and medium-sized businesses.	The Intel® Pentium® III processor with 512KB cache delivers solid performance for mid-range and value servers, with the versatility and compatibility to manage a broad range of server applications.	The Intel® Pentium® 4 processor is the latest generation of Intel processors designed to deliver advanced performance for emerging Web and PC technologies.
Processor Core Speed	Up to 900 MHz[2]	Up to 2.40 GHz[2]	Up to 1.40 GHz[2]	Up to 2.53 GHz[2]
L2 Cache Size	1 or 2 MB L2	512 KB L2	512 KB L2	256 or 512 KB L2
Cache Type	Full-speed Advanced Transfer Cache	Full-speed Advanced Transfer Cache	Full-speed Advanced Transfer Cache	Full-speed Advanced Transfer Cache
System Bus Speed	100 MHz	400 MHz	133 MHz	400 MHz or 533 MHz
Number of Processors Supported	2-4	2	2	1
Intel-Designed Thermal Solution	Yes	Yes	Yes	Yes
Package	Single-edge contact cartridge	603-pin INT mPGA	370-pin FC-PGA2[1]	478-pin mPGA
Intel® NetBurst™ Microarchitecture	No	Yes	No	Yes
Hyper-Threading Technology	No	Yes	No	No
Hyper-Pipelined Technology	No	Yes	No	Yes
Dynamic Execution	Yes	Yes, advanced	Yes	Yes, advanced
Streaming SIMD Extensions	Yes	Yes	Yes	Yes
Streaming SIMD Extensions 2	No	Yes	No	Yes
Rapid Execution Engine	Yes	Yes	Yes	Yes
128-Bit Floating-Point Port	No	Yes	No	Yes
SIMD 128-Bit Integer	No	Yes	No	Yes
Execution Trace Cache	No	Yes	No	Yes
Intel® Server Board or Platform Support	Intel® Server Platform SPKA4 Intel® Server Platform SRKA4	Intel® Server Board SE7500CW2 Intel® Server Board SHG2	Intel® Server Board SDS2 Intel® Server Board SCB2 (SCSI) Intel® Server Board SCB2 (ATA) Intel® Server Board SAI2 Intel® Server Board S815EBM1	Intel® Entry Server Board S845WD1-E
Availability	Now	Now	Now	Now

[1] New processor voltage requires a motherboard update. Contact your motherboard vendor for compatibility information.
[2] Speeds listed are those available as of Q2'02. For the latest roadmap information see http://www.intel.com/reseller.

