UP X12 Servers Roadmap

Supermicro X12 Intel Comprehensive Portfolio

Confidential

Hyper-E and Hyper
Best-in-Class Performance and Flexibility Rackmount Servers

Ultra and Ultra-E
High Performance & Flexibility Rackmount Systems for Enterprise Applications

CloudDC
All-in-one Rackmount Platforms for Cloud Data Centers

WIO (UP)
Industry's Widest Variety of I/O Optimized Servers

Mainstream (UP & DP)
Versatile Entry Level and Volume Servers for Enterprise Applications

BigTwin
Highly Modular Multi-Node Systems with Tool-less Design

FatTwin
Advanced Multi-node 4U Twin Architecture with 8 or 4 Nodes

TwinPro (UP & DP)
Cost-effective 2U Multi-node Platforms

GrandTwin (UP)
2U Multi-node
Front & Rear I/O

SuperBlade (UP & DP)
High Density x86 Multi-node Server for Enterprise Cloud, HPC

MP 4-Way Server
Highest Performance and Flexibility for Enterprise Applications

HGX GPU Servers
High Performance and Flexibility with Advanced Architecture and Thermal Design

PCIe GPU Servers (UP)
High Density Systems for 3 Double-width, Full Length PCIe GPUs

SuperStorage (UP & DP)
Top-loading Server Optimized for Field Serviceability and Field Replacement

IOT/Embedded (UP)
High-efficiency, High-performance Compact Form Factor for 5G and Edge computing

UP X12 Ice Lake (Whitley) Single Node Server

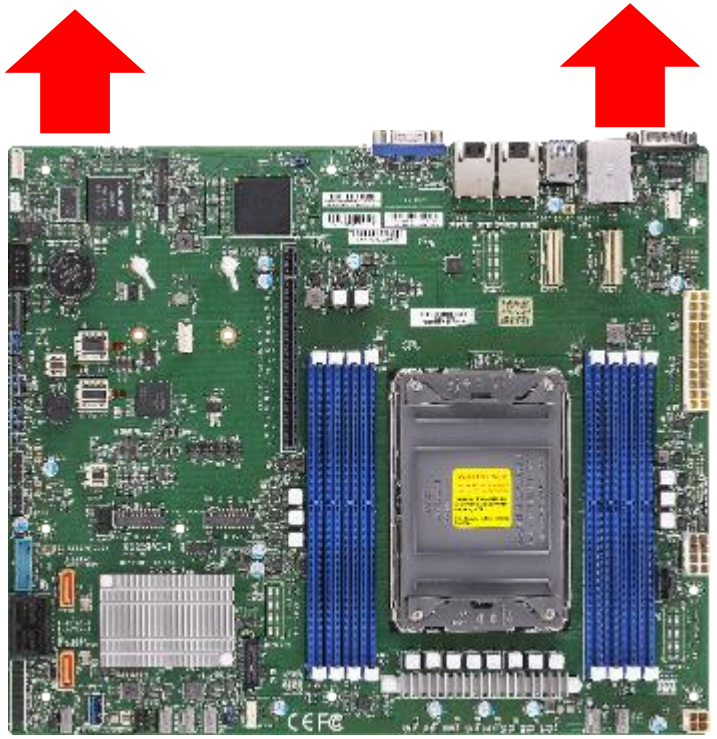
Presenter
Wei Chang
System Solution PM

X12 UP Mainstream Key Features

- Better Thermals: Optimize airflow design
  - **1U: 220W TDP**
- Compute Performance
  - Support single ICX up to 220W CPU
  - 8 DIMM for a large memory foot print
    - **Up to 3 TB with Intel® Optane™ Persistent Memory 200 Series**
- Platinum (94%) Power Supplies
  - 500W Single (510P-M)
  - 400W Redundant (510P-MR)
- **All Flash NVMe Hybrid Storage Options**
  - **1U 4x NVMe**
- Flexible I/O Expansion Slots:
  - 1U: **1 PCI-E 4.0 x16 FHHL slot**
  - **2x M.2 with VROC Support**
- Networking
  - 2x 1G

