# 24 hours / 365 days . . .

# Technical Support guarantees minimal downtime

Supermicro server products are built with the highest quality components and the latest engineering technology to ensure maximum performance and the highest availability.

Our goal is to deliver super reliable server solutions that exceed the demands of today's fast-pace businesses. We implement optimized features such as 100% cooling redundancy, triple redundant hot-plug power supplies, hot-swap storage subsystems (includes SAS, SCSI, and SATA), RAID solutions, redundant hot-plug system cooling fans into our products to maximize system uptime and offer peace of mind. Moreover, our comprehensive system health monitoring software demonstrates our unwavering commitment to deliver enterpriseclass quality products. We offer standard round-the-clock technical service to help keep your mission-critical systems running 24/7, all year round.

We employ a meticulous approach to system design, testing and validation to ensure stability and data integrity in all our server platforms. Our consistent first-to-market approach with cutting-edge solutions based on the newest advances in server technology has earned us a solid reputation as the technology leader in the IT industry and the loyalty of many top-tier customers. Supermicro servers support all major operating systems, such as Windows, Solaris, UNIX and various Linux-based operating systems.

Take a moment to compare the computing density, advanced features and price to performance benefits of our solutions against the competition and see why Supermicro servers are the most optimal choice for your business needs.

# Supermicr•

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www.supermicro.com/aplus



# Dual-Core Opteron



# Server Building Block Solutions®

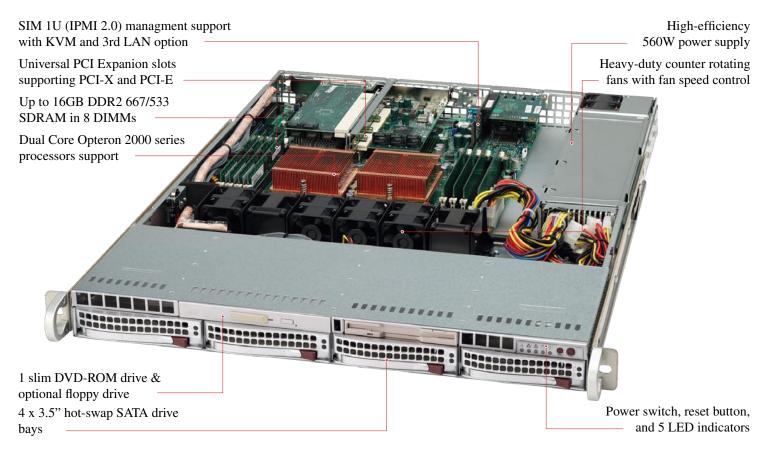
**Your Best Server/Workstation Partner** 

**Serverboard** • Chassis • Power Supply • Thermal Management

**Building Block Solutions<sup>®</sup> August 2006** 

# 1U High Performance Opteron Server

2000 series processors + DDR2 memory + SIM management



## **A+ Server 1021M-T2**

Designed for optimal performance, the A+ Server 1021M-T2 supports the latest Opteron 2000 series processors in a high-density 1U form-factor. The new platform takes advantage of the faster DDR2 memory with it's wide bandwidth memory architecture offers customers unmatched scalability and higher performance while consuming less power. With support for up to four hot-swappable 3 Gbs SATA drives, dual gigabit Ethernet, and two universal PCI-X or PCI-E expansion card, this is an ideal solution for network infrastructure, front-end enterprise, and minimal-downtime cluster server systems. The high-efficiency 560W power supply lowers total cost of ownership with its earth-friendly, energy-efficient design. With sophisticated management features, Supermicro Intelligent Management (SIM) includes IPMI 2.0 with virtual media and KVM-over-LAN options. This system is simple to configure, easy to deploy and manage on a day-to-day basis, ensuring continual performance and maximum data availability.

## Riser Card Configurations for A+ Series Motherboards



Model #	CSE-RR1U-X	CSE-RR1U-XLP	CSE-RR1U-XR	CSE-RR1U-EL	CSE-RR1U-ELP	CSE-RR1U-ER	RSC-RR1U-E8	RSC-RR1U-E16	RSC-RR1U-EHT	RSC-RR1U-HT
Form Factor	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Fit Type	PCI-X	PCI-X	PCI-X	Universal PCI	Universal PCI	Universal PCI	PCI-Express	PCI-Express x16	PCI-Express	PCI-Express
Output Type	PCI-X	PCI-X low-profile	PCI-X	PCI-Express	PCI-Express	PCI-Express	PCI-Express	PCI-Express	PCI-E/HT	PCI-E/HT
Speed Type	133/100/66/33MHz	133/100/66/33MHz	133/100/66/33MHz	PCI-Express x8	PCI-Express x8 low-profile	PCI-Express x8 low-profile	PCI-Express x8	PCI-Express x16	PCI-Express x8 HyperTransport	PCI-Express x8 HyperTransport
Position	Left slot	Right slot	Right slot	Left slot	Right slot	Right slot	Left slot	Left slot	Left slot	Left slot
Chassis	SC811, SC812, SC813+, SC814 SC815+	SC812, SC813+	SC814, SC816	SC811, SC812, SC813+, SC814, SC815+	SC812, SC813+, SC815+	SC814, SC816	SC812, SC813+, SC818+	SC812, SC813+, SC815+	SC812, SC813+, SC818+	SC812, SC813+, SC818+

# 4-way Opteron Solution

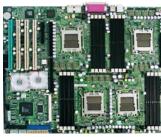
800 series processors, 8-way upgradability





## A+ Server 4041M-82R

## A+ Server 1041M-82



H8QM8-2/H8QME-2 H8QM8-2+\*/H8QME-2+\*

\*(+)versions are optimized for 1U chassis with PCI-X slots removed

Dual-Core AMD Opteron 8000

nVidia MCP55-Pro AMD 8132 PCI-X Tunnel

## Form Factor SWTX 16" x 13"

#### Optimized Chassis H8OM8-2+:

1U: SC818S+-1000 H8QME-2+: 1U: SC818TQ+-1000 H8OM8-2: 4U: SC748S-R1000 H8QME-2:

4U: SC748TQ-R1000

32/32/64 GB ECC Reg. DDR2 667/533/400 SDRAM in 16

#### Expansion Slot

1 HyperTransport slots 1 PCI-Express x16 1 PCI-Express x8 2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 100 MHz

Onboard Storage Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (H8QM8-2(+) only) nVidia MCP55-Pro SATA2 (3Gbps) controller for 6 SATA

AOC-LPZCR1 and AOC-LPZCR2 (H8QM8-2 only)

#### Onboard LAN

Dual Lan with Intel 82546GB Gigabit Ethernet

## Onboard VGA ATI ES1000 16MB PCI graphics

controller

EIDE/USB Ports Single ATA133/100 Up to 4 USB 2.0 ports

1 floppy port 2 fast UART 16500 serial 1 ECP/EEP parallel port PS/2 mouse & keyboard conn.

SIMSO (IPMI 2.0) socket, Watch Dog, SuperDoctor III

#### Thermal Control

Fan speed control & overheat/fan fail LED indication

AMI 8 Mb Flash EEPROM



H8QC8/H8QCE H8QC8+\*/H8QCE+\*

(+)versions are optimized for 1U chassis with PCI-X slots removed

Dual-Core AMD Opteron 800

nVidia nForce Pro 2200 AMD 8132 PCI-X Tunnel

SWTX 16" x 13"

#### Optimized Chassis

H8QC8+: 1U: SC818S+-1000 H8OCE+: 1U: SC818TQ+-1000 H8QC8: 4U: SC748S-R1000 H8OCE: 4U: SC748TQ-R1000

32/64/64 GB ECC Reg. DDR 400/333/266 SDRAM in 16 DIMMs

1 HyperTransport slot 1 PCI-Express x8 (using x16 slot) 1 PCI-Express x8 2 64-bit PCI-X 133/100 MHz

2 64-bit PCI-X 100 MHz

### Onboard Storage

Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (H8QC8(+) only) nVidia nForce Pro SATA (3Gbps) controller for 4 SATA

AOC-LPZCR1 and AOC-LPZCR2 (H8QC8 only)

## Onboard LAN

Dual Lan with Intel 82546GB Gigabit Ethernet

#### Onboard VGA

ATI Rage XL 8MB PCI graphics controller

### EIDE/USB Ports

Dual ATA133/100 Up to 4 USB 2.0 ports

### Onboard I/O

1 floppy port 2 fast UART 16500 serial 1 ECP/EEP parallel port PS/2 mouse & keyboard conn.