Intel® Server Boards

	Intel® Xeon™ Processor-Based Server Boards			Intel® Pentium® 4 Processor-Based Server Board
	Intel® Server Board SHG2 Superior Performance, Reliability and Manageability for Departmental Servers	**Intel® Server Board SE7500CW2 (SCSI)** Versatility and Processing Power for Small and Medium-sized Businesses	**Intel® Server Board SE7500CW2 (ATA)** Versatility and Processing Power for Small and Medium-sized Businesses	**Intel® Entry Server Board S845WD1-E** Essential Features for Entry-level Server Applications
Order Code	SHG2	SE7500CW2SCSI	SE7500CW2	S845WD1 S845WD11U (for 1U form factor only)
Intel® Server Chassis Support	Intel® Server Chassis SC5200	Intel® Server Chassis SC5200, base configuration only	Intel® Server Chassis SC5200, base configuration only	Intel® Server Chassis SC5100, base configuration only
Number of Processors Supported	2	2	2	1
Processor[3]	Intel® Xeon™ processor	Intel® Xeon™ processor	Intel® Xeon™ processor	Intel® Pentium® 4 processor
System Bus	400 MHz	400 MHz	400 MHz	400 MHz or 533 MHz
Chipset	ServerWorks* GC-LE	Intel® E7500	Intel® E7500	Intel® 845E
Peer PCI Buses	3	3	3	1
Total Slots	6	5	5	4
Slot Types	1 x 64-bit/133MHz PCI-X 2 x 64-bit/100MHz PCI-X 3 x 32-bit/33MHz	1 x 64-bit/133MHz PCI-X 2 x 64-bit/100MHz PCI-X 2 x 32-bit/33MHz	1 x 64-bit/133MHz PCI-X 2 x 64-bit/100MHz PCI-X 2 x 32-bit/33MHz	3 x 32-bit/33MHz 1 x AGP
Memory Capacity	12GB DDR200/266 ECC SDRAM	4GB DDR200/266 ECC SDRAM	4GB DDR200/266 ECC SDRAM	2GB DDR200/266 ECC SDRAM
Integrated SCSI	2 x Ultra160	1 x Ultra160 via adapter	—	—
Integrated ATA RAID	—	Promise* Technology controller (RAID Levels 0, 1, 10)	Promise* Technology controller (RAID Levels 0, 1, 10)	Promise* Technology controller (RAID Levels 0, 1, 10)
Integrated LAN	1 x Intel® PRO/100+ Server Network Connection 1 x Intel® PRO/1000 XT Server Network Connection	2 x Intel® PRO/100+ Server Network Connections	2 x Intel® PRO/100+ Server Network Connections	2 x Intel® PRO/100+ Server Network Connections
Integrated Graphics	ATI* with 8MB memory	ATI* with 8MB memory	ATI* with 8MB memory	ATI* with 2MB memory
Server Management Support	Intel® Server Management version 5.0	Intel® LANDesk® Client Manager	Intel® LANDesk® Client Manager	Intel® LANDesk® Client Manager
Intel® RAID Controller Compatibility (Order Code)[4]	SRCU32U SRCMRU	SRCU31LA SRCU32U	SRCU31LA SRCU32U	SRCU32U
Fully Validated OS	[5]	[5]	[5]	[5]
Availability	Q2'02	Q2'02	Q2'02	Q2'02

Intel® Server Boards

