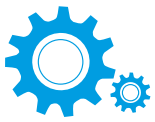Quanta®

OPTIMIZE
YOUR
DATACENTER

Quanta® CLOUD TECHNOLOGY

QCT Product Portfolio

Servers l Storage l Networking l Rack Systems l Solutions

Servers

QCT server product line is designed for cloud datacenters that look for the optimized capital and operational efficiency.

QCT 1U/2U/4U rack mount servers provide flexible choices of Intel microprocessor systems at the industry standard form factor. These highly scalable server systems provide flexible computing & storage options with the highest levels of energy efficiency and performance.

QCT multi-node product line delivers the best performance per watt with its industry leading shared Fan & PSU design. The 2U/3U high density product line offers extensive selection of hot-plug server nodes optimized for high-density computing workoads.

▶ *1U Server*

QuantaGrid D51B-1U

Full-Featured Energy Efficient 2-Socket Server

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	24x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	Option 1: 10x 2.5" hot-plug (including 2x optional 2.5" NVMe PCIe SSD)
	Option 2: 10x 2.5" hot-plug (require additional LSI SAS/ MegaRAID card to connect to the expander backplane)
	Option 3: 4x 3.5" hot-plug, 2x 2.5" fixed SSD
Network Controller	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 1 GbE management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 1 GbE management port
Expansion Slot	Option 1 (default): One x8 PCIe 3.0 SAS mezzanine slot, One x16 PCIe 3.0, FHHL One x8 PCIe 3.0 OCP LAN mezzanine slot
	Option 2: One x16 PCIe 3.0, LP MD-2, One x16 PCIe 3.0, FHHL One x8 PCIe 3.0 OCP LAN mezzanine slot
Form Factor	1U rack mount

QuantaGrid D51BP-1U

Energy Efficient 2-Socket Server with Extreme Storage IOP/S

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	20x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	10x 2.5" hot-plug (support SATA/ SAS/ PCIe-based interface)
Network Controller	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 1 GbE management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 1 GbE management port
Expansion Slot	Option 1 (default): One x8 PCIe 3.0 SAS mezzanine slot One x8 PCIe 3.0 OCP LAN mezzanine slot, Two x8 PCIe 3.0, LP MD-2
	Option 2 (this sku does not support any 2.5" PCIe SSD): One x8 PCIe 3.0 SAS mezzanine slot One x8 PCIe 3.0 OCP LAN mezzanine slot, Two x16 PCIe 3.0, LP MD-2
Form Factor	1U rack mount

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QuantaGrid D51PS-1U

Powerful Compact 2-Socket Server

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	Option 1: 10x 2.5" hot-plug
	Option 2: 4x 3.5" hot-plug , 2x 2.5" fixed SSD
Network	Intel® I350 dual-port 1 GbE
Controller	Dedicated 1 GbE management port
Expansion Slot	Option 1 (default): One x8 PCIe 3.0 SAS mezzanine slot
	One x16 PCIe 3.0 OCP LAN mezzanine slot
	Option 2: One x8 PCIe 3.0 QCT LAN mezzanine slot
	One x16 PCIe 3.0 OCP LAN mezzanine slot
Form Factor	1U rack mount

QuantaGrid D51PC-1U

Versatile Compact 2-Socket Server

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	8x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	Option 1: 10x 2.5" hot-plug
	Option 2: 4x 3.5" hot-plug , 2x 2.5" fixed SSD
Network	Option 1: Intel® I210 dual-port 1 GbE
Controller	Dedicated 1 GbE management port
	Option 2: Intel® I210 dual-port 1 GbE + Intel® I350 dual-port 1 GbE
	Dedicated 1 GbE management port
Expansion Slot	Option 1 (default): One x8 PCIe 3.0 SAS mezzanine slot
	One x8 PCIe 3.0 LP MD-2
	One x8 PCIe 3.0 OCP LAN mezzanine slot
	Option 2: One x8 PCIe 3.0 QCT LAN mezzanine slot
	One x8 PCIe 3.0 LP MD-2
	One x8 PCIe 3.0 OCP LAN mezzanine slot
Form Factor	1U rack mount