## Man<u>ageability</u>

IPMI 2.0 socket, Watch Dog, SuperDoctor III

#### Thermal Control

Fan speed control & overheat/fan fail LED indication

AMI 8 Mb Flash EEPROM

## Zero Channel RAID Card & Heatsinks



**AOC-LPZCR2** (SAS with SES2)



AOC-LPZCR1 (SCSI & SATA all-in-one)



AOC-SOZCR1 (SCSI & SATA all-in-one)



**SNK-P0022** (1U passive heatsink)



SNK-P0023P 2U and above)



**SNK-P0012** (Passive heatsink for (1U passive heatsink)



**SNK-P0013** (Passive heatsink for 2U and above)



SNK-P0014AP(4) (3/4-wire active heatsink for 4U and tower)













Model	H8DM8-2/H8DME-2	H8DMR-82/H8DMR-i2	H8DA8-2/H8DAE-2	H8SMi-2/H8SMA-2	H8SSL-i2
Processor	Dual-Core AMD Opteron 2000 Series	Dual-Core AMD Opteron 2000 Series	Dual-Core AMD Opteron 2000 Series	Dual-Core AMD Opteron 1000 Series	Dual-Core AMD Opteron 1000 Series
Chipset	nVidia MCP55-Pro NEC 720400 PCI-X Bridge	nVidia MCP55-Pro NEC 720400 PCI-X Bridge	nVidia MCP55-Pro + IO55 NEC 720400 PCI-X Bridge	nVidia MCP55-Pro	ServerWorks HT1000
Form Factor	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 12" x 13.05"	ATX 12" x 9.6"	ATX 12" x 8"
Optimized Chassis	H8DM8-2: 2U: SC82552-R700 3U: SC83652-R800 SC833S1/S2-R760 4U: SC74552-R760 4U: SC74552-R800 SC743S1/S2-R760/650 H8DME-2: 2U: SC825TO-R700 3U: SC833TO-R760 4U: SC745TO-R800 SC743TQ/i-R760/650	H8DMR-82: 1U: SC8155+-560 H8DMR-I2: 1U: SC815TQ+-560	H8DA8-2: 4U: SC743S1/S2-645 H8DAE-2: 4U: SC743T-645	H8SMA-2: 4U: SC743TQ/T/i-645 Mid-Tower: SC733TQ/T/i-450/645 H8SMi-2: 1U: SC512F-260 SC811T-300	1U: SC512F-260 SC811T-300 Mid-Tower: SC733TQ/T/i-450/645
Memory Capacity & Slots	32/32/64 GB ECC Registered DDR2 667/533/400 SDRAM in 16 DIMMs	16/16/32 GB ECC Registered DDR2 667/533/400 SDRAM in 8 DIMMs	16/16/32 GB ECC Registered DDR2 667/533/400 SDRAM in 8 DIMMS	8 GB ECC/non-ECC Unbuffered DDR2 800/667/533 SDRAM in 4 DIMMs*	8 GB ECC/non-ECC Unbuffered DDR2 800/667/533 SDRAM in 4 DIMMs*
Expansion Slots	2 PCI-Express x8 2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 100 MHz	1 Universal PCI-X 133 MHz or 1 PCI-Express x8 1 Universal PCI-X 100 MHz or 1 PCI-Express x8	2 PCI-Express x16 1 PCI-Express x8 1 PCI-Express x4 1 64-bit PCI-X 133 MHz 1 64-bit PCI-X 100 MHz	1 PCI-Express x16 1 PCI-Express x8 (using x16 slot) 1 PCI-Express x4 (using x8 slot) 3 32-bit PCI	1 64-bit PCI-X 133MHz 2 32-bit PCI
Onboard SAS/ SCSI/SATA/RAID	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (H8DMs-2 only) n/Vidia MCP55-Pro for 6 SATA2 ports, RAID 0, 1, 0+1, 5, JBOD	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (H8DMR-82 only) nVidia MCP55-Pro for 6 SATA2 ports, RAID 0, 1, 0+1, 5, JBOD	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (H8DA#-2 only) nVidia MCP55-Pro for 6 SATA2 ports, RAID 0, 1, 0+1, 5, JBOD	nVidia MCP55-Pro for 6 SATA2 ports, RAID 0, 1, 0+1, 5, JBOD	ServerWorks HT1000 for 4 SATA ports RAID 0, 1, 5, 10
Zero Channel RAID Support	AOC-LPZCR1 or AOC-LPZCR2 (H8DM8-2 only)	AOC-LPZCR1 or AOC-LPZCR2 (H8DMR-82 only)	AOC-LPZCR1 or AOC-LPZCR2 (H8DA8-2 only)	N/A	N/A
Onboard LAN	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet	Dual LAN with Broadcom 5704 Gigabit Ethernet
Onboard VGA	ATI ES1000 16MB PCI graphics controller	ATI ES1000 16MB PCI graphics controller	N/A	ATI ES1000 16MB PCI graphics controller (H8SMi-2 only)	ATI ES1000 16MB PCI graphics controller
Built-in EIDE/USB Ports	Single ATA133/100 Up to 6 USB 2.0 ports	Single ATA133/100 Up to 4 USB 2.0 ports	Single ATA133/100 Up to 8 USB 2.0 ports	Single ATA133/100 Up to 8 USB 2.0 ports (H8SMA-2 only)	Single ATA133/100 Up to 4 USB 2.0 ports
Other Onboard I/O Devices	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 1 ECP/EPP parallel port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn. ALC883 audio CODEC high def. 7.1-channel sound Front-side audio header 2 IEEE1394 headers	1 floppy port 1 ECP/EPP parallel port 2 last UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.
Manageability	SIMLC slot (IPMI 2.0) with KVM and virtual media option, Watch Dog, SuperDoctor III	SIM1U slot (IPMI 2.0) with KVM and virtual media option, Watch Dog, SuperDoctor III	SIMLP slot (IPMI 2.0) with KVM and virtual media option, Watch Dog, SuperDoctor III	SIMLP slot (IPMI 2.0) with KVM and virtual media option, Watch Dog, SuperDoctor III	1U/LP IPMI 2.0 slot, Watch Dog, SuperDoctor III
PC Health Monitoring	Monitors CPU core voltages, CPU 4-phase-switching voltage regulator, 3.3V, 45V, +12V, -12V, 5V standby, 1.5V, VBAT, Hyper Transport voltage 1.2V, memory voltage 1.8V, and total of 8-fan status, supports system management utility, mem VTT, MCP55 Vcore, chassis intrusion header	Monitors CPU core voltages, CPU 4-phase-switching voltage regulator, 3.3V, 45V, 12V, 12V, 5V standby, 1.5V, VBATHyper Transport voltage 1.2V, memory voltage 1.8V, and total of 5-fan status, supports system management utility, mem VTT, MCP55 Vcore, chassis intrusion header	Monitors CPU core voltages, CPU 4-phase-switching voltage regulator, 3:W, +5V, +12V, -12V, 5V standby, 1:SV, VBAT, Hyper Transport voltage 1:2V, memory voltage 1:8V, and total of 8-fan status, supports system management utility, mem VTT, MCP55 Vcore, chassis intrusion header	Monitors CPU core voltages, CPU 4-phase-switching voltage regulator, 3.3V, +5V, +12V, 5V standby, and total of 5-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, +5V, +12V, -12V, 5V standby, 2.5V standby, VBAT, Hyper Transport voltage 1.2V, DDR termination, and total of 5-fan status, supports system management utility, chassis intrusion header
Thermal Control	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	PWM Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication
Other Features	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/external modem ring-on, WOL, control of power-on mode for recovery from AC power loss & S3 STR support	ACPI power management, internal/external modern ring-on, WOL, control of power-on mode for recovery from AC power loss & S3 STR support	ACPI/API power management, internal/external modern ring-on, WOL, control of power-on mode for recovery from AC power loss
BIOS	AMI 8 Mb Flash ROM	AMI 8 Mb Flash ROM	AMI 8 Mb Flash ROM	AMI 4 Mb Flash ROM	AMI 4 Mb Flash ROM

## **Optimized Chassis Highlights**



## SUPER® SC745 Series

- 8 hot-swap drive bays Tower/4U rackmount server chassis
- 100% cooling redundancy
- Redundant 800W/700W power supply with I<sup>2</sup>C mgt.
- High Efficiency Power



