

## 4U2S GPGPU SERVER



## Thunder HX FT83A-B7129

B7129F83AV8E4HR-N / B7129F83AV14E8HR-N



### Front View



B7129F83AV8E4HR-N  
• (12) 3.5"/2.5" Hot-Swap HDD/SSDs w/ (4) NVMe



B7129F83AV14E8HR-N  
• (12) 3.5"/2.5" Hot-Swap SAS/SATA HDDs +  
(10) 2.5" Hot-Swap SAS/SATA HDDs

### Back View



• (3+1) 4,800W RPSU, 80+ Platinum

4U2S Whitely platform supports for up to 10 GPU deployment to providing high GPU-to-GPU bandwidth for various parallel workloads

- Dual LGA4189 socket
- (2) 3rd Gen Intel® Xeon® Scalable Processors
- (16)+(16) DDR4 DIMM slots, Support up to DDR4 ECC RDIMM/RDIMM 3DS/LRDIMM/LRDIMM 3DS 3200
- (2) 2.5" Hot-Swap HDD/SSDs / (8) NVMe / (12) 3.5/2.5" Hot-Swap HDD/SSDs drive bays
- (1) PCIe Gen.4 x16 slot (FH/HL) / (10) PCIe Gen.4 x16 (FH/10.5"L/DW) / (3) PCIe Gen.4 x16 (FH/HL)
- (1) GbE dedicated for IPMI
- Onboard BMC w/ IPMI and iKVM support
- (3+1) 4,800W RPSU, 80+ Platinum

### Summary Table

| SKU                | Motherboard | Storage   |
|--------------------|-------------|---|
| B7129F83AV8E4HR-N  | S7129GMRE   | (12) 3.5"/2.5" Hot-Swap HDD/SSDs w/ (4) NVMe                            |
| B7129F83AV14E8HR-N | S7129GMRE   | (12) 3.5/2.5" Hot-Swap HDD/SSDs / (2) 2.5" Hot-Swap HDD/SSDs / (8) NVMe |

