



Supermicro Hadoop® Building Block & Cluster Solutions

High Performance Enterprise Apache™ Hadoop Infrastructure
Intel® Xeon® E5-2600 v3 (Haswell) Support

Design	Application Analysis	Power Budget	BOM Creation	Rack Layout, Wire Map
Assembly	Node Assembly	Rack and Stack	Cabling and Labeling	Third Party Equipment
Configuration	BIO Settings	Firmware Update	IPMI Setting	OS and Customer Image
Testing	Multi-Vendor Equipment Compatibility	Full Rack Burn-in and QA	Full Rack Power Measurement	Performance Benchmarks
Shipping Documentation	Assert Label and Docs	Unpacking Instruction	Custom User Manual	Customer Training



- Fully-validated, pre-configured SKUs optimized for Hadoop solutions
- Hot Swap or Tool-less Direct Attach 4x, 6x, 8x, and 12x 3.5" HDDs per Node
- Platinum Level (95%+) High-Efficiency Redundant Power Supplies with PMBus
- Server Management Software including In-Band and Out-of-Band Utilities
- Designed and Certified for Apache and leading Hadoop distributions
- Supports Hadoop 2.0 / YARN / HDFS2



Cluster Management SYS-5018D-MTRF	1U Ultra Name Node SYS-1028U-TR(T/TP)+	2U Ultra Data Node SYS-2028U-TR(T/TP)+ SYS-6028U-TR(T/TP)+	Layer 2/3 10G Ethernet SuperSwitches SSE-X3648S and SSE-X3648SR	IPMI Server Management Server Management Software Utilities
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Supermicro Ultra Hadoop Solutions



KEY FEATURES

- Optimized Turnkey Apache Hadoop Cluster
- 42U Rack with 22 Nodes and PDU
- 1x 48 Port 10G Layer 3 Ethernet Switch w/ Dual 40G Uplinks (QSFP+ connectors)
- 1x 48 Port 1G Layer 3 Ethernet Switch w/ Dual 10G Uplinks (SFP+ connectors)
- 1x 1U Management Server
- 3x 1U Name Node/Job Tracker/Journal Manager/Resource Manager
- 18x 2U Data Nodes/Task Tracker/Node Manager
- Up to 864TB Storage Capacity (using 4TB drives)
- Titanium Level (96%) / Platinum Level (94%) / Gold Level (93%+) Efficiency Power Supplies
- Cabled and Labeled
- Integrated APC 30A 208V L21-30 PDU