## SUPER® SC743 Series

- 8 hot-swap drive bays
   Triple redundant 760W power with I<sup>2</sup>C mgt. (R760 only)
   6 hot-swap fans for 100% cooling redundancy
- Tool-less PCI & rotatable drive bay module



## SUPER® SC836 Series

- 16 hot-swap drive bays
   100% cooling redundancy
   Redundant 800W power supply with I<sup>2</sup>C mgt.
- High Efficiency Power



## SUPER●® SC825 Series

- 8 hot-swap drive bays

- Optional butterly riser card
  Up to 7 low profile expansion cards
  Redundant 700W power supply with I<sup>2</sup>C mgt.
- High Efficiency Power



## SUPER® SC815+ Series

- 4 hot-swap drive bays
   High density slim 1U rackmount
   700W cold-swap power supply with FC mgt.
   Optional 650W redundant power supply
   High Efficiency Power

# **Key Features and Accessories**

	H8DM8-2/E-2	H8DMR-82/i2	H8DA8-2/E-2	H8SMi-2/A-2	Fan Setting
SC745 Series	SC745S2-700/R800 (SCSI) SC745TQ-700/R800 (SATA/IDE) 100% Cooling & High Performance • 4U/Tower convertible • 8 hot-swap SCA/SATA/fixed drives • 700W or 800W with redundancy • Passive heatsink*: SNK-P0023P • Air shroud: CSE-PT0123	N/A	SC745S2-700/R800 (SCSI) SC745TQ-700/R800 (SATA/IDE) High Performance Video Server  • 4U/Tower convertible  • 8 hot-swap SCA/SATA/fixed drives  • 700W or 800W with redundancy  • Passive heatsink*: SNK-P0023P  • Air shroud: CSE-PT0123	N/A	3-pin Server
SC743 Series	SC743S1-R760/650 (SCSI) SC743TQ/i-R760/650 (IDE) 100% Cooling and Redundancy • 4U/Tower convertible • 8 hot-swap SCA/8 fixed drive bays • Triple 760W/650W • Passive heatsink*: SNK-P0023P	N/A	SC743S1-645 (SCSI) SC743i-645 (IDE) Low Noise Workstation  • 4U/Tower convertible  • 8 hot-swap SCA/SATA/fixed drives  • Low noise 645W  • Passive heatsink*: SNK-P0023P  • Exhaust fan*: FAN-0091	SC743T/i-645 (SATA/IDE) Low Noise Workstation  • 4U/Tower convertible  • 8 hot-swap SATA/8 fixed drive bays  • Low noise 645W  • Active heatsink*: SNK-P0024AP4	SC743S/i- R760/650: 3-pin Server SC743S/T/i-645: 4-pin Workstation
SC836 Series	SC836S2-R800 (SCSI) SC836TQ/E1/E2-R800 (SATA/IDE) 100% Cooling and Redundancy • 16 SCA/SATA drive bays • Redundant 800W with I <sup>®</sup> C mgt. • Passive heatsink*: SNK-P0023P	N/A	SC836S2-R800 (SCSI) SC836TQ/E1/E2-R800 (SATA/IDE) High Performance Video Server • 16 SCA/SATA drive bays • Redundant 800W with I <sup>®</sup> C mgt. • Passive heatsink*: SNK-P0023P	N/A	3-pin Server
SC825 Series	SC825S2-R700 (SCSI) SC825TQ-R700 (SATA/IDE) High Density & Efficiency Power • 8 hot-swap SCA/SATA drive bays • Redundant 700W with I°C • Passive heatsink': SNK-P0023P • Air shroud: MCP-310-00025-01	N/A	N/A	N/A	3-pin Server
SC815 Series	N/A	SC815S+-560 (SCSI) SC815TQ+-560 (SATA/IDE) High Performance 1U  4 hot-swap SCA/SATA drive bays  560W power supply  1U Passive heatsink*: SNK-P0022  1U Riser cards*: CSE-RR1U-X(LP) CSE-RR1U-EL(P)	N/A	N/A	3-pin Server













Madal	HODAO/HODAE	110000/11000:	H8DCE	H8DCE-HTe	H8DSL-HTi
Model	H8DA8/H8DAE	H8DC8/H8DCi	H8DCE	H8DCE-H1e	H8DSL-H11
Processor	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series
Chipset	AMD 8131 PCI-X Tunnel AMD 8111 I/O Hub	nVidia nForce Pro 2200 nVidia nForce Pro 2050 AMD 8132 PCI-X Tunnel	nVidia nForce Pro 2200 nVidia nForce Pro 2050	nVidia nForce Pro 2200 nVidia nForce Pro 2050	ServerWorks HT1000
Form Factor	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 9.6" x 13.05"
Optimized Chassis	H8DA8: 2U: SC823S-R500LP/550LP 3U: SC833S1-R760/SC933S2-R760 SC833S-R760/550 4U: SC743S1-R760/650 H8DAE: 2U: SC823I-550LP 4U: SC743I-R760/650	H8DC8: 4U: SC743S1-645 H8DCi: 4U: SC743I-645 Mid-Tower: SC733I-645	4U: SC743T-645 SC743I-645 Mid-Tower: SC733T-645	1U: SC813T-500C-HTe 4U: SC743T-645 Mid-Tower: SC733T-645	1U: SC813T-500C SC812L-420C
Memory Capacity & Slots	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMS	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs
Expansion Slots	2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 66 MHz 2 32-bit PCI	2 PCI-Express x16 1 PCI-Express x4 (using x8 slot) 2 64-bit PCI-X 133/100 MHz 1 64-bit PCI-X 100 MHz 1 32-bit PCI	2 PCI-Express x16 2 PCI-Express x4 (using x8 slot) 3 32-bit PCI	1 HyperTransport connector 2 PCI-Express x16 1 PCI-Express x4 (using x8 slot) 3 32-bit PCI	1 HyperTransport connector 1 64-bit PCI-X 133 MHz
Onboard SAS/ SCSI/SATA/RAID	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (HBDA8 only)	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (HBDC8 only) NVidia nForce Pro 2200 SATA (3Gbps) controller for 4 SATA ports	nVidia nForce Pro 2200 & 2050 SATA (3Gbps) controller for 8 SATA ports nVidia RAID 2.0	nVidia nForce Pro 2200 & 2050 SATA (3Gbps) controller for 8 SATA ports nVidia RAID 2.0	ServerWorks HT1000 for 4 SATA ports
Zero Channel RAID Support	AOC-LPZCR1 or AOC-LPZCR2 (H8DA8 only)	AOC-LPZCR1 or AOC-LPZCR2 (H8DC8 only)	N/A	N/A	N/A
Onboard LAN	Dual LAN with Broadcom 5704 Gigabit Ethernet	Dual LAN with nVidia nForce Pro 2200 & 2050 Gigabit Ethernet	Dual LAN with nVidia nForce Pro 2200 & 2050 Gigabit Ethernet	Dual LAN with two Broadcom 5721 Gigabit Ethernet	Dual LAN with Broadcom 5704 Gigabit Ethernet
Onboard VGA	ATI Rage XL 8MB PCI graphics controller	N/A	N/A	ATI Rage XL 8MB PCI graphics controller	ATI Rage XL 8MB PCI graphics controller
Built-in EIDE/USB Ports	Dual ATA133/100 Up to 5 USB 1.1 ports	Dual ATA133/100 Up to 8 USB 2.0 ports	Dual ATA133/100 Up to 8 USB 2.0 ports	Dual ATA133/100 Up to 6 USB 2.0 ports	Single ATA100 Up to 4 USB 2.0 ports
Other Onboard I/O Devices	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 1 ECP/EPP parallel port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn. AC'97 audio CODEC high quality 6-channel sound Front-side audio header	1 floppy port 1 ECP/EPP parallel port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn. AC'97 audio CODEC high quality 6-channel sound Front-side audio header	1 floppy port 1 ECP/EPP parallel port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn. AC'97 audio CODEC high quality 6-channel sound Front-side audio header	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.
Manageability	Low-profile IPMI 2.0 slot Watch Dog, SuperDoctor III	Watch Dog, SuperDoctor III	Watch Dog, SuperDoctor III	Low-profile IPMI 2.0 slot Watch Dog, SuperDoctor III	1U IPMI 2.0 slot Watch Dog, SuperDoctor III
PC Health Monitoring	Monitors CPU core voltages, 3.3V, +5V, +12V, -12V, 3.3V standby, Hyper Transport voltage 1.2V, memory voltage 2.5V, DDR termination 1.25V, chipset voltage 1.8V, and total of 8-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, 3.3V, +5V, +12V, -12V, 3.3V standby, Hyper Transport voltage 1.2V, memory voltage 2.5V, nVidia nForce Pro 2200 & 2050 voltage 1.5V, and total of 8-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, 3.3V, +5V, +12V, -12V, 3.3V standby, Hyper Transport voltage 1.2V, memory voltage 2.5V, nVidia nForce Pro 2200 & 2050 voltage 1.5V, and total of 8-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, 3.3V, +5V, +12V, -12V, 3.3V standby, Hyper Transport voltage 1.2V, memory voltage 2.5V, n/idia nForce Pro 2200 & 2050 voltage 1.5V, and total of 8-fan status, plus 2 chipset fan status, spus 2 chipset fan status, comports system management utility, chassis intrusion header	Monitors CPU core voltages, +5V, +12V, -12V, 5V standby, 2.5V standby, VBAT, Hyper Transport volt- age 1.2V, memory voltage 2.5V, DDR termination 1.25V, and total of 5-fan status, supports system management utility, chassis intrusion header
Thermal Control	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication
Other Features	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/external modern ring-on, WOL, control of power-on mode for recovery from AC power loss & S3 STR support	ACPI power management, internal/external modern ring-on, WOL, control of power-on mode for recovery from AC power loss & S3 STR support	ACPI power management, internal/ external modern fing-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/ external modem ring-on, WOL, con- trol of power-on mode for recovery from AC power loss
BIOS	AMI 4 Mb Flash ROM	AMI 8 Mb Flash ROM	AMI 4 Mb Flash ROM	AMI 8 Mb Flash ROM	AMI 8 Mb Flash ROM