	Intel® Server Board SDS2 — Powerful, Multipurpose Server Board for Workgroup and Internet Applications	Intel® Server Board SCB2 (SCSI) — Powerful, Rack-optimized Server Board for Reliable High-density Solutions	Intel® Server Board SCB2 (ATA) — Powerful, Rack-optimized Server Board for Reliable High-density Solutions	Intel® Server Board SAI2 (SCSI) — Economical Dual-processing Server Board for Small and Medium-sized Businesses	Intel® Server Board SAI2 (ATA) — Economical Dual-processing Server Board for Small and Medium-sized Businesses	Intel® Server Board S815EBM1 — Economical Uniprocessor Server Board for Front-end Appliances
Order Code	SDS2	SCB2SCSI	SCB2ATA	SAI2SCSI	SAI2	S815EBM1
Intel® Server Chassis Support	Intel® Server Chassis SC5100	Intel® Server Chassis SR1200, Intel® Server Chassis SR2200	Intel® Server Chassis SR1200, Intel® Server Chassis SR2200	Intel® Server Chassis SC5100 (base configuration only)	Intel® Server Chassis SC5100 (base configuration only)	—
Number of Processors Supported	2	2	2	2	2	1
Processor[3]	Intel® Pentium® III processor with 512KB L2 cache	Intel® Pentium® III processor with 512KB L2 cache	Intel® Pentium® III processor with 512KB L2 cache	Intel® Pentium® III processor with 512KB L2 cache	Intel® Pentium® III processor with 512KB L2 cache	Intel® Pentium® III processor with 512KB L2 cache
System Bus	133 MHz	133 MHz	133 MHz	133 MHz	133 MHz	133 MHz
Chipset	ServerWorks* Enterprise ServerSet* III HE-SL	ServerWorks* Enterprise ServerSet* III HE-SL	ServerWorks* Enterprise ServerSet* III HE-SL	ServerWorks* ServerSet* III LE	ServerWorks* ServerSet* III LE	Intel® 815E
Peer PCI Buses	3	3	3	2	2	1
Total Slots	6	2 in 1U, 6 in 2U	2 in 1U, 6 in 2U	6	6	3
Slot Types	4 x 64-bit/66MHz 2 x 32-bit/33MHz	2 x 64-bit/66MHz (1U) 6 x 64-bit/66MHz (2U)	2 x 64-bit/66MHz (1U) 6 x 64-bit/66MHz (2U)	2 x 64-bit/66MHz 4 x 32-bit/33MHz	2 x 64-bit/66MHz 4 x 32-bit/33MHz	3 x 32-bit/33MHz
Memory Capacity	6GB PC133 ECC SDRAM	6GB PC133 ECC SDRAM	6GB PC133 ECC SDRAM	4GB PC133 ECC SDRAM	4GB PC133 ECC SDRAM	512KB PC133 SDRAM
Integrated SCSI	2 x Ultra160	2 x Ultra160	—	1 x Ultra160 via adapter	—	—
Integrated ATA RAID	—	—	Promise* Technology controller (RAID Levels 0, 1, 10)	—	—	—
Integrated LAN	2 x Intel® PRO/100+ Server Network Connections	2 x Intel® PRO/100+ Server Network Connections	2 x Intel® PRO/100+ Server Network Connections	1 x Intel® PRO/100+ Server Network Connection	1 x Intel® PRO/100+ Server Network Connection	1 x Intel® PRO/100+ Desktop Network Connection
Integrated Graphics	ATI* with 4MB memory	ATI* with 8MB memory	ATI* with 8MB memory	ATI* with 8MB memory	ATI* with 8MB memory	Intel
Server Management Support	Intel® Server Control software version 3.5	Intel® Server Control software version 3.5	Intel® Server Control software version 3.5	—	—	—
Intel RAID Controller Compatibility (Order Code)[4]	SRCU31A SRCU31LA SRCU32U SRCMRU	SRCU31A SRCU31LA SRCU32U SRCMR SRCMRU	SRCU31A SRCU31LA SRCU32U SRCMR SRCMRU	SRCU31A SRCU31LA SRCU32U	SRCU31A SRCU31LA SRCU32U	SRCU31LA
Fully Validated OS	[5]	[5]	[5]	[5]	[5]	[5]
Availability	Now	Now	Now	Now	Now	Now