14U Rack



42U Rack



MODEL	Cluster Management SYS-5018D-MTRF	1U Ultra Name Node SYS-1028U-TR(T/TP)+	2U Ultra Data Node SYS-2028U-TR(T/TP)+ SYS-6028U-TR(T/TP)+
Processor Support	Intel® Xeon® processor E3-1200 v3 family	Dual Intel® Xeon® processor E5-2600 v3 family	Dual Intel® Xeon® processor E5-2600 v3 family
Chipset	Intel® C224 Express Chipset	Intel® C612 Express Chipset	Intel® C612 Express Chipset
System Memory (Max)	8GB (4x DDR3, Max. 32GB ECC UDIMM)	64-384GB (24x DDR4, Max. 1.5TB ECC LRDIMM, 768GB ECC RDIMM)	64-384GB (24x DDR4, Max. 1.5TB ECC LRDIMM, 768GB ECC RDIMM)
Expansion Slots	1 PCI-E 3.0 x8 (in x16) slot	2 PCI-E 3.0 x16 slot 2 PCI-E 8.0 x8 slots	1 PCI-E 3.0 x16 slot 7 PCI-E 8.0 x8 slots
Storage Controller	4x SATA3 (6Gbps) ports 2x SATA2 (3Gbps) ports	10x SATA3 (6Gbps) ports SAS3 ports support via Add-on Card (AOC-S3108L-H8) with HW-RAID	10x SATA3 (6Gbps) ports SAS3 ports support via Add-on Card (AOC-S3008L-L8) in JBOD mode
Networking	Intel i217LM + Intel i210AT Gigabit Ethernet 2x 10 Gigabit Ethernet RJ45 via AOC-STG-i2T, or 2x 10 Gigabit Ethernet SFP+ via AOC-STGN-i2S	2x 10 Gigabit Ethernet RJ45 via AOC-2UR68-i2XT (TRT+) 2x 10 Gigabit Ethernet SFP+ via AOC-2UR68-i2XS (TRTP+)	2x 10 Gigabit Ethernet RJ45 via AOC-2UR68-i2XT (TRT+) 2x 10 Gigabit Ethernet SFP+ via AOC-2UR68-i2XS (TRTP+)
Manageability	Dedicated IPMI 2.0 with virtual media over LAN and KVM-over-LAN support	Dedicated IPMI 2.0 with virtual media over LAN and KVM-over-LAN support	Dedicated IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
Drive Bays	4x Hot-Swap HDD bays	10x 2.5" Hot-Swap HDD bays (2028U) 2x SuperDOM (Disk on Module) ports	24x 2.5" Hot-Swap HDD bays (2028U) 12x 3.5" Hot-Swap HDD bays (6028U) 2x SuperDOM (Disk on Module) ports
Power Supply	400W (1+1) Redundant SuperCompact Short-depth AC-DC Gold-level power supply	750W Redundant AC-DC Power Supplies, +12V/+12Vsb output	1000W Titanium Level (96%) High-efficiency Redundant Single Output Power Supplies
Cooling System	4x 4cm 12,500 RPM PWM fans	4x heavy duty fans with optimal fan speed control 4x optional fans for additional cooling	4x 8cm heavy duty PWM fans
Form Factor	1U rackmount chassis 17.2"W x 1.7"H x 19.8"D (437 x 43 x 503mm)	1U rackmount chassis 17.2"W x 1.7"H x 30.6"D (437 x 43 x 777mm)	2U rackmount chassis 17.2"W x 3.5"H x 25.5"D (437 x 89 x 647mm)

42U Rack Information

Switches / Networking	<ul style="list-style-type: none"> • SSE-X3348SR, – 1U Rackmount 48 port Gigabit Ethernet Switch • 48 ports SFP+ (Includes 4 QSFP+ Uplinks) for 10G Ethernet • SSE-G48-TG4 – 1U Rackmount 48 port Gigabit Ethernet Switch • 48 ports RJ45 copper (Includes 4 SFP Combo Ports) for 1G Ethernet • Managed L2/L3 with Industry Standard CLI and Web-GUI for management • AOM-SSE-X2S – Dual-port 10G Ethernet Uplink Module with SFP+ Connector
PDU	<ul style="list-style-type: none"> • APC PDU 208V L21-30 Plug/ (21) IEC 320 C13 (3) IEC 320 C19 Connectors (APC#AP8965)
Rack Construction	<ul style="list-style-type: none"> • Supports EIA 19" rackmount servers with regular square mounting holes, casters, front/rear doors
Form Factor	<ul style="list-style-type: none"> • 82.38"W x 48.22"D x 82.38"H

For detailed product information, please contact Supermicro sales.