1U 3.5″
Compute & Storage Powerhouse
SYS-510P-M: 4x 3.5″ SATA/NVMe (SAS via AOC)

1U 3.5″
Compute Optimized Redundant Power Supplies
SYS-510P-MR: 4x 3.5″ SATA/NVMe (SAS via AOC)



X12 UP WIO Key Features

- Better Thermals: Optimize airflow design
  - **1U/2U 270W TDP**
- Compute Performance
  - Support single ICX up to 270W CPU
  - 8 DIMM for a large memory foot print

    (Up to 3TB with Intel® Optane™ Persistent Memory 200 Series)
- Networking
  - 2x 10G BaseT

- Platinum (94%) Power Supplies
  - 1U: 600W Single (510P-WT)
  - 1U: 500W Redundant (510P-WTR)
  - 1U: 750W Redundant (110P-WTR)
  - 2U: 650W Redundant (520P-WTR)
- **All Flash NVMe Hybrid Storage Options**
  - **1U: 4x NVMe**
  - **2U: 2x NVMe**
- Flexible I/O Expansion Slots:
  - 1U: **2 PCI-E 4.0 x16 FHFL slots**
    1 PCI-E 4.0 x16 LP slot
  - 2U: **2 PCI-E 4.0 x16 FHFL slots**
    2 PCI-E 4.0 x8 LP slot

SYS-510P-WT
Compute Optimized

SYS-510P-WTR
Compute Optimized Redundant Power

SYS-110P-WTR
Compute & Storage Powerhouse

SYS-520P-WTR
Capacity Optimized Storage

X12 UP Storage Key Features

- Better Thermals: Optimize airflow design
  - **1U/2U/4U: 270W TDP**
- Compute Performance
  - Support single ICX up to 270W CPU
  - 8 DIMM for a large memory footprint
    - **Up to 3TB with Intel® Optane™ Persistent Memory 200 Series**
- Flexible I/O Expansion Slots:
  - 1U: **1 PCI-E 4.0 x16 FHHL slot**
  - 2U/4U: **2 PCI-E 4.0 x16 LP slots**
    2 PCI-E 4.0 x8 LP slots

- NVMe Storage Options
  - 1U 10x NVMe (Dedicated)
  - 2U/4U 2x NVMe (Option Rear)
- Networking
  - 2 x 10G BaseT
- Power Supply Level
  - 860W Redundant (Platinum) (110P-TRN10)
  - 800W Redundant (Titanium) (520P-ACTR12L/H)
  - 1200W Redundant (Titanium) (540P-E1CTR36L/H)
  - 1600W Redundant (Platinum) (540P-E1CTR45L/H)

1U 10x 2.5″
Compute & Storage Powerhouse
SSG-110P-NTR10: 10x 2.5″ NVMe

2U 12x 3.5″
Compute & Storage Powerhouse
SSG-520P-ACTR12L/H: 12x 3.5″ SATA/SAS + 2x 2.5” SATA/NVMe optional rear

4U 36x 3.5″
IOPS Optimized Storage
SSG-540P-E1CTR36L/H: 36x 3.5″ SATA/SAS + 2x 2.5” SATA/NVMe optional rear

4U 45x 3.5″ (Top-Load)
Capacity Optimized Storage
SSG-540P-E1CTR45L/H: 45x 3.5″ SATA/SAS + 2x 2.5” SATA
+ 2x 2.5” SATA/NVMe optional rear