[3] Refer to http://support.intel.com/support/motherboards/server for up-to-date details on processors supported by each server board.
[4] Refer to http://support.intel.com/support/motherboards/server for up-to-date details on RAID Controllers supported by each server board.
[5] Refer to http://support.intel.com/support/motherboards/server for up-to-date details on operating systems supported by each server board.

Intel® Server Chassis

	Intel® Server Chassis SC5200			Intel® Server Chassis SC5100		
	The flexibility and performance of the Intel® Server Chassis SC5100 with the option for high-reliability features including hot-swap redundant cooling, remarkable flexibility and support for Intel® Server Boards SHG2 and SE7500CW2 (both of which support powerful new Intel® Xeon™ processors)			Designed to work seamlessly with the Intel® Server Boards SDS2 and SAI2 and the Intel® Entry Server Board S845WD1-E, all of which include features for creating versatile, flexible server platforms		

Configuration	Base	Hot-swap, redundant power and cooling	Hot-swap, redundant power and cooling, rack-optimized	Base	Hot-swap, redundant power	Hot-swap, redundant power, rack-optimized
Order Code	KHD3BASE450	KHD3HSRP650	KHD3HSRP650R	KHD2BASE300	KHD2HSRP350	KHD2HSRP350R
Spares Kit Order Code	FHD3SPRS	FHD3SPRS	FHD3SPRS	FHD2SPRS	FHD2SPRS	FHD2SPRS
Form Factor	Pedestal or 5U rack[6]	Pedestal or 5U rack[6]	5U rack	Pedestal or 5U rack[7]	Pedestal or 5U rack[7]	5U rack
Intel® Server Board Support	Intel® Server Board SE7500CW2 Intel® Server Board SHG2	Intel® Server Board SHG2	Intel® Server Board SHG2	Intel® Server Board SDS2 Intel® Server Board SAI2 Intel® Entry Server Board S845WD1-E	Intel® Server Board SDS2	Intel® Server Board SDS2
Drive Bays	5 x fixed SCSI or IDE 1 x 3.5" floppy 3 x 5.25" bays	Up to 10[8] Ultra320 hot-swap SCSI Up to 2 x fixed SCSI or IDE 1 x 3.5" floppy 3 x 5.25" bays	Up to 10[8] Ultra320 hot-swap SCSI Up to 2 x fixed SCSI or IDE 1 x 3.5" floppy 3 x 5.25" bays	5 x fixed SCSI or IDE 1 x 3.5" floppy 3 x 5.25" bays	Up to 10[8] Ultra160 hot-swap SCSI Up to 2 x fixed SCSI or IDE 1 x 3.5" floppy 3 x 5.25" bays	Up to 10[8] Ultra160 hot-swap SCSI Up to 2 x fixed SCSI or IDE 1 x 3.5" floppy 3 x 5.25" bays
System Cooling	Supports four system fans plus one power-supply fan	Supports hot-swap redundant cooling with five system fans plus two power-supply fans	Supports hot-swap redundant cooling with five system fans plus two power-supply fans	Supports four system fans plus one power-supply fan	Supports four system fans plus one power-supply fan	Supports four system fans plus one power-supply fan
Power Supply	450-watt PFC	650-watt, dual-line cord, 2+1 PFC	650-watt, dual-line cord, 2+1 PFC	300-watt PFC	350-watt, dual-line cord, 1+1 PFC	350-watt, dual-line cord, 1+1 PFC
Redundant Power Capable	No	Yes	Yes	No	Yes	Yes
Dimensions (H x W x D)	17.5" x 8.6" x 26.9"	17.5" x 8.6" x 26.9"	8.6" x 16.9" x 24.9"	17.5" x 8.6" x 26.9"	17.5" x 8.6" x 26.9"	8.6" x 16.9" x 24.9"
Lockable Bezel Color	Beige	Beige	Black	Beige	Beige	Black
Front Connectors	1 x USB	1 x USB	1 x USB, 1 x serial	1 x USB	1 x USB	1 x USB, 1 x serial
Availability	Q2 '01	Q2 '01	Q2 '01	Now	Now	Now

[6] Requires rack conversion kit AHD3RACK.
[7] Requires rack conversion kit AHD2RACK.
[8] Ten hot-swap SCSI drive bays (and zero fixed bays) are possible with the AXX2HSDRVUG upgrade kit. Unit ships with 5 drive bays included.
[9] Front USB not available with Intel® Server Board SAI2

Intel® Server Chassis

	Intel® Server Chassis SR2200 (2U)	Intel® Server Chassis SR1200 (1U)
	A high-density 2U rack chassis that features six PCI slots and up to seven 1" hot-swap SCSI drives and one flexible drive	A high-density 1U chassis that hosts either a SCSI or ATA hard drive backplane, three 1" hot-swap SCSI or two ATA drives, and a flexible bay

Configuration	—	SCSI	ATA
Order Code	KSN	KCR SCSI backplane - BCR1USBPWB	KCR ATA backplane - BCR1UABPWB
Spares Kit Order Code	FSNSPRKIT	FCRSPRKIT	FCRSPRKIT
Form Factor	2U rack[10]	1U rack[10]	1U rack[10]
Intel® Server Board Support [11]	Intel® Server Board SCB2 (SCSI SKU only)	Intel® Server Board SCB2	Intel® Server Board SCB2
Drive Bays	7 x Ultra160 hot-swap SCSI CD-ROM/floppy module optional[12] 1 x 3.5" peripheral bay	3 x Ultra160 hot-swap SCSI CD-ROM/floppy module optional[12]	2 x IDE CD-ROM/floppy module optional[12]
System Cooling	Supports two system fans plus one power-supply fan	Supports five system fans plus two power-supply fans	Supports five system fans plus two power-supply fans
Power Supply	350-watt AC, dual-line cord, 1+1 PFC[13]	250-watt PFC AC[14]	250-watt PFC AC[14]
Redundant Power Capable	Yes[15]	No	No
Dimensions (H x W x D)	3.5" x 19" x 25"	1.75" x 19" x 25"	1.75" x 19" x 25"
Lockable Bezel Color	Black or beige[16]	Black or beige[17]	Black or beige[17]
Front Connectors	2 x USB, 1 x serial (RJ45)	2 x USB, 1 x serial (RJ45)	2 x USB, 1 x serial (RJ45)
Availability	Now	Now	Now