QuantaGrid S51G-1UL

The Densest 1U Scale Out Computing Storage Server

Processor	Intel® Xeon® processor E5-2600 v2 product family
Chipset	Intel® C602
Memory	8x 1866/1600/1333 MHz DDR3 RDIMM, or 8x 1600 MHz DDR3 LRDIMM
Storage	12x 3.5" or 2.5" fixed SATA
Network	One Intel® I350 dual port 1 GbE
Controller	One Intel® 82599 10Gb single port SFP+
	Dedicated 10/100/1000 management port
Expansion Slot	One x16 PCIe G3 slot (full height)
Form Factor	1U rack mount

STRATOS S100-L11D

The Densest 1U Scale Out
Storage Server

Processor	Intel® Xeon® processor E3-1200 v3 product family
Chipset	Intel® C226
Memory	4x 1600/1333 MHz DDR3 ECC UDIMM
Storage	12x 3.5" or 2.5" fixed SATA
Network	One Intel® 82599ES single port 10G SFP+
Controller	Four Intel® I210 1 GbE
	Dedicated 10/100 management port
Expansion Slot	One x8 PCIe 3.0 LP MD-2
Form Factor	1U rack mount

STRATOS S100-L11SL

The Densest 1U Scale Out
Storage Server

Processor	Intel® Xeon® processor E3-1200, E3-1200 v2 product family
Chipset	Intel® C204
Memory	4x 1600/1333 MHz DDR3 ECC UDIMM
Storage	12x 3.5" or 2.5" fixed SATA
Network	One Intel® 82599ES single port 10G SFP+
Controller	Four Intel® 82574L 1 GbE
	Dedicated 10/100 management port
Expansion Slot	One x8 PCIe 3.0 LP MD-2
Form Factor	1U rack mount

STRATOS S100-X1S1N

Compact 1U Server with Extra
Storage Expandability

Processor	Intel® Xeon® processor E3-1200 v3 product family
Chipset	Intel® C222
Memory	4x 1600/1333 MHz DDR3 ECC UDIMM
Storage	Option 1: 10x 2.5" hot-plug, 2x 2.5" fixed SSD
	Option 2: 4x 3.5" hot-plug, 2x 2.5" fixed SSD, 2x 2.5" fixed HDD
Network Controller	Intel® I210 dual port 1 GbE
Expansion Slot	Option 1: Two x8 PCIe 3.0 mezzanine Slots
	Option 2: One x8 PCIe 3.0, LP-MD2
	One x8 PCIe 3.0 mezzanine Slots
Form Factor	1U rack mount

STRATOS S210-X12RS

2-Socket High Memory 1U
Rackmount Server

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	24x 1866/1600/1333 MHz DDR3 RDIMM, or 24x 1600 MHz DDR3 LRDIMM
Storage	Option 1: 10x 2.5" hot-plug
	Option 2: 4x 3.5" hot-plug
Network	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 1 GbE management port
Controller	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 1 GbE management port
Expansion Slot	One x16 PCIe 3.0, FHHL
	Two x8 PCIe 3.0 mezzanine Slots
Form Factor	1U rack mount

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STRATOS S215-X1M2Z

OCP, AMD Open 3.0 Compliant
1U Server

Processor	AMD OpteronTM 6200, 6300 product family
Chipset	AMD SR5670 + SP5100
Memory	24x 1600/1333 MHz DDR3 RDIMM
Storage	Option 1: 10x 2.5" hot-plug
	Option 2: 4x 3.5" hot-plug
Network Controller	Broadcom 5720 dual-port 1 GbE
Expansion Slot	Two x8 PCIe 2.0, LP MD-2
	One x8 PCIe 3.0 OCP mezzanine slot
Form Factor	1U rack mount

▶ *2U Server*

QuantaGrid D51B-2U

Full-Featured Energy Efficient
2-Socket Server

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	24x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	Option 1: 24x 2.5" hot-plug, 2x optional rear 2.5" hot-plug
	2x optional rear 2.5" hot-plug PCIe SSD
	Option 2: 12x 3.5" hot-plug, 2x optional rear 2.5" hot-plug
	2x optional rear 2.5" hot-plug PCIe SSD
Network Controller	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 1 GbE management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 1 GbE management port
Expansion Slot	Option 1 (default): One x8 PCIe 3.0 SAS mezzanine slot, Two x8 PCIe 3.0, LP MD-2
	One x8 PCIe 3.0 FHHL, One x16 PCIe 3.0 FHHL
	One x8 PCIe 3.0 OCP LAN mezzanine slot
	Option 2: One x16 PCIe 3.0, LP MD-2, Two x8 PCIe 3.0 FHHL, One x16 PCIe 3.0 FHHL
	One x8 PCIe 3.0 OCP LAN mezzanine slot
Form Factor	2U rack mount