Spec/Feature Summary of X12 UP Xeon Scalable Series

Product Family	Mainstream		WIO				Storage			
System PN	510P-M	510P-MR	110P-WTR	510P-WT	510P-WTR	520P-WTR	110P-NTR10	520P-ACTR12	540P-E1CTR36	540P-E1CTR45
Form Factor	1U	1U	1U	1U	1U	2U	1U	2U	4U	4U
CPU TDP Max	220W	220W	270W	270W	270W	270W	270W	270W	270W	270W
Memory DIMM #	8	8	8	8	8	8	8	8	8	8
3.5” Disk Bay #	4	4	-	4	4	8	-	12	36	45
2.5” Disk Bay #	2 (Opt)	2 (Opt)	10	2 (Opt)	2 (Opt)	2 (Opt)	10	2 (Opt)	2 (Opt)	2 + 2 (Opt)
U.2 NVMe Support #	4 (Opt)	4 (Opt)	4 (Opt)	4 (Opt)	4 (Opt)	2 (Opt)	10	2 (Opt)	2 (Opt)	2 (Opt)
M.2 Support #	2	2	1	1	1	1	2	1	1	1
M.2 interface	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA	x4 NVME/ SATA
M.2 Form Factor	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110	2280/ 22110
PCI-E 4.0 x16	1	1	3	3	3	2	1	2	2	2
PCI-E 4.0 x8						2		2	2	2
SAS Controller								3816 (L) 3916 (H)	3808 (L) 3908 (H)	3808 (L) 3908 (H)
Networking (Base T)	1G x2	1G x2	10G x2	10G x2	10G x2	10G x2	10G x2	10G x2	10G x2	10G x2
Power Supply	500W Single	400W 1+1	750W 1+1	600W Single	500W 1+1	650W 1+1	860W 1+1	800W 1+1	1200W 1+1	1600W 1+1
Power Efficiency 80Plus	94%	94%	94%	94%	94%	94%	94%	96%	96%	94%