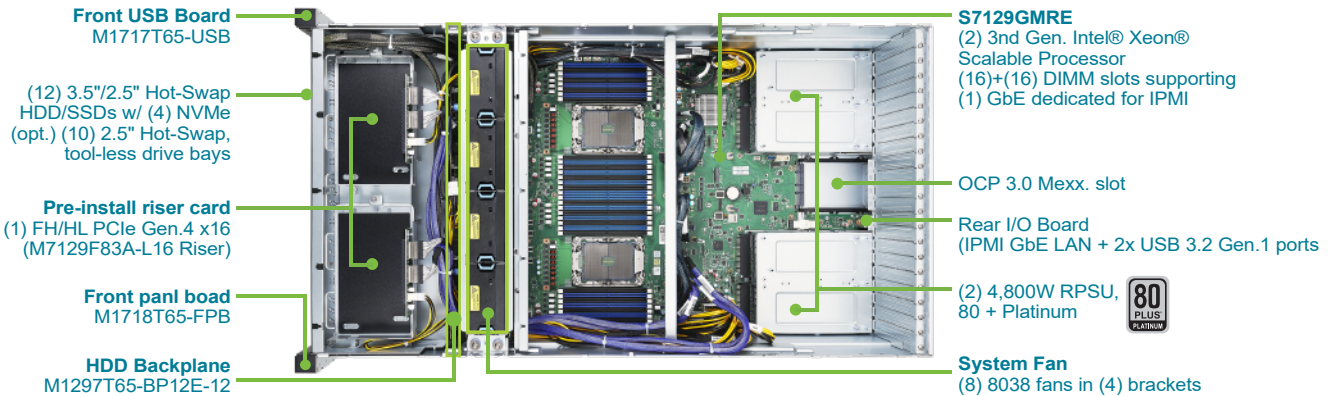
# Transport HX FT83A-B7129

B7129F83AV8E4HR-N

# TYAN

## Specifications

### Top View



|                              |  |  |
|------------------------------|--|--|
| System                       | Form Factor                              | 4U Rackmount   |
|                              | Chassis Name                             | FT83   |
|                              | Dimension (D x W x H)                    | 32.68" x 17.26" x 6.9" (830 x 438.4 x 176mm)   |
|                              | Motherboard                              | S7129GMRE#   |
| Front Panel                  | Motherboard Notification                 | # The motherboard not sold separately  |
|                              | Gross Weight                             | 46 kg (101.4 lbs)  |
|                              | Net weight                               | 39.3 kg (86.6 lbs)   |
|                              | Buttons                                  | (1) UID / (1) PWR w/ LED / (1) RST   |
| External Drive Bay           | LEDs                                     | (1) HDD / (1) ID / (1) System Event / (2) LAN activity   |
|                              | I/O Ports                                | (2) USB 3.0 ports / (1) COM Port / (1) VGA port  |
| System Cooling Configuration | Q'ty / Type                              | (12) 3.5"/2.5" Hot-Swap HDD/SSDs w/ (4) NVMe   |
|                              | Front Drive Bay Interface                | (12) SATA 6Gb/s with (4) NVMe ports  |
| Power Supply                 | Front HDD Backplane Support              | SAS 12Gb/s /SATA 6Gb/s /NVMe   |
|                              | FAN                                      | (8) hot-swappable 8cm fans   |
|                              | Type                                     | RPSU   |
|                              | Input Range                              | AC 100-127V/12A / AC 200-240V/9.48A  |
| Processor                    | Efficiency                               | 80 plus Platinum   |
|                              | Output Watts                             | 4,800Watts   |
|                              | Redundancy                               | 3+1  |
| Chipset                      | Q'ty / Socket Type                       | (2) LGA4189  |
|                              | Supported CPU Series                     | 3rd Gen Intel Xeon Scalable Processor  |
| CPU-GPU Link Topology        | Thermal Design Power wattage             | Max up to 270W (TDP)   |
|                              | PCH                                      | Intel C621A  |
| Memory                       | Dual-root                                | All GPU connected to CPUs evenly   |
|                              | Supported DIMM Qty                       | (16)+(16) DIMM slots   |
|                              | DIMM Type / Speed                        | DDR4 ECC RDIMM/RDIMM 3DS/LRDIMM/LRDIMM 3DS 3200  |
|                              | Capacity                                 | Up to 4,096GB RDIMM/ 8,192GB LRDIMM/ 8,192GB RDIMM 3DS/LRDIMM 3DS *Follow latest Intel DDR4 Memory POR |
| Expansion Slots              | Memory channel                           | 8 Channels per CPU   |
|                              | Memory voltage                           | 1.2V   |
| LAN                          | PCIe                                     | (3) PCIe Gen.4 x16 slots (FH/HL) / (10) PCIe Gen.4 x16 (FH/10.5"L/DW )                                 |
|                              | Pre-install TYAN Riser Card (PCIe Gen.4) | (2) M7129F83A-L16 riser card for (2) PCIe Gen.4 x16 slots (left)                                       |
|                              | Others                                   | (1) PCIe Gen.4 x16 OCP 3.0 slot for mezz. w/ pull tab  |
| PHY Controller               | Port Q'ty                                | (1) GbE dedicated for IPMI   |
|                              | PHY Controller                           | Realtek RTL8211E   |