## **Optimized Chassis Highlights**



# SUPER●® SC743S1-R760/650 • 8 hot-swap drive bays • Triple 760W redundant power/650



# SUPER® SC743S1-645 • 8 hot-swap drive bays • 90-degree rotatable drive bay module

- 645W low noise power supply
   Hot-swap redundant PWM cooling fans
   4U x 25.5"/Tower



# SUPER® SC733T-645 • 4 hot-swap SATA drive bays • 2 5.25" expansion bays • 645W low noise power supply • Low noise PWM cooling fans • 16.8" x 7" x 20.9"/Mid Tower



# SUPER® SC823S-R500LP 6 hot-swap SCA drive bays Redundant 500W power with I<sup>\*</sup>C mgt. 4 high-performance hot-swap fans 7 low-profile PCI-X/PCI-E expansion slots



- SUPER●® SC833S-R760
   8 hot-swap SCA drive bays (SAF-TE compliant)
- Triple redundant 760W power with FC mgt.
  6 hot-swap fans for 100% cooling redundancy
  Air-shroud for optimal cooling

## **Key Features and Accessories**

	H8DA8/E	H8DC8/i	H8DCE-(HTe)	Fan Setting
SC743 Series	SC743S1-R760/650 (SCSI) SC743i-R760/650 (IDE) 100% Cooling and Power Redundancy • 4U/Tower convertible • 8 hot-swap SCA/8 fixed drive bays • Triple 760W/550W redundant cooling • Passive heatsink*: SNK-P0013	SC743S1-645 (SCSI) SC743i-645 (IDE) Low Noise Workstation • 4U/Tower convertible • 8 hot-swap SCA/8 fixed drive bays • Low noise 645W • Active heatsink*: SNK-P0014AP4	SC743T-645 (SATA) SC743i-645 (IDE) Low Noise Workstation  • 4U/Tower convertible  • 8 hot-swap SATA/8 fixed drive bays  • Low noise 645W  • Active heatsink*: SNK-P0014AP4	SC743S/i-R760/650: 3-pin Server SC743S/T/i-645: 4-pin Workstation
SC833 Series	SC833S-R760/550 (SCSI) 100% Cooling and Power Redundancy • 8 hot-swap SCA drive bays • Triple 760W/550W power supply • Passive heatsink*: SNK-P0013	N/A	N/A	3-pin Server
SC823 Series	SC823S-R500LP/550LP (SCSI) SC823i-550LP (IDE) High Performance and Power Redundancy • 6 hot-swap SCA/6 fixed drive bays • Redundant 500W/550W • 7 low-profile expansion slots • Passive heatsink*: SNK-P0013 • Air shroud*: CSE-PT83	N/A	N/A	3-pin Server
SC733 Series	N/A	SC733i-645 (IDE) Low Noise and Cost Effective  • 4 fixed drive bays  • Low noise 645W  • Active heatsink*: SNK-P0014PA4	SC733T-645 (SATA) Low Noise and Cost Effective  • 4 hot-swap SATA drive bays • Low noise 645W • Active heatsink*: SNK-P0014PA4	4-pin Workstation

\* Sold separately













				Complete State Sta	
Model	H8DAR-8/H8DAR-i	H8DAR-T/H8DAR-E	H8DSR-8/H8DSR-i	H8DCR-3/H8DCR-i	H8SSL-i/H8SSL-R10
Processor	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series	Dual-Core AMD Opteron 200 Series
Chipset	AMD 8131 PCI-X Tunnel AMD 8111 I/O Hub	AMD 8132 PCI-X Tunnel AMD 8111 I/O Hub	ServerWorks HT2000 ServerWorks HT1000	nVidia nForce Pro 2200 AMD 8132 PCI-X Tunnel	ServerWorks HT1000
Form Factor	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 12" x 13.05"	EATX 9.6" x 13.05"
Optimized Chassis	H8DAR-8: 1U: SC813S-500C SC812S-420C H8DAR-I: 1U: SC812I-420C SC812L-420C	H8DAR-T: 1U: SC813T+-500 H8DAR-E: 1U: SC813i+-500	H8DSR-8: 1U: SC813S+-500 H8DSR-i: 1U: SC813i+500	H8DCR-3: 1U: SC813TQ+-500 H8DCR-I: 1U: SC813T+-500 SC813i+-500	1U: SC512L-260 SC512C-260 SC811FT-260 (OEM only) Mid-tower: SC733T-450 SC733i-450
Memory Capacity & Slots	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	16/32/32 GB ECC Registered DDR 400/333/266 SDRAM in 8 DIMMs	4 GB ECC/non-ECC Unbuffered DDR 400/333 SDRAM in 4 DIMMs
Expansion Slots	1 64-bit PCI-X 100 MHz	2 64-bit PCI-X 133/100 MHz	1 Universal PCI-X 133 MHz or 1 PCI- Express x8 (low-profile) 1 Universal PCI-X 100 MHz or 1 PCI-Express x8	1 Universal PCI-X 133 MHz or 1 PCI-Express x8 1 Universal PCI-X 100 MHz or 1 PCI- Express x8 (low-profile)	1 64-bit PCI-X 133 MHz 2 32-bit PCI
Onboard SAS/ SCSI/SATA/RAID	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (HBDAR-8 only)	Marvell 88SX6041 controller for 4 SATA ports (H8DAR-T only)	Adaptec 7902W dual-channel Ultra320 SCSI with host RAID (HBDSR-8 only) ServerWorks HT1000 for 4 SATA ports	Adaptec 9410W for 8 SAS/SATA (4 int. & 4 ext); RAID 0, 1, 10 (HBDCR-3 only) nVidia nForce Pro 2200 controller for 4 SATA ports	ServerWorks HT1000 for 4 SATA ports RAID 0, 1, 10 (H8SSL-R10 only)
Zero Channel RAID Support	AOC-SOZCR1 (H8DAR-8 only)	AOC-LPZCR1 or AOC-LPZCR2 (H8DAR-T only)	AOC-LPZCR1 or AOC-LPZCR2 (H8DSR-8 only)	AOC-LPZCR2 (H8DCR-3 only)	N/A
Onboard LAN	Dual LAN with Broadcom 5704 Gigabit Ethernet	Dual LAN with Broadcom 5704 Gigabit Ethernet	Dual LAN with ServerWorks HT2000 Gigabit Ethernet	Dual LAN with two Broadcom 5721 Gigabit Ethernet	Dual LAN with Broadcom 5704 Gigabit Ethernet
Onboard VGA	ATI Rage XL 8MB PCI graphics controller	ATI Rage XL 8MB PCI graphics controller	ATI Rage XL 8MB PCI graphics controller	ATI Rage XL 8MB PCI graphics controller	ATI Rage XL 8MB PCI graphics controller
Built-in EIDE/USB Ports	Dual ATA133/100 Up to 5 USB 1.1 ports	Dual ATA133/100 Up to 5 USB 1.1 ports	Single ATA100 Up to 4 USB 2.0 ports	Dual ATA133/100 Up to 4 USB 2.0 ports	Single ATA100 Up to 4 USB 2.0 ports
Other Onboard I/O Devices	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.	1 floppy port 2 fast UART 16550 serial ports PS/2 mouse & keyboard conn.
Manageability	1U IPMI 2.0 slot Watch Dog, SuperDoctor III	1U IPMI 2.0 slot Watch Dog, SuperDoctor III	1U IPMI 2.0 slot Watch Dog, SuperDoctor III	1U IPMI 2.0 slot Watch Dog, SuperDoctor III	1U/Low-profile IPMI 2.0 slot Watch Dog, SuperDoctor III
PC Health Monitoring	Monitors CPU core voltages, 3.3V, +5V, +12V, -12V, 3.3V standby, Hyper Transport voltage 1.2V, memory voltage 2.5V, DDR termination 1.25V, chipset voltage 1.8V, and total of 5-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, 3.3V, +5V, +12V, -12V, battery voltage, total of 5-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, +5V, +12V, -12V, 5V standby, 2.5V standby, VBAT, Hyper Transport voltage 1.2V, memory voltage 2.5V, DDR termination 1.25V, and total of 5-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, 1.5V, 2.5V, 3.3V, +5V, +12V, -12V, 3.3V standby, Hyper Transport voltage 1.2V, memory voltage 2.5V, and total of 5-fan status, supports system management utility, chassis intrusion header	Monitors CPU core voltages, +5V, +12V, +12V, 5V standby, 2.5V standby, VBAT, Hyper Transport voltage 1.2V, memory voltage 2.5V, DDR termination 1.25V, and total of 5-fan status, supports system management utility, chassis intrusion header
Thermal Control	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication	Fan speed control & overheat LED indication
Other Features	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss	ACPI power management, internal/ external modern ring-on, WOL, con- trol of power-on mode for recovery from AC power loss
BIOS	AMI 4 Mb Flash ROM	AMI 4 Mb Flash ROM	AMI 8 Mb Flash ROM	AMI 8 Mb Flash ROM	AMI 4 Mb Flash ROM