[10] Optional Sliding Rails order code: AXX1U2URAIL.
[11] Refer to http://support.intel.com/support/motherboards/server for up-to-date details on server boards supported by each chassis.
[12] Optional CD-ROM/floppy module order code: AXXCDFLOPPY. Adding the CD-ROM/Floppy module uses one SCSI drive bay.
[13] -48VDC power supply is available, order code TSLDCPSU101. −48V redundant power also requires a replacement power supply cage, order code TCLDCCAGE01.
[14] Optional −48VDC power supply is available, order code TSMDCPSU101.
[15] Redundant power requires optional second power supply module, order code AXX2PSMODL350.
[16] SR2200 bezel must be ordered separately. Black bezel order code: ASNBEZBLACK; beige bezel order code: ASNBEZBEIGE.
[17] SR1200 bezel must be ordered separately. Black bezel order code: ACRBEZBLACK; beige bezel order code: ACRBEZBEIGE.

Intel® Server Platforms

Intel® Pentium® III Xeon™ Processor-Based Platform

Intel® Server Platform SPKA4
Highly Available and Scalable Quad-processing 7U Server Platform for Compute-intensive Enterprise and e-Business Applications, Available in Pedestal or Rack Form Factor

Intel® Server Platform SRKA4
Highly Available and Scalable Quad-processing 4U Rack Server Platform for Space Optimization in Dense, Compute-intensive Enterprise and e-Business Environments

Order Code	SKOC2HI	SKODVHI (beige) or SKODVBKHI (black)
Number of Processors Supported	4	4
Processor[3]	Intel® Pentium® III Xeon™ processor	Intel® Pentium® III Xeon™ processor
System Bus	100 MHz	100 MHz
Chipset	ServerWorks* ServerSet* III HE	ServerWorks* ServerSet* III HE
PCI Buses	3	3
Total Slots	8	8
Slot Types	2 x 64-bit/66MHz hot-plug 4 x 64-bit/33MHz hot-plug 2 x 32-bit/33MHz	2 x 64-bit/66MHz hot-plug 4 x 64-bit/33MHz hot-plug 2 x 32-bit/33MHz
Memory Capacity	16GB PC100 ECC SDRAM	16GB PC100 ECC SDRAM
Integrated SCSI	2 x Ultra160, 1 x Ultra2	2 x Ultra160, 1 x Ultra2
Integrated LAN	1 x Intel® PRO/100+ Server Network Connection	1 x Intel® PRO/100+ Server Network Connection
Integrated Graphics	ATI* with 2MB memory	ATI* with 2MB memory
Server Management Support	Intel® Server Control software version 3.1	Intel® Server Control software version 3.1
Intel RAID Controller Compatibility (Order Code)[4]	SRCU31 SRCU31A SRCU31L SRCU31LA SRCU32U	SRCU31 SRCU31A SRCU31L SRCU31LA SRCU32U
Form Factor	Pedestal or 7U rack	4U rack
Drive Bays	Up to 10 hot-swap SCSI 3 x 5.25" bays 1 x 3.5" floppy bay	Up to 5 hot-swap SCSI 1 x slim-line floppy/slim-line CD-ROM pair included
System Cooling	Supports eight system fans plus three power-supply fans	Supports six system fans
Power Supply	3 x 375-watt redundant hot-swap	3 x 350-watt redundant hot-swap
Dimensions (H x W x D)	18" x 12.25" x 25.25"	4U x 17.5" x 26.5"
Availability	Now	Now