|                       |                             |   |
|-----------------------|-----------------------------|---|
| Storage               | Connector                   | (3) SFF-8643 for (12) front SATA drives   |
|                       | Controller                  | Intel C621A   |
|                       | Speed                       | 6Gb/s   |
|                       | RAID                        | RAID 0/1/10/5 (Intel RSTe)  |
| Graphic               | Connector(M.2)              | (2) 2280 (by PCIe 4.0 interface)  |
|                       | Connector(U.2)              | (2) SFF-8654 for (4) NVMe ports   |
| Input/Output          | Connector type              | D-Sub 15-pin  |
|                       | Resolution                  | Up to 1920x1200   |
| TPM (Optional)        | Chipset                     | Aspeed AST2600  |
|                       | USB                         | (2) USB3.0 ports (@ front) / (2) USB3.0 ports (@ rear) (from M7129F83A-RI0)   |
|                       | COM                         | (1) DB-9 COM port   |
|                       | VGA                         | (1) D-Sub 15-pin port   |
| System Monitoring     | RJ-45                       | (1) GbE port dedicated for IPMI (from M7129F83A-RI0)  |
|                       | TPM Support                 | Please refer to our TPM supported list.   |
| Server Management     | Chipset                     | Aspeed AST2600  |
|                       | Voltage                     | Monitors voltage for CPU, memory, chipset & power supply  |
|                       | Temperature                 | Monitors temperature for CPU & memory & system environment  |
| BIOS                  | LED (On system front panel) | Over temperature warning indicator / Fan & PSU fail LED indicator   |
|                       | Others                      | Watchdog timer support  |
| Operating System      | Onboard Chipset             | Onboard Aspeed AST2600  |
|                       | AST2600 iKVM Feature        | 24-bit high quality video compression / Supports storage over IP and remote platform-flash / USB 2.0 virtual hub  |
| Regulation            | AST2600 IPMI Feature        | IPMI 2.0 compliant baseboard management controller (BMC) / 10/100/1000 Mb/s MAC interface   |
|                       | Brand / ROM size            | AMI / 32MB  |
| Operating Environment | Feature                     | Hardware Monitor / Boot from USB device/PXE via LAN/Storage / Console Redirection / User Configurable FAN PWM Duty Cycle / SMBIOS 3.0/PnP/Wake on LAN / ACPI 6.1 / ACPI sleeping states S4,S5 |
|                       | OS supported list           | Please refer to our AVL support lists.  |
| RoHS                  | FCC (SDoC)                  | Class A   |
|                       | CE (DoC)                    | Class A   |
| RoHS                  | VCCI                        | Class A   |
|                       | RCM                         | Class A   |
| RoHS                  | CB/LVD                      | Yes   |
|                       | Operating Temp.             | 10° C ~ 35° C (50° F~ 95° F)  |
| RoHS                  | 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 Compliant          | Yes   |

(Specifications are subject to change without notice. Items pictured may only be representative.)

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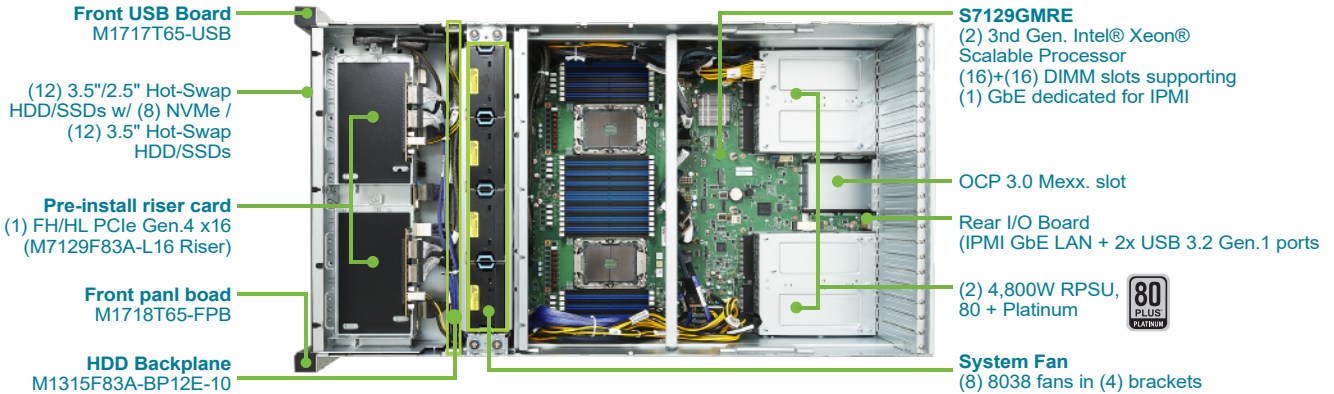
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## Specifications

