

# UP SuperServer SYS-510T-WTR



More details here

## Key Applications

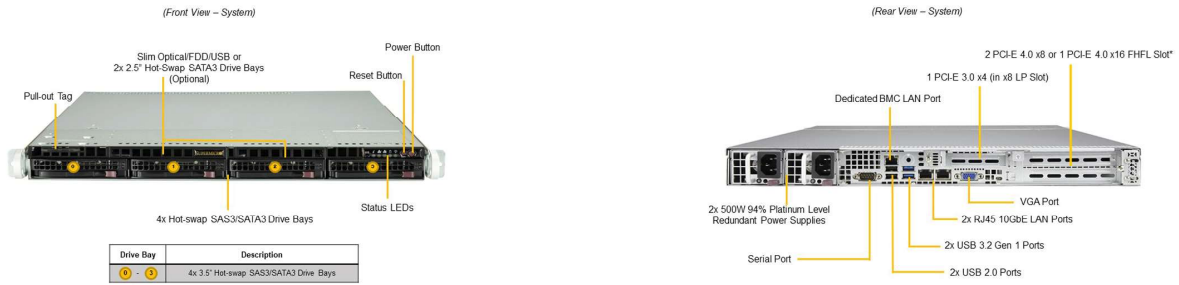
Virtualization, Cloud Computing, Enterprise Server, Data Center Optimized,

## Key Features

- Single Socket H5 (LGA-1200) supports Intel® Xeon® E-2300 series, Intel® Pentium® processors;
- 4 DIMMs; Up to 128GB of DDR4 ECC UDIMM memory with speeds of up to 3200MHz;
- 1 PCIe 4.0 x16 or 2 PCIe 4.0 x8 (FHFL); 1 PCIe 3.0 x4 (in x8 LP);
- Intel® Ethernet Controller X550 2x 10GbE RJ45;
- 4x hot-swap 3.5" SATA3 drive bays, SAS3 with additional controller card; Onboard 2x NVMe M.2 (with Xeon CPU) or 1x NVMe M.2 (with Pentium CPU);
- Redundant Platinum 500W Power Supply;



<b>Form Factor</b>	1U Rackmount Enclosure: 437 x 43 x 650mm (17.2" x 1.7" x 25.6") Package: 596.9 x 215.9 x 855.98mm (23.5" x 8.5" x 33.7")
<b>Processor</b>	Single Socket H5 (LGA 1200) Intel® Xeon® E-2300 series Processors and 10th Gen. Pentium® Processors Up to 8C/16T; Up to 16MB Cache per CPU Supports up to 95W TDP CPUs (Air Cooled)
<b>System Memory</b>	Memory Capacity: 4 DIMM slots Up to 128GB: 4x 32 GB DRAM Memory Type: 3200/2933/2666MHz ECC DDR4 UDIMM
<b>Drive Bays</b>	4x 3.5" SATA drive bays 1x PCIe 3.0 x 4 1x PCIe 4.0 x 4 (with Xeon CPU) M-key, 2280, 22110
<b>Expansion Slots</b>	1 PCIe 4.0 x16 or x8 slot(s) 1 PCIe 4.0 x0 or x8 (FHFL) [Auto Switch with Slot 1] slot(s) 1 PCIe 3.0 x4 slot(s) (Pentium CPUs provide PCIe 3.0 only.)
<b>On-Board Devices</b>	SATA: SATA3 (6Gbps); RAID 0/1/5/10 support (Port 0-5) Chipset: Intel® C256 Network Connectivity: 2x 10GbE BaseT with Intel® X550 IPMI: Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
<b>Input / Output</b>	SATA: 8 SATA (6Gbps) port(s) LAN: 2 RJ45 10GbE LAN ports 1 RJ45 Dedicated IPMI LAN port USB: 6 USB 2.0 port(s) (2 rear; 4 headers) 4 USB 3.2 Gen 1 port(s) (2 rear; 2 headers) 1 USB 3.2 Gen 2 port(s) (1 Type A) Video: 1 VGA port(s) Serial Port: 2 COM Port(s) (1 header; 1 rear) DOM: 2 SuperDOM (Disk on Module) port with built-in power



\* Pentium CPUs provide PCI-E 3.0 only

System Cooling	4x (4cm x 4cm x 5.6cm) heavy duty fan(s)
Power Supply	500W Redundant Platinum Level power supplies
System BIOS	BIOS Type: AMI 32MB SPI Flash EEPROM
Management	Redfish API; Supermicro Server Manager (SSM); Supermicro Update Manager (SUM); SuperDoctor® 5; Super Diagnostics Offline ; KVM with dedicated LAN ; IPMI 2.0
PC Health Monitoring	<p>CPU: Monitors for CPU Cores, Chipset Voltages, Memory 6 + 2 + 1 Phase-switching voltage regulator</p> <p>FAN: Fans with tachometer monitoring Status monitor for speed control Pulse Width Modulated (PWM) fan connectors</p> <p>Temperature: Monitoring for CPU and chassis environment Thermal Control for fan connectors</p>
Dimensions and Weight	<p>Height: 1.7" (43 mm)</p> <p>Width: 17.2" (437 mm)</p> <p>Depth: 25.6" (650 mm)</p> <p>Gross Weight: 48 lbs (21.77 kg)</p> <p>Net Weight: 24 lbs (10.89 kg)</p> <p>Packaging: 8.5" (H) x 23.5" (W) x 33.7" (D)</p> <p>Available Color: Black</p>
Operating Environment	<p>Operating Temperature: 10°C ~ 35°C (50°F ~ 95°F)</p> <p>Non-operating Temperature: -40°C to 70°C (-40°F to 158°F)</p> <p>Operating Relative Humidity: 8% to 90% (non-condensing)</p> <p>Non-operating Relative Humidity: 5% to 95% (non-condensing)</p>
Motherboard	<a href="#">Super X12STW-TF</a>
Chassis	CSE-815TS-R504WBP7