STRATOS S210-X22RQ

2-Socket High Memory 2U
Rackmount Server

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	24x 1866/1600/1333 MHz DDR3 RDIMM, or 24x 1600 MHz DDR3 LRDIMM
Storage	Option 1: 24x 2.5" hot-plug
	2x optional rear 2.5" hot-plug
	Option 2: 12x 3.5" hot-plug
	2x optional rear 2.5" hot-plug
Network Controller	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 1 GbE management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 1 GbE management port
Expansion Slot	Four x8 PCIe 3.0, LP MD-2
	One x4 PCIe 3.0, LP MD-2
	Two x8 PCIe 3.0 mezzanine slots
Form Factor	2U rack mount

* All specifications and figures are subject to change without prior notice.

4

Servers

▶ *4U Server*

STRATOS S400-X44E

Performance & Cost Optimized
4-Socket Server

Processor	Intel® Xeon® processor E5-4600 product family
Chipset	Intel® C602
Memory	48x 1600/1333 MHz DDR3 RDIMM
Storage	8x 2.5" hot-plug
Network	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 1 GbE management port
Controller	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 1 GbE management port
Expansion Slot	Four x16 PCIe 3.0, Four x8 PCIe 3.0, One x4 PCIe 3.0
	One x8 PCIe 3.0 mezzanine slot
Form Factor	4U rack mount

QuantaGrid Q71L-4U

Powerful Enterprise Grade 4U
4-Socket Server with Unprecedented
RAS and Scalability

Processor	Intel® Xeon® processor E7-4800 v2 product family
Chipset	Intel® C602J
Memory	96x 1600/1333 MHz DDR3 RDIMM, or 96x 1866 MHz DDR3 RDIMM
Storage	12x 2.5" hot-plug (* up to 4x hot-plug PCIe SSD support)
Network	Option 1: Intel® I350 dual-port 1 GbE
Controller	Dedicated 1 GbE management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T
	Dedicated 1 GbE management port
Expansion Slot	Two x16 PCIe 3.0, HH 3/4L (1x has HS feature)
	Eight x8 PCIe 3.0, HHHL (3x has HS feature)
	One x8 PCIe 3.0 dedicated storage mezzanine slot
	One x8 PCIe 3.0 dedicated Network mezzanine slot
Form Factor	4U rack mount
	* 2x NVMe PCIe SSD supported onboard, 2x additional available with add-on PCIe card.

▶ *GPGPU Server*

QuantaGrid D51BV-2U

Energy Efficient 2-Socket
GPU/ Intel® Xeon PhiTM Server

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	24x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	Option 1: 10x 3.5" hot-plug SATA 6Gb/s
	Option 2: 12x 3.5" hot-plug (require additional SAS/ RAID card)
Network	Option 1: Intel® I350 dual-port 1 GbE
Controller	Dedicated 1 GbE management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T
	Dedicated 1 GbE management port
Expansion Slot	Two x16 PCIe 3.0 double-width FHFL
	Two x8 PCIe 3.0, LP MD-2
	One x8 PCIe 3.0 OCP LAN mezzanine slot
Form Factor	2U rack mount

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STRATOS S210-X2A2J

Incredible Parallel Computing Power

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	16x 1866/1600/1333 MHz DDR3 RDIMM or 16x 1600 MHz DDR3 LRDIMM
Storage	4x 2.5" hot-plug
Network Controller	Option 1: Intel® I350 dual-port 1 GbE
	Shared NIC 10/100 Mbps for management on NIC1
	Option 2: Intel® I350 dual-port 1 GbE, Mellanox CX3 IB QDR QSFP+ port
	Shared NIC 10/100 Mbps for management on NIC1
	Option 3: Intel® I350 dual-port 1 GbE, Mellanox CX3 IB FDR QSFP+ port
	Shared NIC 10/100 Mbps for management on NIC1
Expansion Slot	Four x16 PCIe 3.0, FHFL
Form Factor	2U rack mount