## **Optimized Chassis Highlights**



# SUPER® SC813S-500C • 4 hot-swap SCA drive bays • 500W cold-swap power with PC mgt.

- 1 PCI-X slot
- 1 slim CD & 1 slim floppy drive 1U x 25.6"



# SUPER® SC813T+-500 • 4 hot-swap SATA drive bays • 500W cold-swap power with I<sup>o</sup>C mgt.

- 2 PCI-X slots
- 1 slim CD & 1 slim floppy drive 1U x 25.6"



# SUPER® SC813S-500C • 3 hot-swap SCA drive bays • Powerful 420W power supply

- 1 PCI-X slot
- 1 slim CD & 1 slim floppy drive 1U x 25.6"



#### SUPER® SC811FT-260 (OEM only)

- 2 hot-swap SATA drive bays
  260W power supply for single processor
  2x 10cm blower fans for optimal cooling
- 1 PCI-X slot
- 1U x 22.6"



### **SUPER**●® SC512C-260

- Mini 1U for shallow racks
   260W power supply for single processor
   1x 10cm blower fan
- 1 PCI-X slot
- 1U x 14"

## **Key Features and Accessories**

	H8DAR-8/i	H8DAR-T/E	H8DSR-8/i, H8DCR-3	H8SSL-i/R10	Fan Setting
SC813 Series	SC813S-500C (SCSI) High Performance and Storage  • 4 hot-swap SCA • 500W cold -swap with I <sup>2</sup> C mgt. • 1U Passive heatsink*: SNK-P0012 • 1U Riser cards*: CSE-RR1U-X • Air shroud*: CSE-PT82	SC813T+-500 (SATA) SC813i+-500 (IDE) High Performance and Storage • 4 hot-swap SATA/4 fixed • 500W cold -swap with PC mgt. • 1U Passive heatsink*: SNK-P0012 • 1U Riser cards*: CSE-RR1U-X CSE-RR1U-XLP • Air shroud*: CSE-PT70	SC813S+-500 (SCSI) SC813i+-500 (IDE) High Performance and Storage • 4 hot-swap SCA/4 fixed • 500W cold -swap with I <sup>2</sup> C mgt. • 1U Passive heatsink*: SNK-P0012 • 1U Riser cards*: CSE-RR1U-X CSE-RR1U-XLP • Air shroud*: CSE-PT70	N/A	3-pin Server
SC812 Series	SC812S-420C (SCSI) SC812I-420C (IDE) SC812L-420C (IDE internal) Versatile and Cost Effective • 3 hot-swap SCA/3 fixed/3 internal drive bays • 420W power supply • 1U Passive heatsink*: SNK-P0012 • 1U Riser cards*: CSE-RR1U-X • Air shroud*: CSE-PT82	N/A	N/A	N/A	3-pin Server
SC811 Series	N/A	N/A	N/A	SC811FT-260 (OEM only) Cost Effective • 2 hot-swap SATA • 260W power supply • 1U Passive heatsink*: SNK-P0012 • 1U Riser cards*: CSE-RR1U-X • Air shroud*: CSE-PT0113	3-pin Server
SC512 Series	N/A	N/A	N/A	SC512C-260 Mini 1U and Cost Effective  • 1 internal 3.5" SATA  • 260W power supply  • 1U Passive heatsink*: SNK-P0012  • 1U Riser cards*: CSE-RR1U-X  • Rail kits*: CSE-PT8  • Air shroud*: CSE-PT0112	3-pin Server

<sup>\*</sup> Sold separately

# NEW!

# **NEW!**









	A+ Server 1021M-82/T2	A+ Server 1041M-82/T2	A+ Server 1020P-8R/TR
PROCESSOR SUPPORT	Dual-Core AMD Opteron 2000 series	Dual-Core AMD Opteron 8000 series	Dual-Core AMD Opteron 200 series
KEY APPLICATIONS	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)	Mission critical applications, enterprise server, large database, e-business, online transaction processing	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)
OUTSTANDING FEATURES	4 SCA/SATA drive bays Universal PCI-X or PCI-Express 16/16/32 GB DDR2 667/533/400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support (1021M-82 only) SIM1U (IPMI 2.0) management 560W high-efficiency power supply	1U 4-way system 3 SCA/SATA drive bays 1 PCI-Express x16 or HyperTransport Up to 32/32/64 GB DDR2 667/533/400 SDRAM 2 Gigabit Ethernet ports SIMSO (IPMI 2.0) management Powerful 1000W cold swap power supply	4 SCA/SATA drive bays Universal PCI-X or PCI-Express 16 GB DDR400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support 1U IPMI 2.0 with optional 3rd LAN 700W redundant power supply
SERVERBOARD/CHIPSET	H8DMR-82/i2 / HyperTransport nVidia MCP55-Pro NEC 720400 PCI-X Bridge	H8QM8-2+/E-2+ / HyperTransport nVidia MCP55-Pro AMD 8132 PCI-X Tunnel	H8DSP-8/i / HyperTransport ServerWorks HT2000 ServerWorks HT1000
SYSTEM MEMORY (Max.)	16/16/32 GB ECC Reg. DDR2 667/533/400 SDRAM in 8 DIMM sockets	32/32/64 GB ECC Reg. DDR2 667/533/400 SDRAM in 16 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets
EXPANSION SLOTS	1 Universal PCI-X 133 MHz or 1 PCI-Express x8 (full height) 1 Universal PCI-X 100 MHz or 1 PCI-Express x8 (low-profile)	1 PCI-Express x16 or HyperTransport conn.	1 Universal PCI-X 133 MHz or 1 PCI-Express x8 (full height) 1 Universal PCI-X 100 MHz or 1 PCI-Express x8 (low-profile)
ONBOARD SAS/SCSI/SATA/ IDE/RAID	Adaptec® 7902 2-channel Ultra320 SCSI with host RAID (1021M-82 only) nVidia MCP55-Pro for 4 SATA (1021M-T2 only)	Adaptec® 7902 2-channel Ultra320 SCSI (1041M-92 only) nVidia MCP55-Pro for 3 SATA (1041M-T2 only)	Adaptec® 7902 2-channel Ultra320 SCSI (1020P- 8R only) ServerWorkst HT1000 for 4 SATA (1020P-TR only)
ZERO CHANNEL RAID SUPPORT	AOC-LPZCR1 or AOC-LPZCR2 (1021M-82 only)	N/A	AOC-LPZCR1 (1020P-8R only)
ONBOARD LAN/VGA/AUDIO	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller	Dual LAN with Intel 82546GB Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller	Dual LAN with ServerWorks HT2000 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller
MANAGEMENT	SIM1U (IPMI 2.0) slot, SuperDoctor III, Watch Dog	SIMSO (IPMI 2.0) socket, SuperDoctor III, Watch Dog	1U IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog
INTERNAL STORAGE (Max)	1.2/1.6 TB	0.9/1.2 TB	1.2/1.6 TB
DRIVE BAYS	4 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (1021M-82 only) 4 x 3.5" hot-swap SATA drive bays (1021M-T2 only)	3 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (1041M-82 only) 3 x 3.5" hot-swap SATA drive bays (1041M-T2 only)	4 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (1020P-8R only) 4 x 3.5" hot-swap SATA drive bays (1020P-TR only)
PERIPHERAL BAYS	1 slim DVD-ROM drive optional 1 slim floppy drive	1 slim DVD-ROM drive optional slim floppy drive	1 slim DVD-ROM drive 1 slim floppy drive
POWER SUPPLY	560W high-efficiency power supply	1000W cold-swap power supply with I <sup>2</sup> C built-in	700W redundant power supply with I <sup>2</sup> C built-in
COOLING SYSTEM	4 x 4cm heavy duty counter-rotating fans with air-shroud & optimal fan speed control	6 x 4cm heavy duty counter-rotating fans with air-shroud & optimal fan speed control	4 x 4cm heavy duty counter-rotating fans with optimal fan speed control
FORM FACTOR	1U Rackmount 437 x 43 x 650mm (17.2" x 1.7" x 25.6")	1U Rackmount 448 x 44 x 760mm (17.64" x 1.7" x 27")	1U Rackmount 437 x 43 x 686mm (17.2" x 1.7" x 27")