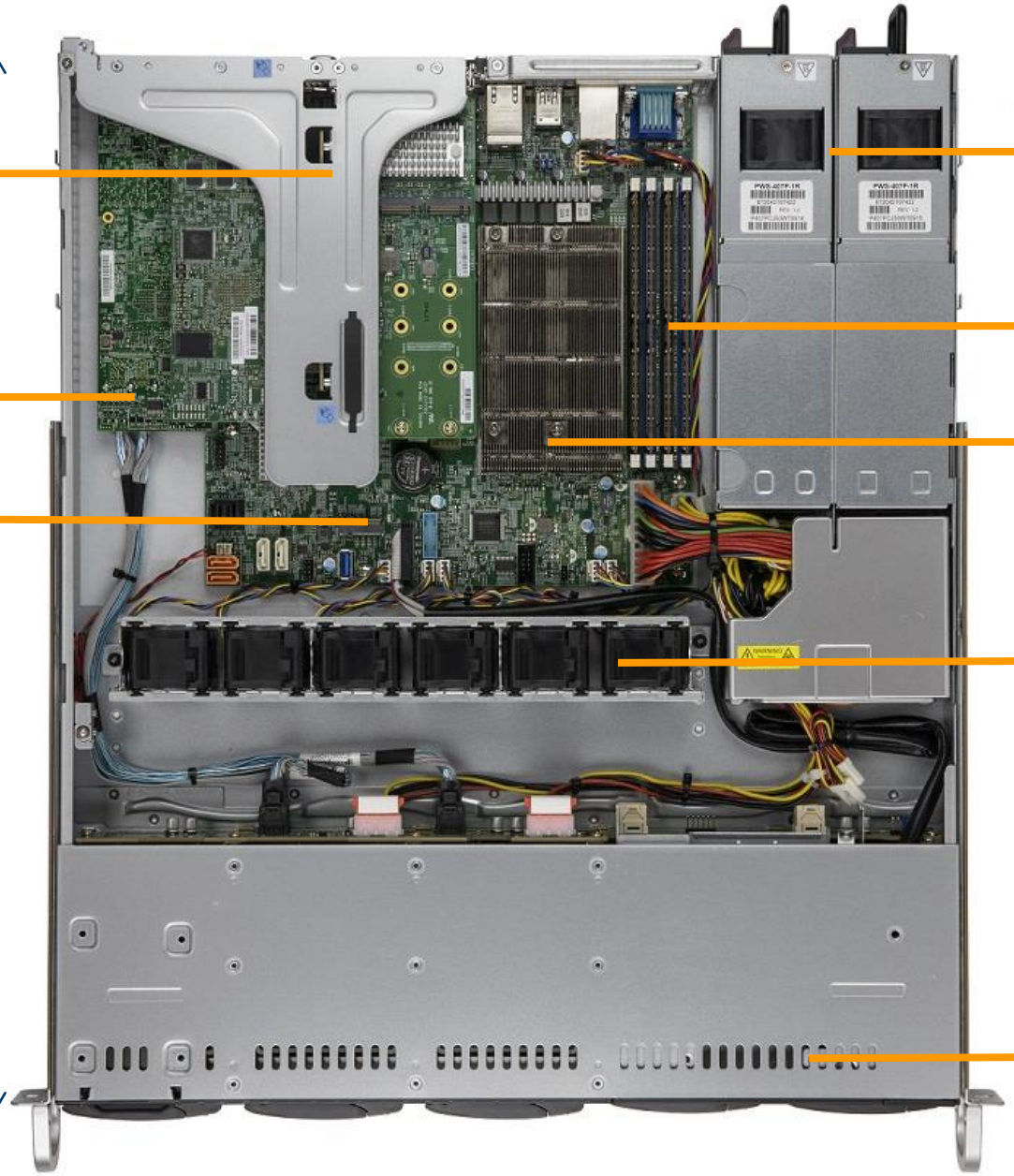
UP X12 Rocket Lake (Tatlow) Server

Presenter
Wei Chang
System Solution PM

1x PCI-E 4.0 x16 FHHL
or
1x PCI-E 4.0 x8 FHHL
1x PCI-E 4.0 x8 LP

1x Dedicated HBA slot
(internal)