▶ *Microserver*

STRATOS S910-X31E

High Density and Energy Efficient 3U Microserver

	9-Node	12-Node
Processor	Intel® Xeon® processor E3-1200 v3 product family	
Chipset	Intel® C226	
Memory	4x 1600/1333 MHz ECC UDIMM per node	4x 1600/1333 MHz ECC VLP UDIMM per node
Storage	2x 3.5" per node, or 4x 2.5" per node	
Network Controller	Intel® I350 dual port 1 GbE per node	
	Dedicated 10/100 Mbps management port on the system	
	Built-in switch with two 10G SFP+ ports for uplink on the system	
Expansion Slot	One x8 PCIe 3.0 mezzanine slot per node	None
Form Factor	3U rack mount, 9 nodes	3U rack mount, 12 nodes

▶ *Multi-Node Server*

QuantaPlex T41S-2U (4-Node)

2U 4-Node Server Featuring Highest Compute Density

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 MHz DDR4 RDIMM/ LRDIMM per node
Storage	Option 1: 6x 2.5" hot plug per node
	Option 2: 3x 3.5" hot plug per node
Network Controller	Option 1: Intel® I350 dual-port 1 GbE per node
	Dedicated 10/100 management port per node
	Option 2: Intel® X540 dual-port 10GbE BASE-T per node
	Dedicated 10/100 management port per node
	Option 3: Intel® 82599ES dual-port 10G SFP+ per node
	Dedicated 10/100 management port per node
Expansion Slot	One x16 PCIe 3.0, LP MD-2 per node
	One x8 PCIe 3.0 mezzanine slot per node
Form Factor	2U rack mount, 4 nodes

* All specifications and figures are subject to change without prior notice.

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QuantaPlex T41SP-2U (4-Node)

2U 4-Node Server Featuring
NVMe SSD

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 MHz DDR4 RDIMM/ LRDIMM per node
Storage	6x 2.5" hot plug (2x NVMe SSD) per node
Network Controller	Option 1: Intel® I350 dual-port 1 GbE per node
	Dedicated 10/100 management port per node
	Option 2: Intel® X540 dual-port 10GbE BASE-T per node
	Dedicated 10/100 management port per node
	Option 3: Intel® 82599ES dual-port 10G SFP+ per node
	Dedicated 10/100 management port per node
Expansion Slot	One x16 PCIe 3.0, LP MD-2 per node
	One x8 PCIe 3.0 mezzanine slot per node
Form Factor	2U rack mount, 4 nodes

STRATOS S810-X52L (4-Node)

Ultra Dense High Computing
Multi-node 2U Rackmount Server

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	16x 1866/1600/1333 MHz DDR3 RDIMM, or 16x 1600 MHz DDR3 LRDIMM per node
Storage	Option 1: 6x 2.5" hot plug per node
	Option 2: 3x 3.5" hot plug per node
Network Controller	Option 1: Intel® I350 dual-port 1 GbE per node
	Dedicated 10/100 management port per node
	Option 2: Intel® X540 dual-port 10GbE BASE-T per node
	Dedicated 10/100 management port per node
Expansion Slot	One x16 PCIe 3.0, LP MD-2 per node
	One x16 PCIe 3.0 mezzanine slot per node
Form Factor	2U Rack Mount, 4 nodes

Broad Choice of Network/Storage Mezzanine Options

QCT has developed the most reliable network and SAS mezzanine cards with outstanding performance and power efficiency. QCT's network mezzanine cards are available from the conventional 1GbE/10GbE copper Ethernet for fail-over redundancy to the LoM, to the high performance 10GbE SFP+/40GbE QSFP+ and InfiniBand designed to increase the network throughput and bandwidth. With the explosive growth of data in cloud and enterprise storage requirement, QCT's latest 6Gbps/12Gbps SAS 3.0 mezzanine cards will satisfy the need for both cost efficient cold storage application and mission critical high performance data application.

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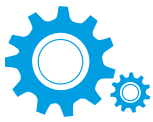
Quanta Datacenter Manager

As energy demands and density continue to increase in the datacenter, datacenter managers are now looking for new solutions to face challenges like manageability and rising cost; Quanta Datacenter Manager (QDCM) provides the solution to help improve the manageability, energy usage and system utilization to your datacenter so datacenter managers can get better control of energy and resources with just a click.

Through QDCM, datacenter managers can monitor the real-time power usage and temperature at the dashboard, and manage any server's power consumption by power policies. QDCM also provides the energy optimization function. By tracking and analyzing energy usage history and cooling analysis, QDCM can give you recommendations like consolidating workloads from low utilized servers or cooling your datacenter more efficiently to save more energy.

QDCM Dashboard

QDCM Dashboard displays the overall status of managed nodes, including temperature, power consumption, space usage, and custom/system events in one page.