A+ Server 1040C-8/T	A+ Server 1020A-T	A+ Server 1020S-8	A+ Server 1020A-8
Dual-Core AMD Opteron 800 series	Dual-Core AMD Opteron 200 series	Dual-Core AMD Opteron 200 series	Dual-Core AMD Opteron 200 series
Mission critical applications, enterprise server, large database, e-business, online transaction processing	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)
1U 4-way system 3 SCA drive bays 1 PCI-Express x8 or HyperTransport Up to 32 GB DDR 400 SDRAM 2 Gigabit Ethernet ports Powerful 1000W power supply	4 SATA drive bays 2 PCI-X 133/100 MHz 16 GB DDR400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support 1U IPMI 2.0 with optional 3rd LAN 500W cold-swap power supply	4 SCA drive bays Universal PCI-X or PCI-Express 16 GB DDR400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support 1U IPMI 2.0 with optional 3rd LAN 500W cold-swap power supply	3 SCA drive bays 1 PCI-X 100 MHz 16 GB DDR400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support 1U IPMI 2.0 420W power supply
H8QC8+/E+ / HyperTransport nVidia nForce Pro 2200 AMD 8132 PCI-X Tunnel	H8DAR-T / HyperTransport AMD 8132 PCI-X Tunnel AMD 8111 I/O Hub	H8DSR-8 / HyperTransport ServerWorks HT2000 ServerWorks HT1000	H8DAR-8 / HyperTransport AMD 8131 PCI-X Tunnel AMD 8111 I/O Hub
32/64 GB ECC Reg. DDR 400/333 SDRAM in 16 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets
1 PCI-Express x8 or HyperTransport conn.	2 64-bit PCI-X 133/100 MHz	1 Universal PCI-X 100 MHz or 1 PCI-Express x8 (full height) 1 Universal PCI-X 133 MHz or 1 PCI-Express x8 (low-profile)	1 64-bit PCI-X 100 MHz
Adaptec® 7902 2-channel Ultra320 SCSI (1040C-8 only) nVidia nForce Pro 2200 for 3 SATA (1040C-T only)	Marvell 88SX6041 for 4 SATA	Adaptec® 7902 2-channel Ultra320 SCSI	Adaptec® 7902 2-channel Ultra320 SCSI
N/A	AOC-LPZCR1 or AOC-LPZCR2	AOC-LPZCR1 or AOC-LPZCR2	AOC-SOZCR1
Dual LAN with Intel 82546GB Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller	Dual LAN with Broadcom 5704 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller	Dual LAN with ServerWorks HT2000 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller	Dual LAN with Broadcom 5704 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller
IPMI 2.0 socket, SuperDoctor III, Watch Dog	1U IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog	1U IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog	1U IPMI 2.0 slot, SuperDoctor III, Watch Dog
900 GB	1.6 TB	1.2 TB	900 GB
3 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (1040C-8 only) 3 x 3.5" hot-swap SATA drive bays (1040C-T only)	4 x 3.5" hot-swap SATA drive bays	4 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE	3 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE
1 slim DVD-ROM drive optional slim floppy drive	1 slim CD-ROM drive 1 slim floppy drive	1 slim CD-ROM drive 1 slim floppy drive	1 slim CD-ROM drive 1 slim floppy drive
1000W cold-swap power supply with I <sup>2</sup> C built-in	500W cold-swap power supply with I <sup>2</sup> C built-in	500W cold-swap power supply with I <sup>2</sup> C built-in	420W
6 x 4cm heavy duty counter-rotating fans with air-shroud & optimal fan speed control	4 x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control	4 x 4cm heavy duty counter-rotating fans with air-shroud & optimal fan speed control	2 x 10cm heavy duty blowers with air shroud & optimal fan speed control
1U Rackmount 448 x 44 x 760mm (17.64" x 1.7" x 27")	1U Rackmount 437 x 43 x 650mm (17.2" x 1.7" x 25.6")	1U Rackmount 437 x 43 x 650mm (17.2" x 1.7" x 25.6")	1U Rackmount 437 x 43 x 650mm (17.2" x 1.7" x 25.6")







	A+ Server 1020C-3	A+ Server 1010P-8R/TR	A+ Server 1011M-T2
PROCESSOR SUPPORT	Dual-Core AMD Opteron 200 series	Dual-Core AMD Opteron 200 series (single processor support only)	Dual-Core AMD Opteron 1000 series
KEY APPLICATIONS	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)	High-end enterprise server, SQL server, high performance computer cluster (HPCC), explicitly parallel instruction computing (EPIC)	File/print server, firewall applications, mail server, web server for small business, server appliance, cluster node
OUTSTANDING FEATURES	4 SAS drive bays with SES2 Universal PCI-X or PCI-Express 16 GB DDR400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support 1U IPMI 2.0 with optional 3rd LAN 500W cold-swap power supply	4 SCA/SATA drive bays Universal PCI-X or PCI-Express 8 GB DDR400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support (1010P-8R only) 1U IPMI 2.0 with optional 3rd LAN 400W redundant power supply	2 SATA drive bays 1 PCI-X 133 MHz slot 8 GB DDR2 800/667/533 SDRAM 2 Gigabit Ethernet ports SIM1U IPMI 2.0 slot
SERVERBOARD/CHIPSET	H8DCR-3 / HyperTransport nVidia nForce Pro 2200 AMD 8132 PCI-X Tunnel	H8SSP-8/i / HyperTransport ServerWorks HT2000 ServerWorks HT1000	H8SMi-2 / HyperTransport nVidia MCP55-Pro
SYSTEM MEMORY (Max.)	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets	8 GB ECC/non-ECC Unbuffered DDR2 800/667/533 SDRAM in 4 DIMM sockets
EXPANSION SLOTS	1 Universal PCI-X 133 MHz or 1 PCI-Express x8 (full height) 1 Universal PCI-X 100 MHz or 1 PCI-Express x8 (low-profile)	1 Universal PCI-X 133 MHz or 1 PCI-Express x8 (full height) 1 Universal PCI-X 100 MHz or 1 PCI-Express x8 (low-profile)	1 PCI-Express x16
ONBOARD SAS/SCSI/SATA/ IDE/RAID	Adaptec®9410 for 4 SAS; RAID 0, 1, 10	Adaptec® 7902 2-channel Ultra320 SCSI (1010P-8R only) ServerWorkst HT1000 for 4 SATA (1010P-TR only)	nVidia MCP55-Pro for 2 SATA
ZERO CHANNEL RAID SUPPORT	AOC-LPZCR2	AOC-LPZCR1 or AOC-LPZCR2 (1010P-8R only)	N/A
ONBOARD LAN/VGA/AUDIO	Dual LAN with two Broadcom 5721 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller	Dual LAN with ServerWorks HT2000 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller	Dual LAN with Broadcom 5704 Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller
MANAGEMENT	1U IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog	1U IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog	SuperDoctor III, Watch Dog
INTERNAL STORAGE (Max)	1.2 TB	1.2/1.6 TB	800 GB
DRIVE BAYS	4 x 3.5" hot-swap SAS drive bays with SES2 support	4 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (1010P-8R only) 4 x 3.5" hot-swap SATA drive bays (1020P-TR only)	2 x 3.5" hot-swap SATA drive bays
PERIPHERAL BAYS	1 slim CD-ROM drive 1 slim floppy drive	1 slim DVD-ROM drive 1 slim floppy drive	1 slim DVD-ROM drive 1 floppy drive
POWER SUPPLY	500W cold-swap power supply with I <sup>2</sup> C built-in	400W redundant power supply with I <sup>2</sup> C built-in	260W
COOLING SYSTEM	4 x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control	3 x 4cm heavy duty counter-rotating fans with optimal fan speed control	2 x 4cm heavy duty counter-rotating fans with air shroud & optimal fan speed control
FORM FACTOR	1U Rackmount 437 x 43 x 650mm (17.2" x 1.7" x 25.6")	1U Rackmount 437 x 43 x 686mm (17.2" x 1.7" x 27")	1U Rackmount 425 x 44 x 574mm (16.7" x 1.7" x 22.6")



