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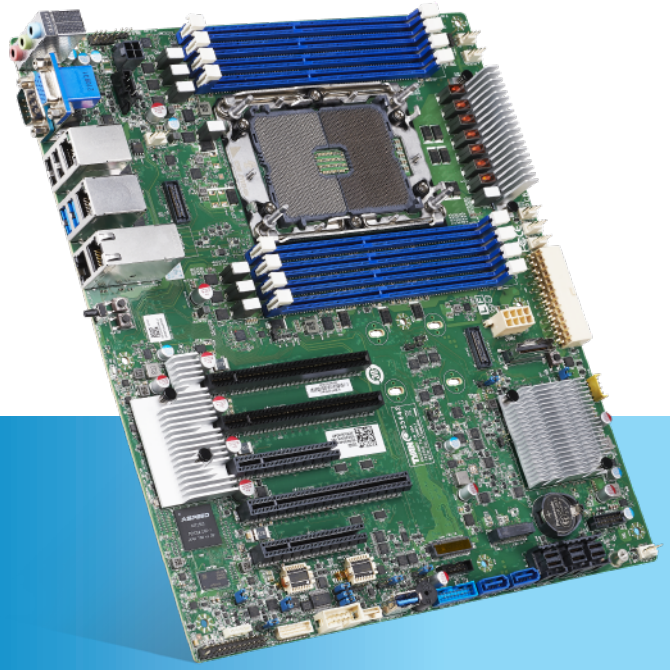
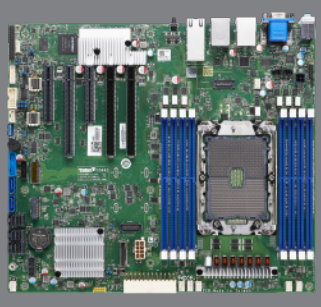
# 3RD GEN. INTEL XEON SCALABLE PROCESSORS



## Tempest HX
# S5642

S5642AGMNRE / S5642AGM3NRE-2T



■ Intel® C621A

## Standard 1S Xeon SP Server Board

- (1) LGA4189
- (8) DIMM slots w/ DDR4-3200 memory support
- (3) PCIe Gen.4 x16 + (2)PCIe Gen.4 x8 slots
- (1) GbE ports + (1) GbE dedicated for IPMI or (2) 10GbE + (1) GbE ports + (1) GbE dedicated for IPMI
- SSI CEB (12" x 10.5")

### ■ Summary Table

| SKU | CPU Support | Storage |
|---|---|---|
| S5642AGMNRE | (1) Socket P+ | (2)NVMe + (14) SATA |
| S5642AGM3NRE-2T | (1) Socket P+ | (2)NVMe + (14) SATA |

Dec., 2021 Rev.1

Specifications are subject to change without notice. Items pictured may only be representative.
Please visit our website for the latest product information.

# Tempest HX
# S5642
S5642AGMNRE

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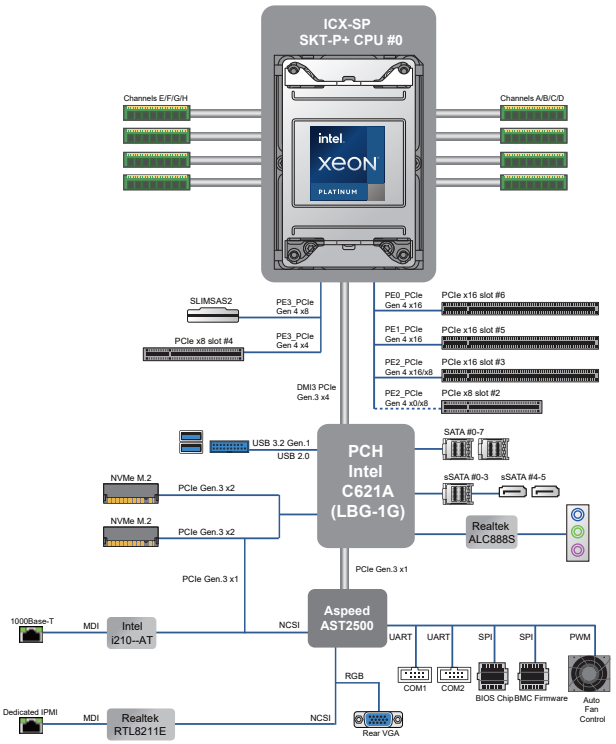
Specifications