QDCM Hierarchical Datacenter Management

Datacenter Manager displays all managed entities in QDCM Console. The summary shows the status of selected rack or a single server, including temperature, power consumption, space usage and custom/system events. In this page, users also can get server's inventory data or set power policies to limit the consumed power.

QDCM Energy Optimization

Energy Optimization analyzes many data sets to help user optimize the energy efficiency in their datacenter.

- Cooling Analysis provides the current cooling status which is evaluated with suggestions, along with possible actions and the benefits of taking these actions.
- Low-Utilization Servers function can identify under utilized servers and list them as potential targets for workload consolidation to optimize energy efficiency.
- Server Power Characteristics provides the information of power consumption to decide whether to upgrade or replace some servers to improve the power efficiency in their datacenter.

Storage

QCT storage product line is designed with high availability and full redundancy, offering seamless data storage and backup solution suitable broadly for SMBs, enterprises, and cloud service providers.

QCT JBOD Series offer flexible, affordable, scalable, and highly available IT infrastructure. Users can easily scale up the storage capability when business grows, and access critical data with high reliability because of the redundant controller module, power supply, data path, and cooling module design.

▶ JBOD

MESOS M4600H

Ultra-Dense 4U Disk Expansion Unit

Controller Module	2x SAS Interface Modules (SIM)
	4x Internal SAS Interface Modules (ISIM)
External I/O Ports	4x 6Gb/s mini-SAS ports per SIM
Storage	60x 3.5" or 2.5" hot-plug SAS/SATA HDD/SSDs
Management Port	1x Mini USB management port
Fan	4x FAN modules, dual rotors per module
Power Supply	2x 1400W 220VAC or 2x 1200W 100-220VAC PSUs
Form Factor	4U rack mount

MESOS M4240H

High-Density 4U Disk Expansion Unit

Controller Module	2x SAS Interface Modules (SIM)
External I/O Ports	3x 6Gb/s mini-SAS ports per SIM
	- 2x Host ports
	- 1x Cascading ports
Storage	24x 3.5" or 2.5" hot-plug SAS/SATA HDD/SSDs
Management Port	1x RJ11 management port
Fan	4x FAN modules, 2+2 redundant
Power Supply	2x 760W redundant PSUs
Form Factor	4U rack mount

▶ Storage Server

QuantaPlex T21SR-2U (2-Node)

2U 2-Node High Availability Storage Serve

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 MHz DDR4 RDIMM/ LRDIMM per node
Storage	Option 1: 12x 3.5" hot-plug shared SAS HDD, 2x 2.5" hot-plug SSD for OS installtion,
	1x USB flash module per node
	Option 2: 24x 2.5" hot-plug shared SAS HDD, 2x 2.5" hot-plug SSD for OS installtion,
	1x USB flash module per node
Network	Option 1: Intel® I350 dual-port 1 GbE per node
Controller	Dedicated 10/100 management port per node
	Option 2: Intel® X540 dual-port 10GbE BASE-T per node
	Dedicated 10/100 management port per node
	Option 3: Intel® 82599ES dual-port 10G SFP+ per node
	Dedicated 10/100 management port per node
Expansion Slot	Two x8 PCIe 3.0, LP MD-2 per node
	One x8 PCIe 3.0 for SAS controller per node
Node	One x8 PCIe 3.0 for Intel® Non-Transparent Bridge (NTB) per node
Interconnection	One x8 PCIe 3.0 for 10G Base-KR per node
Form Factor	2U rack mount, Dual clustered node

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STRATOS S810-X52LR

Cluster-in-a-Box Server Provides
In-chassis Shared Storage

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	16x 1866/1600/1333 MHz DDR3 RDIMM per node
Storage	Option 1: 12x 3.5" or 2.5" hot-plug SAS HDDs, 2x 2.5" internal HDDs for OS installtion per node (one PCIe slot will be size constraint)
	Option 2: 12x 3.5" hot-plug SAS HDDs, 1x USB Flash Module per system
Network Controller	Option 1: Intel® I350 dual-port 1 GbE, Dedicated 10/100 management port
	Option 2: Intel® X540 dual-port 10GbE BASE-T, Dedicated 10/100 management port
Expansion Slot	Option 1: Three x8 PCIe 3.0, LP MD-2 per node
	Option 2: One x8 PCIe 3.0 mezzanine slot per node, One x8 PCIe 3.0 , LP MD-2 per node
Node Interconnection	1Gb and NTB interconnection
Form Factor	2U rack mount, Dual clustered node

▶ Storage Appliance

MESOS CB220

Converged Cluster-in-a-Box
Network Attached Storage

Tailored for SMB, branch office and private cloud storage applications, QCT's innovative storage appliance, MESOS CB220, features a highly available, fully redundant, and fault-tolerant Cluster-in-a-Box design philosophy powered by Windows Storage Server 2012 R2 Standard Edition and LSI Syncro CS solution. MESOS CB220 offers the best user experience to enable network storage quickly with high availability and transparent failover functions to achieve continuous operation.