Intel® RAID Controllers

	Intel® RAID Controller SRCU32	Intel® Server RAID Controller U3-1 (SRCU31)	Intel® Server RAID Controller U3-1L Low Profile (SRCU31L)	Intel® RAID Controller SRCMR
	Full-featured high-performance RAID card with PCI hot-plug support	High-performance RAID controller for data-intensive applications	Affordable RAID controller for small and medium-sized businesses	Economical modular ROMB (RAID On Mother Board) controller.
Order Code	SRCU32U	BOXSRCU31A	BOXSRCU31LA	SRCMRU
Processor	Intel® 80303 IOP 100MHz	Intel® i960 RN I/O 100MHz	Intel® i960 RS I/O 100MHz	Intel® 80302 IOP 60MHz
XOR	Hardware XOR	Hardware XOR	Software XOR	Hardware XOR
Memory	Supports 64-256MB Unbuffered PC133 ECC SDRAM	Supports 32-128MB PC100 ECC SDRAM (currently shipping with a 64MB DIMM)	Embedded 16MB PC100 ECC SDRAM	Embedded 32MB PC133 ECC SDRAM
PCI Bus	PCI 2.2 64-bit/66MHz	PCI 2.2 64-bit/33MHz	PCI 2.2 32-bit/33MHz	PCI 2.2 64-bit/66MHz
SCSI Channels	2 x Ultra160	1 x Ultra160	1 x Ultra160	2 x Ultra160 (using server board's integrated SCSI controller)
Form Factor	Standard PCI	Standard PCI	Low-profile PCI	Low-profile PCI
RAID Levels	0, 1, 4, 5, and 10	0, 1, 4, 5, and 10	0, 1, 4, 5, and 10	0, 1, 4, 5, and 10
PCI Hot-Plug	Yes	No	No	No
Compatibility	[18]	[18]	[18]	[18]
Availability	Now	Now	Now	Now

Intel® PRO Network Connections — Server Adapters

	Intel® PRO/1000 MT Server Adapters	Intel® PRO/1000 MF Server Adapters	Intel® PRO/100 S Server Adapters	Intel® PRO/1000 T IP Storage Adapter
	High-performance 10/100/1000Mbps copper connections for servers	High-performance Gigabit fiber connections for servers	Fast, managed 10/100 server connections with accelerated LAN security	Bringing Gigabit Ethernet and flexible 10/100/1000Mbps connections to network storage
Order Code	PWLA8492MT (Dual Port) PWLA8490MT (Single Port)	PWLA8492MF (SX Dual Port) PWLA8490MF (SX Single Port) PWLA8490LX (LX Single Port)	PILA8472C3 (Dual Port) PILA8470C3 (Single Port)	PWSA8700T
Processor	Intel® 82546EB (Dual Port) Intel® 82545EM (Single Port)	Intel® 82546EB (Dual Port) Intel® 82545EM (Single Port)	2 x Intel® 82550GY (Dual Port) Intel® 82550EY (Single Port)	Intel® 80200 Processor, based on Intel® XScale™ microarchitecture
PCI Buses Supported	Full-height and low-profile PCI/PCI-X	Full-height and low-profile PCI/PCI-X	PCI	PCI
Data-Path Width	64/32-bit, 133/100/66/33MHz	64/32-bit, 133/100/66/33MHz	64/32-bit, 66/33MHz (Dual Port) 32-bit, 33MHz (Single Port)	64/32-bit, 66/33MHz
Server Management Capabilities	CIM/WBEM, SNMP, DMI2.0, PXW, ACPI, WOL	CIM/WBEM, SNMP, DMI2.0, PXW, ACPI, WOL	CIM/WBEM, SNMP, DMI2.0, PXW, ACPI, WOL	SNMP
IEEE Support	802.2 & 802.3ab	802.2 & 802.3z	802.2 & 802.3	802.2, 802.3U & 802.3ab
Wiring and Connectors	Cat-5, 4 pair, RJ-45	Fiber optic, LC MMF: 62.5 – 50µm SMF: 9µm (LX only)	Cat-5, 2 pair, RJ-45	Cat-5, 4 pair; RJ-45
Compatibility	[19]	[19]	[19]	[19]
Availability[20]	June 2002	June 2002	Now	Now

[18] For the latest server board support please visit http://support.intel.com/support/motherboards/server
[19] See http://support.intel.com/support/network/adapter/pro100/index.htm for compatibility information.
[20] Refer to http://www.intel.com/network/connectivity/products/server_adapters.htm for product availability.

For the most current product information on Intel server building blocks, visit: www.intel.com/go/serverbuilder