| | | | |
|---|---|---|---|
| Processor | Q'ty / Socket Type | | (1) LGA4189 |
| | Supported CPU Series | | 3nd Gen Intel® Xeon® Scalable Processor |
| | Thermal Design Power Wattage | | Max up to 270W (TDP) |
| Chipset | PCH | | Intel® C621A |
| Memory | Supported DIMM Q'ty | | (8) DIMM slots |
| | DIMM Type / Speed | | DDR4 ECC RDIMM /LRDIMM 3200 |
| | Capacity | | Up to 1,024GB RDIMM/ 2,048GB LRDIMM/ 2,048GB RDIMM 3DS/LRDIMM 3DS *Follow latest Intel® DDR4 Memory POR |
| | Memory channel | | 8 Channels per CPU |
| | Memory voltage | | 1.2V |
| Expansion Slots | PCIe | | (1) PCIe Gen.4 x8 slot (#4 w/x4 link) / (1) PCe Gen.4 x8 slot (#2 via MUX) / (1) PCIe Gen.4 x16 slot (#3 w/x8 link) / (2) PCIe Gen.4 x16 slots (#5,#6) |
| LAN | Port Q'ty | | (1) GbE port + (1) GbE dedicated for IPMI |
| | Controller | | Intel® I210 |
| | PHY | | Realtek RTL8211E |
| Storage | SATA | Connector | (2) Mini-SAS HD (8 ports) |
| | | Speed | Intel® C621A |
| | | RAID | RAID 0/1/10/5 (Intel RSTe) |
| | sSATA | Connector | (1) Mini-SAS (4-ports) / (2) 7-pin SATA for (2) SATA ports |
| | | Speed | Intel® C621A |
| | | RAID | RAID 0/1/10/5 (Intel RSTe) |
| | NVMe | Connector (M.2) | (2) 22110/2280 (by PCIe Gen.3 interface) |
| | NVMe | Connector (U.2) | (1) SFF-8654 for (2) NVMe ports |
| Graphic | Connector type | | D-Sub 15-pin |
| | Resolution | | Up to 1920x1200 |
| | Chipset | | Aspeed AST2500 |
| Input /Output | USB | | (2) USB2.0 ports (@ rear) / (2) USB3.0 ports ( @ rear) / (2) USB3.0 ports (via cable) |
| | COM | | (1) DB-9 COM Connector |
| | VGA | | (1) D-Sub 15-pin VGA port (@ rear) |
| | Power | | 8-pin power connectors |
| | RJ-45 | | (1) GbE ports + (1) GbE dedicated for IPMI |
| | SATA | | (14) SATA-III ports |
| | Others | | (1) UID button |
| TPM (Optional) | TPM Support | | Please refer to our TPM supported list. |
| System Monitoring | Chipset | | Aspeed AST2500 |
| | Fan | | Total (5) 4-pin headers |
| | Voltage | | Monitors voltage for CPU, memory, chipset & power supply |
| | Temperature | | Monitors temperature for CPU, memory & system environment |
| | LED | | Over temperature warning indicator / Fan & PSU fail LED indicator |
| | Others | | Watchdog timer support |
| Audio | Chipset | | Realtek ALC888S |
| | Feature | | 2.1 ch |
| Server Management | Onboard Chipset | | Onboard Aspeed AST2500 |
| BIOS | Brand / ROM size | | AMI / 32MB |
| | Feature | | Hardware Monitor / Boot from USB device/PXE via LAN/Storage / Console Redirection / User Configurable FAN PWM Duty Cycle / SMBIOS 3.3/PnP/Wake on LAN / ACPI 6.2 / ACPI sleeping states S5 |

## Block Diagram




| | | |
|---|---|---|
| Physical Dimension | Form Factor | SSI CEB compatible |
| | Board Dimension | 12" x 10.5" (305 x 267mm) |
| Operating System | OS supported list | Please refer to our AVL support lists. |
| Regulation | FCC (SDoC) | Class B |
| | CE (DoC) | Class B |
| | RCM | Class B |
| | VCCI | Class B |
| Operating Environment | Operating Temp. | 0° C ~ 40° C (32° F~ 104° F) |
| | Non-operating Temp. | - 40° C ~ 70° C (-40° F ~ 158° F) |
| | In/Non-operating Humidity | 90%, non-condensing at 35° C |
| RoHS | RoHS 6/6 Complaint | Yes |

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| | Controller | | Intel® I210 / Intel® X550-AT2 |
| | PHY | | Realtek RTL8211E |
| Storage | SATA | Connector | (2) Mini-SAS HD (8 ports) |
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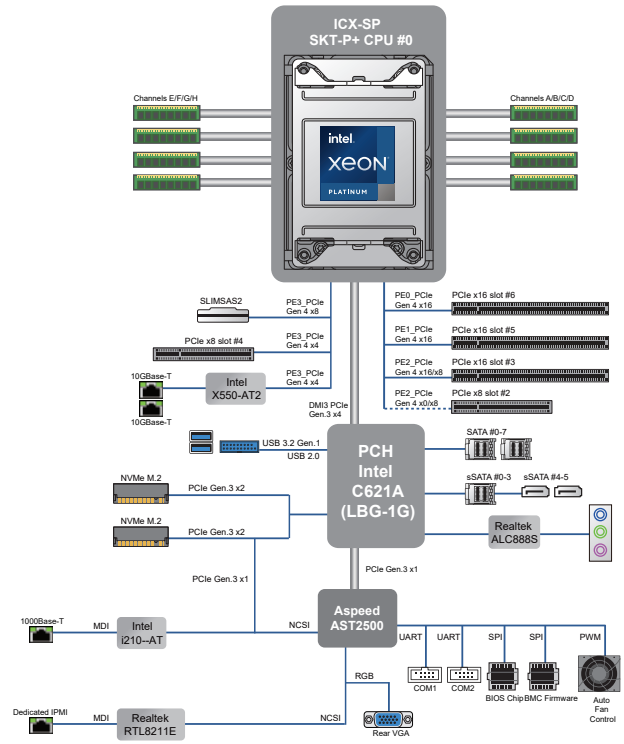


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