· Cluster-in-a-Box, High Availability, Reliability & Serviceability

· Powered by Windows Storage Server 2012 R2

· SMB 3.0, NFSv4.1, De-duplication and Software Parity Support

· Simple Management & Easier Configuration

	Value SKU	Performance SKU
Operating System	Windows Storage Server 2012 R2 Standard Edition	Windows Storage Server 2012 Standard Edition
Processor (per node)	2x Intel® Xeon® E5-2609 per node	
Memory (per node)	32GB 1333MHz DDR3 RDIMM per node	64GB 1333MHz DDR3 RDIMM per node
Storage	12x 3.5" or 2.5" SASII HDD/SSD per system	
Network Controller (per node)	Option 1: Intel® I350 dual-port 1 GbE Option 2: Intel® X540 dual-port 10 GbE	Option 1: Intel® I350 dual-port 1 GbE + 82599 dual-port 10 GbE SFP+ Option 2: Intel® I350 dual-port 1 GbE + X540 dual-port 10 GbE RJ-45
RAID	Windows Storage Spaces	LSI Syncro CS SAS 9271-8i
Interconnection	1 Gb and NTB	
Form Factor	2U rack mount, Dual clustered node	

Networking

Emerging trends such as cloud computing, big data, and parallel calculation redefine the network infrastructure from three layers (core, aggregation and access) to two layers (spine and leaf). The QuantaMesh Ethernet switch product lineup is designed for two-layer architecture in modern datacenters. It features low latency, low power consumption, high density, high port count and offers various speed options from 1G, 10G, to 40G, and a wide range of software support including virtualization, L3 fabric, as well as Openflow-based SDN. Its fixed-ports configuration, redundant power supply and fan design, and software features such as Border Gateway Protocol (BGP), Multi-chassis Link Aggregation (MLAG), and Equal-cost Multi-path routing (ECMP) enable scalability, load balancing, and non-stop service for datacenters.

QuantaMesh T3048-LY2R

A Powerful Top-of-Rack Switch for Datacenter

Physical Ports	• Port Configuration: 48 1/10GbE SFP+ and 4 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1280Gbps
	• Maximum Forwarding Rate: 952Mpps
	• Latency: <1us
	• Memory: 2GB DDR3
	• Flash: 128MB
	• MAC: 128K
	• Storage: 8GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T1048-LB9A

1G/10G Enterprise-Class Ethernet Switch

Physical Ports	• Port Configuration: 48 10/100/1000BASE-T and 4 1/10GbE SFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
Performance	• Switching Capacity: 176Gbps
	• Maximum Forwarding Rate: 131Mpps
	• Latency: ~3us
	• Memory: 1GB DDR3
	• Flash: 64MB
	• MAC: 32K
	• Storage: 2GB CF

QuantaMesh T1048-LB9

1G/10G Datacenter & Enterprise-Class Ethernet Switch

Physical Ports	• Port Configuration: 48 10/100/1000BASE-T and 4 1/10GbE SFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
Performance	• Switching Capacity: 176Gbps
	• Maximum Forwarding Rate: 131Mpps
	• Latency: ~3us
	• Memory: 1GB DDR3
	• Flash: 64MB
	• MAC: 32K
	• Storage: 2GB CF
High Availability	• Redundant Power Supply: 1+1

QuantaMesh T1048-LY4A

1G/10G Enterprise-Class Ethernet Switch

Physical Ports	• Port Configuration: 48 10/100/1000BASE-T and 2 1/10GbE SFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 136Gbps
	• Maximum Forwarding Rate: 101Mpps
	• Memory: 512MB DDR3
	• Flash: 32MB
	• MAC: 16K