A+ Server 1011S-MR2	A+ Server 2021M-82R/T2R	A+ Server 2020A-8R	A+ Server 4710S-T
Dual-Core AMD Opteron 1000 series	Dual-Core AMD Opteron 2000 series	Dual-Core AMD Opteron 200 series	Dual-Core AMD Opteron 100 series
File/print server, firewall applications, mail server, web server for small business, server appliance, cluster node	Business critical applications, front-end server, database applications, primary server for midsize companies, internet, e-business, server clutering	Business critical applications, front-end server, database applications, primary server for midsize companies, internet, e-business, server clutering	SOHO or departmental server, file/print server, mail server, web server, home server appliance
Optimized for shallow racks 1 PCI-X 133 MHz slot 8 GB DDR2 800/667/533 SDRAM 2 Gigabit Ethernet ports 1U IPMI 2.0 slot	Up to 8 SCA/6 SATA drive bays Low-profile PCI-X and PCI-Express 32/32/64 GB DDR2 667/533/400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support (2021M-82R only) SIMLC (IPMI 2.0) management 700W high-efficiency redundant power supply	6 SCA drive bays 6 low-profile PCI expansions 16 GB DDR 400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support Low-profile IPMI 2.0 slot 500W redundant power supply	4 SATA drive bays 1 PCI-X 133 MHz slot 4 GB DDR 400 SDRAM 2 Gigabit Ethernet ports IPMI 2.0 slot
H8SSL-i2 / HyperTransport ServerWorks HT1000	H8DM8-2/E-2 / HyperTransport nVidia MCP55-Pro NEC 720400 PCI-X Bridge	H8DA8 / HyperTransport AMD 8131 PCI-X Tunnel AMD 8111 I/O Hub	H8SSL-R10 / HyperTransport ServerWorks HT1000
8 GB ECC/non-ECC Unbuffered DDR2 800/667/533 SDRAM in 4 DIMM sockets	32/32/64 GB ECC Reg. DDR2 667/533/400 SDRAM in 16 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets	4 GB ECC/non-ECC Unbuffered DDR 400 SDRAM in 4 DIMM sockets
1 64-bit PCI-X 133 MHz	2 PCI-Express x8 2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 100 MHz (all low-proile slots)	2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 66 MHz 2 32-bit PCI (all low-profile slots)	1 64-bit PCI-X 133 MHz 2 32-bit PCI
ServerWorkst HT1000 for 1 SATA	Adaptec® 7902 2-channel Ultra320 SCSI with host RAID (2021M-82R only) nVidia MCP55-Pro for 6 SATA (2021M-T2R only)	Adaptec® 7902 2-channel Ultra320 SCSI	ServerWorkst HT1000 for 4 SATA RAID, 0, 1, 10
N/A	AOC-LPZCR1 or AOC-LPZCR2 (2021M-82R only)	AOC-LPZCR1 or AOC-LPZCR2	N/A
Dual LAN with Broadcom 5704 Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller	Dual LAN with Broadcom 5704 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller	Dual LAN with Broadcom 5704 Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller
1U IPMI 2.0 slot, SuperDoctor III, Watch Dog	SIMLC (IPMI 2.0) slot, SuperDoctor III, Watch Dog	Low-profile IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog	1U IPMI 2.0 slot, SuperDoctor III, Watch Dog
400 GB	2.4/3.2 TB	1.8 TB	1.6 TB
1 x 3.5" internal drive bay	8 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (2021M-82R only) 6 x 3.5" hot-swap SATA drive bays and 2 spare SATA drive bays (2021M-T2R only)	6 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE 1 x 5.25" drive bay	4 x 3.5" hot-swap SATA drive bays
1 slim CD-ROM drive	1 slim DVD-ROM drive	1 slim CD-ROM drive 1 floppy drive	1 floppy drive
260W	700W high-efficiency redundant power supply with I <sup>2</sup> C built-in	500W redundant power supply with I <sup>2</sup> C built-in	450W
2 x 4cm heavy duty counter-rotating fan with air shroud & optimal fan speed control	3 x 8cm heavy duty fans with air shroud & optimal fan speed control	4 x 8cm heavy duty fans with air shroud & optimal fan speed control	1 x 12cm exhaust thermal fan & 1 x 9cm cooling thermal fan
Mini 1U Rackmount 425 x 44 x 356mm (16.7" x 1.7" x 14")	2U Rackmount 483 x 89 x 645mm (19" x 3.5" x 25.5")	2U Rackmount 424 x 89 x 650mm (16.8" x 3.5" x 25.6")	MidTower 427 x 178 x 531mm (16.8" x 7" x 20.9")











	A+ Server 4711M-T2	A+ Server 4021M-82R/T2R	A+ Server 4020A-8R
PROCESSOR SUPPORT	Dual-Core AMD Opteron 1000 series	Dual-Core AMD Opteron 2000 series	Dual-Core AMD Opteron 200 series
KEY APPLICATIONS	SOHO or departmental server, file/print server, mail server, web server, home server appliance	Mission-critical applications, enterprise server, large database, e-business, Internet, online transaction processing, NAS	Mission-critical applications, enterprise server, large database, e-business, Internet, online transaction processing, NAS
OUTSTANDING FEATURES	4 SATA drive bays PCI-Express and PCI 8 GB DDR2 800/667/533 SDRAM 2 Gigabit Ethernet ports SIMLP IPMI 2.0 slot	100% cooling redundancy Up to 8 SCA/SATA drive bays PCI-X and PCI-Express 32/32/64 GB DDR2 667/533/400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support (4021M-82R only) SIMLC (IPMI 2.0) management 800W high-efficiency redundant power supply	100% cooling redundancy 8 SCA drive bays 16 GB DDR 400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support Low-profile IPMI 2.0 slot Triple redundant 760W + 380W
SERVERBOARD/CHIPSET	H8SMA-2 / HyperTransport nVidia MCP55-Pro	H8DM8-2/E-2 / HyperTransport nVidia MCP55-Pro NEC 720400 PCI-X Bridge	H8DA8 / HyperTransport AMD 8131 PCI-X Tunnel AMD 8111 I/O Hub
SYSTEM MEMORY (Max.)	8 GB ECC/non-ECC Unbuffered DDR2 800/667/533 SDRAM in 4 DIMM sockets	32/32/64 GB ECC Reg. DDR2 667/533/400 SDRAM in 16 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets
EXPANSION SLOTS	1 PCI-Express x16 1 PCI-Express x8 1 PCI-Express x4 3 32-bit PCI	2 PCI-Express x8 2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 100 MHz	2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 66 MHz 2 32-bit PCI
ONBOARD SAS/SCSI/SATA/ IDE/RAID	nVidia MCP55-Pro for 4 SATA RAID, 0, 1, 0+1, 5, JBOD	Adaptec® 7902 2-channel Ultra320 SCSI with host RAID (4021M-82R only) nVidia MCP55-Pro for 6 SATA (4021M-T2R only)	Adaptec® 7902 2-channel Ultra320 SCSI
ZERO CHANNEL RAID SUPPORT	N/A	AOC-LPZCR1 or AOC-LPZCR2 (4021M-82R only)	AOC-LPZCR1 or AOC-LPZCR2
ONBOARD LAN/VGA/AUDIO	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet controller	Dual LAN with nVidia MCP55-Pro Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller	Dual LAN with Broadcom 5704 Gigabit Ether- net controller ATI® Rage XL 8MB PCI graphics controller
MANAGEMENT	SIMLP (IPMI 2.0) slot, SuperDoctor III, Watch Dog	SIMLC (IPMI 2.0) slot, SuperDoctor III, Watch Dog	Low-profile IPMI 2.0 slot with optional 3rd LAN port, SuperDoctor III, Watch Dog
INTERNAL STORAGE (Max)	1.6 TB	2.4/3.2 TB	2.4 TB
DRIVE BAYS	4 x 3.5" hot-swap SATA drive bays	8 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (4021M-82R only) 6 x 3.5" hot-swap SATA drive bays and 2 spare SATA drive bays (4021M-T2R only)	8 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE 3 x 5.25" drive bay
PERIPHERAL BAYS	1 floppy drive	1 floppy drive	1 floppy drive
POWER SUPPLY	450W	800W high-efficiency redundant power supply with I <sup>2</sup> C built-in	Triple redundant power supply (760W + 380W) with I <sup>2</sup> C built-in
COOLING SYSTEM	1 x 12cm exhaust thermal fan & 1 x 9cm cooling thermal fan	3 x 8cm hot-swap cooling fans & 2 x 8cm exhaust fans with air shroud & optimal fan speed control	4 x 8cm hot-swap cooling fans & 2 x 8cm exhaust fans with air shroud & optimal fan speed control
FORM FACTOR	MidTower 427 x 178 x 531mm (16.8" x 7" x 20.9")	4U Rackmount/Tower 437 x 178 x 645mm (17.2" x 3.5" x 25.5")	4U Rackmount/Tower 437 x 178 x 648mm (17.2" x 7" x 25.5")