### Top View



|                                     |   |  |
|-------------------------------------|---|--|
| <b>System</b>                       | <b>Form Factor</b>                              | 4U Rackmount   |
|                                     | <b>Chassis Name</b>                             | FT83   |
|                                     | <b>Dimension (D x W x H)</b>                    | 32.68" x 17.26" x 6.9" (830 x 438.4 x 176mm)   |
|                                     | <b>Motherboard</b>                              | S7129GMRE#   |
|                                     | <b>Motherboard Notification</b>                 | # The motherboard not sold separately  |
| <b>Front Panel</b>                  | <b>Gross Weight</b>                             | 46 kg (101.4 lbs)  |
|                                     | <b>Net weight</b>                               | 39.3 kg (86.6 lbs)   |
|                                     | <b>Buttons</b>                                  | (1) UID / (1) PWR w/ LED / (1) RST   |
| <b>External Drive Bay</b>           | <b>LEDs</b>                                     | (1) HDD / (1) ID / (1) System Event / (2) LAN activity   |
|                                     | <b>I/O Ports</b>                                | (2) USB 3.0 ports / (1) COM Port / (1) VGA port  |
| <b>System Cooling Configuration</b> | <b>Q'ty / Type</b>                              | (2) 2.5" Hot-Swap HDD/SSDs / (8) NVMe / (12) 3.5" Hot-Swap HDD/SSDs                                    |
|                                     | <b>Front Drive Bay Interface</b>                | NVMe / SATA 6Gb/s  |
|                                     | <b>Front HDD Backplane Support</b>              | (2) SATA 6Gb/s / (8) NVMe / (12) SATA 6Gb/s / SAS 12Gb/s   |
| <b>Power Supply</b>                 | <b>FAN</b>                                      | (8) hot-swappable 8cm fans   |
|                                     | <b>Type</b>                                     | RPSU   |
|                                     | <b>Input Range</b>                              | AC 100-127V/12A / AC 200-240V/9.48A  |
|                                     | <b>Efficiency</b>                               | 80 plus Platinum   |
| <b>Processor</b>                    | <b>Output Watts</b>                             | 4,800Watts   |
|                                     | <b>Redundancy</b>                               | 3+1  |
|                                     | <b>Q'ty / Socket Type</b>                       | (2) LGA4189  |
| <b>Chipset</b>                      | <b>Supported CPU Series</b>                     | 3rd Gen Intel Xeon Scalable Processor  |
|                                     | <b>Thermal Design Power wattage</b>             | Max up to 270W (TDP)   |
| <b>CPU-GPU Link Topology</b>        | <b>Supported CPU Series</b>                     | 3rd Gen Intel Xeon Scalable Processor  |
|                                     | <b>Thermal Design Power wattage</b>             | Max up to 270W (TDP)   |
| <b>Memory</b>                       | <b>PCH</b>                                      | Intel C621A  |
|                                     | <b>Dual-root</b>                                | All GPU connected to CPUs evenly   |
|                                     | <b>Supported DIMM Qty</b>                       | (16)+(16) DIMM slots   |
|                                     | <b>DIMM Type / Speed</b>                        | DDR4 ECC RDIMM/RDIMM 3DS/LRDIMM/LRDIMM 3DS 3200  |
|                                     | <b>Capacity</b>                                 | Up to 4,096GB RDIMM/ 8,192GB LRDIMM/ 8,192GB RDIMM 3DS/LRDIMM 3DS *Follow latest Intel DDR4 Memory POR |
| <b>Expansion Slots</b>              | <b>Memory channel</b>                           | 8 Channels per CPU   |
|                                     | <b>Memory voltage</b>                           | 1.2V   |
|                                     | <b>PCIe</b>                                     | (1) PCIe Gen.4 x16 slot (FH/HL) / (10) PCIe Gen.4 x16 (FH/10.5"L/DW)                                   |
| <b>LAN</b>                          | <b>Pre-install TYAN Riser Card (PCIe Gen.4)</b> | (2) M7129F83A-L16 riser card for (2) PCIe Gen.4 x16 slots (left)                                       |
|                                     | <b>Others</b>                                   | (1) PCIe Gen.4 x16 OCP 3.0 slot for mezz. w/ pull tab  |
| <b>LAN</b>                          | <b>Port Q'ty</b>                                | (1) GbE dedicated for IPMI   |
|                                     | <b>PHY Controller</b>                           | Realtek RTL8211E   |