Quanta www.QuantaQCT.com

QuantaMesh T1048-LY4B

1G/10G Enterprise-Class Ethernet Switch

Physical Ports	• Port Configuration: 48 10/100/1000BASE-T and 4 100/1000BASE-X SFP ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 104Gbps
	• Maximum Forwarding Rate: 77Mpps
	• Memory: 512MB DDR3
	• Flash: 32MB
	• MAC: 16K

QuantaMesh T1048-LY4C

Gigabit Enterprise-Class Ethernet Switch

Physical Ports	• Port Configuration: 48 10/100/1000BASE-T
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 96Gbps
	• Maximum Forwarding Rate: 71Mpps
	• Memory: 512MB DDR3
	• Flash: 32MB
	• MAC: 16K

QuantaMesh T3048-LY2

A Powerful Top-of-Rack Switch for Datacenter

Physical Ports	• Port Configuration: 48 1/10GbE SFP+ and 4 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
Performance	• Switching Capacity: 1280Gbps
	• Maximum Forwarding Rate: 952Mpps
	• Latency: <1.2us
	• Memory: 2GB DDR3
	• Flash: 64MB
	• MAC: 128K
	• Storage: 2GB Micro SD
High Availability	• Redundant Power Supply: 1+1

QuantaMesh T3040-LY3

A Powerful Top-of-Rack Switch for Datacenter

Physical Ports	• Port Configuration: 40 100/1000/10GBASE-T and 8 1/10GbE SFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 960Gbps
	• Maximum Forwarding Rate: 714Mpps
	• Latency: <3us
	• Memory: 2GB DDR3
	• Flash: 64MB
	• MAC: 128K
	• Storage: 2GB Micro SD
High Availability	• Redundant Power Supply: 1+1

* All specifications and figures are subject to change without prior notice.

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QuantaMesh T3064-LY1R

A Powerful Top-of-Rack Switch for Datacenter

Physical Ports	• Port Configuration: 64 1/10GbE SFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1280Gbps
	• Maximum Forwarding Rate: 952Mpps
	• Latency: <1us
	• Memory: 2GB DDR3
	• Flash: 128MB
	• MAC: 128K
	• Storage: 2GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T3048-IZ1

An Intel® ONP Top-of-Rack Switch for Datacenter

Physical Ports	• Port Configuration: 48 1/10GbE SFP+ and 4 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1280Gbps
	• Maximum Forwarding Rate: 952Mpps
	• Latency: <400ns
	• Memory: 4GB DDR3
	• Flash: SPI: 8MBx2
	• MAC: 64K
	• Storage: 32GB SSD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T3096-LY5

A Powerful Spine/Leaf Switch for Datacenter

Physical Ports	• Port Configuration: 96 1/10GbE SFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1920Gbps
	• Maximum Forwarding Rate: 1428Mpps
	• Latency: <600ns
	• Memory: 8GB DDR3/ECC
	• Flash: 128MB
	• MAC: UFT
	• Storage: 8GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T5016-LB8D

A Powerful Top-of-Rack Switch for Datacenter

Physical Ports	• Port Configuration: 16 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
Performance	• Switching Capacity: 1280Gbps
	• Maximum Forwarding Rate: 952Mpps
	• Latency: <1.2us
	• Memory: 2GB DDR3
	• Flash: 64MB
	• MAC: 128K
	• Storage: 2GB Micro SD
High Availability	• Redundant Power Supply: 1+1

QuantaMesh T5032-LY6

A Powerful Spine/Leaf Switch for Datacenter

Physical Ports	• Port Configuration: 32 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 2560Gbps
	• Maximum Forwarding Rate: 1920Mpps
	• Latency: <600ns
	• Memory: 2GB DDR3/ECC
	• Flash: 128MB
	• MAC: UFT
	• Storage: 8GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T3048-LY5A
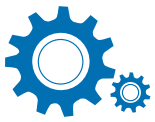
A Powerful Spine/Leaf Switch for Datacenter

Physical Ports	• Port Configuration: 48 1/10GbE SFP+ and 12 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1920Gbps
	• Maximum Forwarding Rate: 1428Mpps
	• Latency: <600ns
	• Memory: 4GB DDR3/ECC
	• Flash: 128MB
	• MAC: UFT
	• Storage: 8GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T3048-LY8

A Powerful Spine/Leaf Switch for Datacenter

Physical Ports	• Port Configuration: 48 1/10GbE SFP+ and 6 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1440Gbps
	• Maximum Forwarding Rate: 1071Mpps
	• Latency: <600ns
	• Memory: 2GB DDR3/ECC
	• Flash: 128MB
	• MAC: UFT
	• Storage: 8GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