# X12STW-TF

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## WIO

### Key Features

Intel® Xeon® E-2300 Processor, 10th Generation Intel® Pentium® Processor, Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 95W TDP

Intel® C256

Up to 128GB Unbuffered ECC UDIMM, DDR4-3200MHz

1 PCIe 4.0 x16 Left Riser Slot

1 PCIe 3.0 x4 (in x8, Right Riser slot)

**M.2 Interface:** 1 PCIe 4.0 x4 and 1 PCIe 3.0 x4

**M.2 Form Factor:** 2280/22110

**M.2 Key:** M-Key Double Height Connector

Dual LAN with Intel® X550 10GBase-T Ethernet Controller

Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

1 VGA port

4 USB 3.2 Gen1 ports (2 rear + 2 via headers)

1 USB 3.2 Gen2 port (1 Type A)

6 USB 2.0 ports (2 rear + 4 via headers)

**Product SKUs**  
**MBD-X12STW-TF**

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**Physical Stats**

**Form Factor**

Proprietary WIO

**Dimension**

8" x 13" (20.32cm x 33.02cm)

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**Processor**

**CPU**

10th Generation Intel® Pentium® Processor, Intel® Xeon® E-2300 Processor  
Single Socket LGA-1200 (Socket H5) supported, CPU TDP supports Up to 95W TDP

**Core**

Up to 8 cores, 16 threads

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**System Memory**

**Memory Capacity**

4 DIMM slots

Up to 128GB Unbuffered ECC UDIMM, DDR4-3200MHz

**Memory Type**

3200/2933/2666 MT/s SDRAM

**DIMM Sizes**

4GB, 8GB, 16GB, 32GB

**Memory Voltage**

1.2V

**Error Detection**

Corrects single-bit errors

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**On-Board Devices**

**Chipset**

Intel® C256

**SATA**

Intel® C256 controller for 8 SATA3 (6 Gbps) ports; RAID 0,1,5,10

**IPMI**

ASPEED AST2600 BMC

**Graphics**

1 ASPEED AST2600 BMC port(s)

**Network Controllers**

Dual LAN with Intel® X550 10GBase-T Ethernet Controller

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**Input / Output**

**SATA**

8 SATA3 (6Gbps) port(s)

**LAN**

2 RJ45 10 Gigabit Ethernet LAN ports

**USB**

6 USB 2.0 port(s) (4 via header; 2 rear)

4 USB 3.2 Gen1 port(s) (2 via header; 2 rear)

1 USB 3.2 Gen2 port(s) (1 type A)

**Video Output**

1 VGA port(s)

**Serial Port**

2 COM Port(s) (1 header; 1 rear)

**DOM**

2 SATA DOM (Disk on Module) power connector support

**TPM**

1 TPM Header

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**Operating Relative Humidity Range**

8% - 90% (non-condensing)

**Non Operating Relative Humidity Range**

5% - 95% (non-condensing)

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**Expansion Slots**

**PCIe**

1 PCIe 4.0 x16 Left Riser Slot,

1 PCIe 3.0 x4 (in x8 slot)

**M.2**

M.2 Interface: 1 PCIe 4.0 x4; 1 PCIe 3.0 x4

Form Factor: 2280/22110

Key: M-Key

Double Height Connector

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**System BIOS**

**BIOS Type**

256MB UEFI

**BIOS Features**

ACPI 6.0

SMBIOS 3.3

Plug and Play (PnP)

RTC (Real Time Clock) Wakeup

UEFI 2.7

USB Keyboard support

PCI 3.0

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**Management**

**Software**

[Redfish API](#), [Supermicro Server Manager \(SSM\)](#), [Supermicro Update Manager \(SUM\)](#), [SuperDoctor® 5](#), [Super Diagnostics Offline](#), [KVM with dedicated LAN](#), [IPMI 2.0](#)

**System Management Software**

IPMI (Intelligent Platform Management Interface) v1.5 / 2.0 with KVM support

**Power Configurations**

ACPI Power Management

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**Security**

**Hardware**

Trusted Platform Module (TPM) 2.0

Silicon Root of Trust (RoT) – NIST 800-193 Compliant

**Features**

Cryptographically Signed Firmware

Secure Boot

Secure Firmware Updates

Automatic Firmware Recovery

System Lockdown

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**PC Health Monitoring**

**Voltage**

VBAT, System level control, Supports system management utility, Monitors CPU voltages, Chipset Voltage, Chassis intrusion header, 6-fan status, +5V standby, +5V, +3.3V, +12V, Memory Voltages

**LED**

UID/Remote UID

CPU / System Overheat LED

**Temperature**

Monitoring for CPU and chassis environment

CPU thermal trip support

Thermal Monitor 2 (TM2) support

PECI

**FAN**

6x 4-pin fan headers (up to 6 fans)

Thermal control tachometer fan connectors

Fan speed control

6 fans with tachometer status monitoring

Overheat LED indication

**Other Features**

WOL, UID, Node Manager Support, M.2 NGFF connector, CPU thermal trip support for processor protection, Control of power-on for recovery from AC power loss, Chassis intrusion header, Chassis intrusion detection, ACPI power management

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**Operating Environment**

**Operating Temperature Range**

0°C - 50°C (32°F - 122°F)

**Non-Operating Temperature Range**

-40°C - 70°C (-40°F - 158°F)