1x NGFF M.2 slot



400W 1+1 Platinum level
350W Single Platinum level

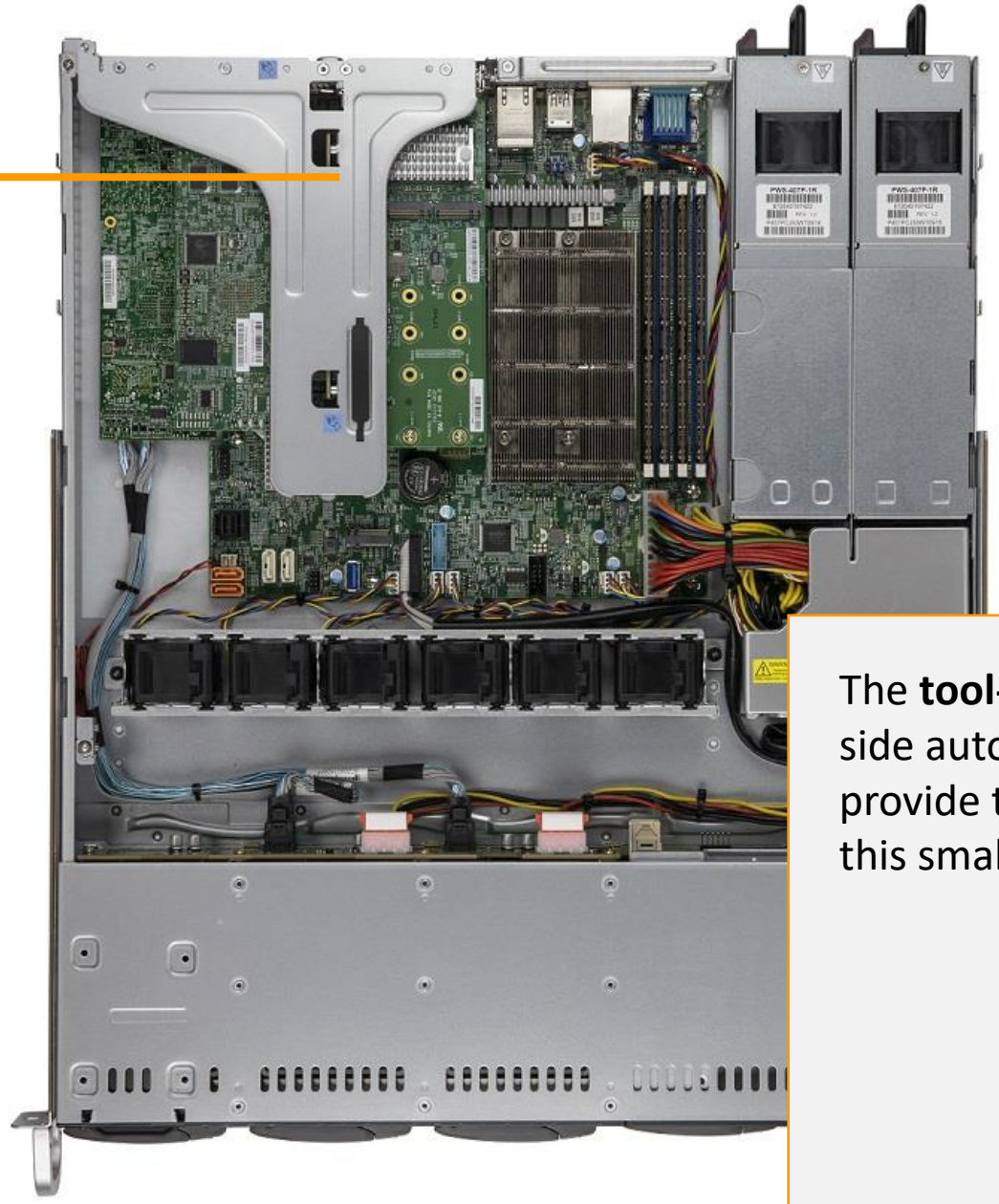
4 DIMM slot, DDR4 3200 ECC UDIMM

Single Intel Xeon E-2300 series, up to 95W

4x 4cm chassis fans; 2x optional

Drive bay: 4x 3.5” or 8x 2.5”

1x PCI-E 4.0 x16 FHHL
or
1x PCI-E 4.0 x8 FHHL
1x PCI-E 4.0 x8 LP



The **tool-less** design side by side auto switch riser card to provide two expansion slot in this small form factor system

Spec/Feature Summary of X12 UP Xeon E Series

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Product Family	Entry	Mainstream			WIO
System PN	SYS-510T-ML	SYS-110T-M	SYS-510T-M	SYS-510T-MR	SYS-510T-WTR
Form Factor	1U	1U	1U	1U	1U
CPU TDP Max	95W	95W	95W	95W	95W
Memory DIMM #	4	4	4	4	4
3.5” Disk Bay #	2 internal	-	4	4	4
2.5” Disk Bay #	Up to 3 (Opt)	8	2 (Opt)	2 (Opt)	2 (Opt)
M.2 Support	1 x4 NVME	1 x4 NVME	1 x4 NVME	1 x4 NVME	2 x4 NVME*
M.2 Form Factor	2280/22110	2280/22110	2280/22110	2280/22110	2280/22110
PCI-E 4.0 x16		1 or 0	1 or 0	1 or 0	1 or 0
PCI-E 4.0 x8	1	0 or 2	0 or 2	0 or 2	0 or 2
PCI-E 3.0 x4 (in x8)					1
Dedicated HBA slot		1	1	1	
Networking (Base T)	1G x2	1G x2	1G x2	1G x2	10G x2
Power Supply	350W Single	400W (Opt) 1+1	350W Single	400W 1+1	500W 1+1
Power Efficiency 80Plus	94%	94%	94%	94%	94%

* Xeon CPU required

UP X13 Servers Roadmap
“Performance made flexible”

Alexander Yu

Supermicro X13 Intel Comprehensive Portfolio

Confidential

Hyper-E and Hyper
Best-in-Class Performance and Flexibility Rackmount Servers

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All-in-one Rackmount Platforms for Cloud Data Centers

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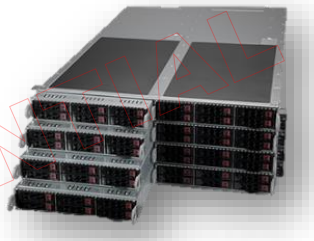
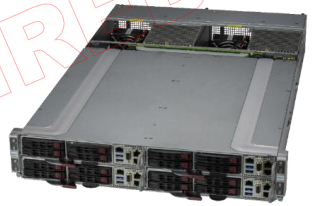


FatTwin (UP)
Advanced Multi-node 4U Twin Architecture with 8 or 4 Nodes

BigTwin
Highly Modular Multi-Node Systems with Tool-less Design

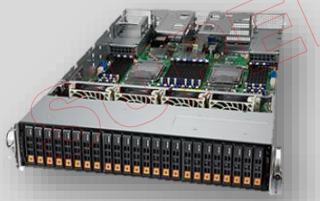
TwinPro
Cost-effective 2U Multi-node Platforms