## NEW!









A+ Workstation 4021A-82/T2	A+ Workstation 4020C-T	A+ Server 4041M-82R/T2R	A+ Server 4040C-8R
Dual-Core AMD Opteron 2000 series	Dual-Core AMD Opteron 200 series	Dual-Core AMD Opteron 8000 series	Dual-Core AMD Opteron 800 series
High-end workstation, business critical applica- tions, front-end server, database applications, video server	High-end workstation, business critical applica- tions, front-end server, database applications, video server	Mission-critical applications, enterprise server, large database, e-business, Internet, online transaction processing	Mission-critical applications, enterprise server, large database, e-business, Internet, online transaction processing
SuperQuiet mode Up to 8 SCA/SATA drive bays 2 PCI-Express x16 16/16/32 GB DDR2 667/533/400 SDRAM 2 Gigabit Ethernet ports ZCR RAID support (4021A-82) SIMLP (IPMI 2.0) management Low-noise 645W with fan speed control	SuperQuiet mode 8 SATA drive bays 2 PCI-Express x16 16 GB DDR 400 SDRAM 2 Gigabit Ethernet ports Low-noise 645W with fan speed control	Enterprise level 4-way system Up to 10 SCA drive bays 2 PCI-Express x16/x8 or HyperTransport 32/32/64 GB DDR2 667/533/400 SDRAM 2 Gigabit Ethernet ports SIMSO (IPMI 2.0) management Redundant 1000W power supply	Enterprise level 4-way system Up to 10 SCA drive bays 2 PCI-Express x8 or HyperTransport 32 GB DDR 400 SDRAM 2 Gigabit Ethernet ports Redundant 1000W power supply
H8DA8-2/E-2 / HyperTransport nVidia MCP55-Pro + IO55 NEC 720400 PCI-X Bridge	H8DCE / HyperTransport nVidia nForce Pro 2200 nVidia nForce Pro 2050	H8QM8-2/E-2 / HyperTransport nVidia MCP55-Pro AMD 8132 PCI-X Tunnel	H8QC8 / HyperTransport nVidia nForce Pro 2200 AMD 8132 PCI-X Tunnel
16/16/32 GB ECC Reg. DDR2 667/533/400 SDRAM in 8 DIMM sockets	16/32 GB ECC Reg. DDR 400/333 SDRAM in 8 DIMM sockets	32/32/64 GB ECC Reg. DDR2 667/533/400 SDRAM in 16 DIMM sockets	32/64 GB ECC Reg. DDR 400/333 SDRAM in 16 DIMM sockets
2 PCI-Express x16 1 PCI-Express x8 1 PCI-Express x4 (using x8 slot) 1 64-bit PCI-X 133 MHz 1 64-bit PCI-X 100 MHz	2 PCI-Express x16 2 PCI-Express x4 (using x8 slot) 3 32-bit PCI	1 PCI-Express x16 or HyperTransport conn. 1 PCI-Express x8 2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 100 MHz	1 PCI-Express x8 or HyperTransport conn. 1 PCI-Express x8 (using x16 slot) 2 64-bit PCI-X 133/100 MHz 2 64-bit PCI-X 100 MHz
Adaptec® 7902 2-channel Ultra320 SCSI with host RAID (4021A-82 only) nVidia MCP55-Pro for 6 SATA (4021A-T2 only)	nVidia nForce Pro 2200 & 2050 SATA (3 Gbps) for 8 SATA nVidia RAID 2.0 support	Adaptec® 7902 2-channel Ultra320 SCSI with host RAID (4041M-82R only) nVidia MCP55-Pro for 6 SATA (4041M-T2R only)	Adaptec® 7902 2-channel Ultra320 SCSI
AOC-LPZCR1 or AOC-LPZCR2 (4021M-82R only)	N/A	AOC-LPZCR1 or AOC-LPZCR2	AOC-LPZCR1 or AOC-LPZCR2
Dual LAN with nVidia MCP55-Pro Gigabit Ethernet controller ALC883 audio CODEC high definition 7.1 channel sound	Dual LAN with nVidia nForce Pro 2200 & 2050 Gigabit Ethernet controller AC'97 audio CODEC high quality 6-channel sound	Dual LAN with Intel 82546GB Gigabit Ethernet controller ATI® ES1000 16MB PCI graphics controller	Dual LAN with Intel 82546GB Gigabit Ethernet controller ATI® Rage XL 8MB PCI graphics controller
SIMLP (IPMI 2.0) slot, SuperDoctor III, Watch Dog	SuperDoctor III, Watch Dog	SIMSO (IPMI 2.0) socket, SuperDoctor III, Watch Dog	IPMI 2.0 socket, SuperDoctor III, Watch Dog
2.4/3.2 TB	3.2 TB	3.0/4.0 TB	3.0 TB
8 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE (4021M-82R only) 6 x 3.5" hot-swap SATA drive bays and 2 spare SATA drive bays (4021M-T2R only)	8 x 3.5" hot-swap Ultra320/160 SCA drive bays with SAF-TE 3 x 5.25" drive bay	Default 1 mobile rack (5 drives) Support up to 2 mobile racks (10 drives)	Default 1 mobile rack (5 SCA drives) Support up to 2 mobile racks (10 SCA drives)
1 floppy drive	1 floppy drive	N/A	N/A
645W with low-noise fan speed control	645W with low-noise fan speed control	Redundant power supply (1000W + 1000W) with I <sup>2</sup> C built-in	Redundant power supply (1000W + 1000W) with I <sup>2</sup> C built-in
4 x 8cm 4-pin Pulse Width Modulated (PWM) fans with air shroud 1 x 8cm exhaust fan	4 x 8cm 4-pin Pulse Width Modulated (PWM) fans with air shroud	3 x 8cm hot-swap cooling fans & 3 x 8cm exhaust fans with air shroud & optimal fan speed control	3 x 8cm hot-swap cooling fans & 3 x 8cm exhaust fans with air shroud & optimal fan speed control
4U Rackmount/Tower 437 x 178 x 645mm (17.2" x 3.5" x 25.5")	4U Rackmount/Tower 437 x 178 x 648mm (17.2" x 7" x 25.5")	4U Rackmount/Tower 464 x 178 x 720mm (18.27" x 7" x 28.35")	4U Rackmount/Tower 464 x 178 x 720mm (18.27" x 7" x 28.35")