|                              |                                    |   |  |
|------------------------------|------------------------------------|---|--|
| <b>Storage</b>               | <b>SATA</b>                        | <b>Connector</b>  | (3) SFF-8643 for (12) front SATA drives  |
|                              |                                    | <b>Controller</b>   | Intel C621A  |
|                              |                                    | <b>Speed</b>  | 6Gb/s  |
|                              |                                    | <b>RAID</b>   | RAID 0/1/10/5 (Intel RSTe)   |
| <b>Storage</b>               | <b>sSATA</b>                       | <b>RAID</b>   | RAID 0/1 (Intel RSTe)  |
|                              |                                    | <b>Connector (M.2)</b>  | 1) 2280 (by PCIe 3.0 x4) M.2 slot on MB / (1) 2280 (by PCIe 4.0 x2) M.2 slot on PCIe I/O board |
|                              |                                    | <b>Connector(U.2)</b>   | (2) SFF-8654 for (4) NVMe ports  |
| <b>Graphic</b>               | <b>Connector type</b>              | D-Sub 15-pin  |  |
|                              | <b>Resolution</b>                  | Up to 1920x1200   |  |
| <b>Input /Output</b>         | <b>Chipset</b>                     | Aspeed AST2600  |  |
|                              | <b>USB</b>                         | (2) USB3.0 ports (@ front) / (2) USB3.0 ports (@ rear)  |  |
|                              | <b>COM</b>                         | (1) DB-9 COM port   |  |
|                              | <b>VGA</b>                         | (1) D-Sub 15-pin port   |  |
| <b>TPM (Optional)</b>        | <b>RJ-45</b>                       | (1) GbE port dedicated for IPMI   |  |
|                              | <b>TPM Support</b>                 | Please refer to our TPM supported list.   |  |
| <b>System Monitoring</b>     | <b>Chipset</b>                     | Aspeed AST2600  |  |
|                              | <b>Voltage</b>                     | Monitors voltage for CPU, memory, chipset & power supply  |  |
|                              | <b>Temperature</b>                 | Monitors temperature for CPU & memory & system environment  |  |
|                              | <b>LED (On system front panel)</b> | Over temperature warning indicator / Fan & PSU fail LED indicator   |  |
| <b>Server Management</b>     | <b>Others</b>                      | Watchdog timer support  |  |
|                              | <b>Onboard Chipset</b>             | Onboard Aspeed AST2600  |  |
|                              | <b>AST2600 iKVM Feature</b>        | 24-bit high quality video compression / Supports storage over IP and remote platform-flash / USB 2.0 virtual hub  |  |
| <b>BIOS</b>                  | <b>AST2600 IPMI Feature</b>        | IPMI 2.0 compliant baseboard management controller (BMC) / 10/100/1000 Mb/s MAC interface   |  |
|                              | <b>Brand / ROM size</b>            | AMI / 32MB  |  |
| <b>Operating System</b>      | <b>Feature</b>                     | Hardware Monitor / Boot from USB device/PXE via LAN/Storage / Console Redirection / User Configurable FAN PWM Duty Cycle / SMBIOS 3.0/PnP/Wake on LAN / ACPI 6.1 / ACPI sleeping states S4,S5 |  |
|                              | <b>OS supported list</b>           | Please refer to our AVL support lists.  |  |
| <b>Regulation</b>            | <b>FCC (SDoC)</b>                  | Class A   |  |
|                              | <b>CE (DoC)</b>                    | Class A   |  |
|                              | <b>VCCI</b>                        | Class A   |  |
|                              | <b>RCM</b>                         | Class A   |  |
|                              | <b>CB/LVD</b>                      | Yes   |  |
| <b>Operating Environment</b> | <b>Operating Temp.</b>             | 10° C ~ 35° C (50° F~ 95° F)  |  |
|                              | <b>Non-operating Temp.</b>         | -40° C ~ 70° C (-40° F ~ 158° F)  |  |
|                              | <b>In/Non-operating Humidity</b>   | 90%, non-condensing at 35° C  |  |
| <b>RoHS</b>                  | <b>RoHS 6/6 Complaint</b>          | Yes   |  |

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