Mainstream
Versatile Entry Level and Volume Servers for Enterprise Applications



GrandTwin (UP)
2U Multi-node
Front & Rear I/O

SuperBlade (UP & DP)
High Density x86 Multi-node Server for Enterprise Cloud, HPC



MP 4-Way Server
Highest Performance and Flexibility for Enterprise Applications

HGX GPU Servers
High Performance and Flexibility with Advanced Architecture and Thermal Design

PCIe GPU Server
High Density Systems for 3 Double-width, Full Length PCIe GPUs

SuperStorage (UP & DP)
Top-loading Server Optimized for Field Serviceability and Field Replacement

IOT/Embedded (UP)
High-efficiency, High-performance Compact Form Factor for 5G and Edge computing

X13 Single Node Rackmount Server

Alexander Yu

X13 UP Server & Storage Product Portfolio

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New! UP CloudDC

SYS-111C-NR
w/2.5'' drive bays

SYS-521C-NR
w/ 3.5" drive bays

Sample Now!

WIO

SYS-111E-WR
w/ 2.5'' drive bays

SYS-511E-WR
w/ 3.5'' drive bays

SYS-521E-WR
w/3.5'' drive bays

Sample Now!

General Storage

SSG-521E-ACTR12L/H

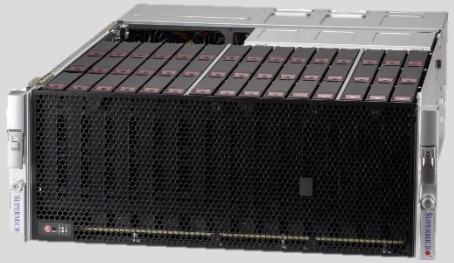
SSG-541E-E1CTR36L/H

2nd Wave

Sample in July 2022!

Top Loading Storage

SSG-541E-E1CTR45L/H



SSG-541E-E1CTR60L/H

X13 SPR 1S CPU Sample Applications

General Purpose/ Cost Effective

CPU choices

32C 2.0/2.6 250W 6414U

24C 2.2/3.0 185W 5412U

8C 1.8/1.9 125W 3408U

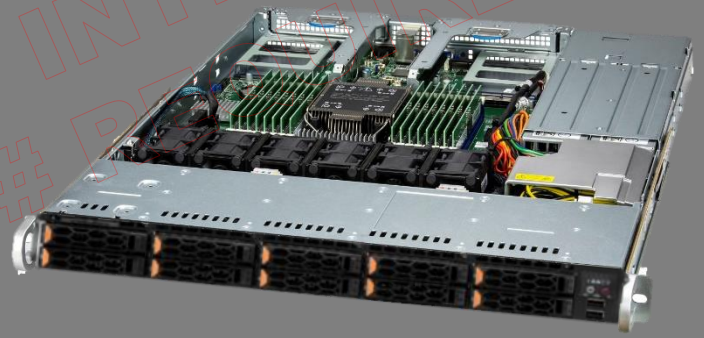
SYS-511E-WR
8x DDR5 DIMMs | 4x SATA HDDs | 3x PCIe 5.0 NICs

SYS-111E-WR
8x DDR5 DIMMs | 10x SATA SSDs | 2x PCIe 5.0 NICs + 1x SAS Controller

Cloud/Virtualization

Cloud (Default) 48C 2.2/2.8 300W 8451V

Cloud (Default) 44C 2.1/2.6 270W 8441V



SYS-111C-NR
16x DDR5 DIMMs | 10x Gen5 NVMe SSDs | 2x Tesla A2 GPUs + 1x AIOM NICs

Network Optimized/Edge

Network (Default) 52C 1.8/2.8 300W 8471N

Network (Default) 32C 1.8/2.8 185W 6421N

Network (Default) 24C 2.0/2.8 165W 5411N

SYS-521C-NR
16x DDR5 DIMMs | 12x SATA HDDs | 6x PCIe 5.0 NICs + 1x AIOM NICs