www.supermicro.com/Hadoop

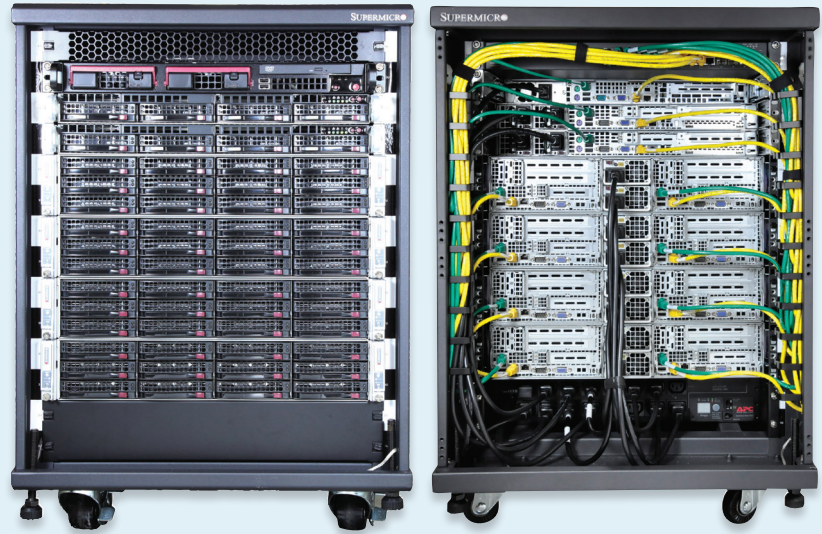


Supermicro Ultra Hadoop Solutions



KEY FEATURES

- **Optimized Turnkey Apache Hadoop Cluster**
- **14U Mobile Rack with 11 Nodes and PDU**
- **1x 24 Port 1G Layer 3 Ethernet Switch w/ Dual 10G Uplinks (SFP+ Connectors)**
- **1x 1U Management Server**
- **3x 1U Name Node/Job Tracker/Journal Manager/Resource Manager**
- **4x 2U Data Nodes/Task Tracker/Node Manager**
- **48TB Storage Capacity**
- **Titanium Level (96%) / Platinum Level (94%) / Gold Level (93%+) Efficiency Power Supplies**
- **Cabled and Labeled**
- **Integrated APC 30A 208V L6-30 PDU**



MODEL	Cluster Management SYS-5018D-MTRF	1U Ultra Name Node SYS-1028U-TR(T/TP)+	2U Ultra Data Node SYS-2028U-TR(T/TP)+ SYS-6028U-TR(T/TP)+
Processor Support	Intel® Xeon® processor E3-1200 v3 family	Dual Intel® Xeon® processor E5-2600 v3 family	Dual Intel® Xeon® processor E5-2600 v3 family
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Power Supply	400W (1+1) Redundant SuperCompact Short-depth AC-DC Gold-level power supply	750W Redundant AC-DC Power Supplies, +12V/+12Vsb output	1000W Titanium Level (96%) High-efficiency Redundant Single Output Power Supplies
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14U Rack Information

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PDU	<ul style="list-style-type: none"> • APC PDU 208V L6-30 Plug/ (16) IEC 320 C13 Connectors (APC#AP7911A)
Rack Construction	<ul style="list-style-type: none"> • Supports EIA 19" rackmount servers with regular square mounting holes, casters, front/rear doors
Form Factor	<ul style="list-style-type: none"> • 21.65"W x 37.4"D x 30.64"H (55cmW x 95cmD x 77.9cmH)
Full 42U Rack Hadoop Solution	<ul style="list-style-type: none"> • SRS-42XL63-HADP-TL (3 Name Nodes, 36 Data Node, 10 GbE SFP+ Networking)

For detailed product information, please contact Supermicro sales.

www.supermicro.com/Hadoop



New Architecture!

X10 Ultra Servers

- Supports up to:
- 36 Cores Max per Server and 160W TDP Dual Intel® Xeon® processor E5-2600 v3 Product Family
 - 1.5TB DDR4-2133MHz in 24 DIMMs • 40G/10GBase-T/1GbE/10G SFP+ Flexible LAN ports options
 - NVMe/SAS3/SATA3 • 8/4 AOCs in 2U/1U • Redundant Titanium Level (96%+) Power Supplies



1U Ultra Server

SYS-1028U-TR(4/4T/T/TP)+ (Shown)
SYS-6018U-TR(4/4T/T/TP)+

2U Ultra Server

SYS-2028U-TR(4/4T/T/TP)+
SYS-6028U-TR(4/4T/T/TP)+ (Shown)

Supermicro X10 Ultra Servers support:

Performance

- Hot-Swappable NVMe support and SAS 3.0 (12Gbps)
- Up to 36 cores and maximum 160W TDP support with dual Intel® Xeon® Processor E5-2600 v3 product family
- 1.5TB DDR4-2133 MHz memory in 24 DIMM slots

Flexibility

- Versatile integrated networking options for 10GBASE-T, 10G SFP+, 1GbE and future expansion
- Support for latest GPUs and Xeon Phi™ cards

Scalability

- 8/4 PCI-E 3.0 Add-on Cards in 2U/1U
- Up to 24/12 hot-swap 2.5"/3.5" HDDs

Serviceability and Security

- Integrated IPMI 2.0 with support for Supermicro Server Manager (SSM)
- TPM Platform Security supported with optional onboard integration

Efficiency

- Redundant Titanium Level (96%+) power supplies available
- Optimized system cooling design for Green Computing



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www.supermicro.com/Ultra