QuantaMesh T3048-LY9

A Powerful Spine/Leaf Switch for Datacenter

Physical Ports	• Port Configuration: 48 100/1000/10GBASE-T and 6 40GbE QSFP+ ports
	• Management Port: OOB port (10/100/1000BASE-T)
	• Console Port: 1 (RJ-45)
	• USB: 1 (Type A)
Performance	• Switching Capacity: 1440Gbps
	• Maximum Forwarding Rate: 1071Mpps
	• Latency: <3us
	• Memory: 2GB DDR3/ECC
	• Flash: 128MB
	• MAC: UFT
	• Storage: 8GB Micro SD
High Availability	• Redundant Power Supply: 1+1
	• Hot-Swappable Fan Tray: N+1

* All specifications and figures are subject to change without prior notice.

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Rack Systems

The exponential growth in compute and storage requirement in datacenters has gone hand in hand with a strong increase in their power consumption over the past few years. In an attempt to keep operating budgets low, QCT has long been committed to providing ways of optimizing datacenter hardware architecture.

QCT rack systems offer revolutionary conventional system design for datacenters. While providing an unequalled level of power efficiency for the most demanding application, rack system modular architectures also offer datacenter the configuration flexibility and exceptional ease to upgrade.

With industry's best engineer team, QCT offers two completely different rack infrastructures in Rackgo X and Rackgo M. Each offers unique features which set benefit to your specific datacenter needs.

Rackgo® M

OPEN Compute Project
SOLUTION PROVIDER

QCT Rackgo M based on the OCP Open Cloud Server (OCS) specifications contributed by Microsoft® is an innovative solution for running business applications that is built to integrate server, storage and networking functionality with technology exchange and heterogeneous management. QCT Rackgo M offers ease, density, availability, affordability and scalability that are central to the blade technology promise. QCT Rackgo M shares the same design concept of blade servers with integrated storage, all in an easy-to-use package that is designed specifically for the office and distributed enterprise environment.

Infrastructure Introduction

One Rackgo M chassis holds up to 24 compute and storage blades in any combination of your choice with integrated chassis management module in a mere 12U rack space. The chassis centralizes the high efficiency power suppliers (5+1 redundancy) for up to a pool of 8K watt power source, and utilizes large fan walls to reach the operational efficiency beyond the conventional servers currently available in the market.

A Multiple Option of Blades

QCT Rackgo M offers two different types of blades. MC510 compute blade supports the latest Intel® Xeon® processor E5-2600 v3 product family to provide unprecedented computing performance. With up to eight 2.5" hard disks (four hot-swap and four fixed), MC510 blade provides astonishing compute and storage integration that is so easy-to-use. MS100 storage blade supports up to ten 3.5" 6TB fixed (non hot-swap) hard disks with the highest storage density in an ½U architecture, ideal for Hadoop and distributed software applications.

Similarity to Blade Server

Furthermore, with both 40Gbps-ready (network) and 12G-SAS-ready (storage) tray backplane design, Rackgo M increases data transfer speed and efficiency across blade servers and networks. The shared single compute/storage tray backplane design and pre-configured rear cables function the same as the blade midplane to help reduce service complexity and allow enterprise businesses to run mission critical applications.

Network and Storage Cabling Via Backplane Architecture

QCT Rackgo M offers an unique passive backplane for simplicity and signal integrity risk reduction, and architectural flexibility for multiple network types such as 10Gbe/40Gbe Copper/Optical. For any enterprise service teams, no cable touch required helps reduce the TCO during production operations and on-site support.

MC510 Compute Blade

Open Cloud Server (OCS) Inspired
Platform

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 MHz DDR4 RDIMM/ LRDIMM
Storage	4x 2.5" hot-plug, 4x 2.5" fixed SSD
Network Controller	Option 1: Intel® 82599ES dual-port 10GbE SFP+ mezzanine card
	Option 2: Mellanox® CX3-PRO dual-port 40GbE mezzanine card
Expansion Slot	Option 1: One x8 PCIe 3.0 QCT SAS mezzanine slot
	One x8 PCIe 3.0 QCT Network OCS mezzanine slot
	Option 2: One x8 PCIe 3.0 LP MD-2
	One x8 PCIe 3.0 QCT Network OCS mezzanine slot
Form Factor	Half-width blade

MS100 Storage Blade

High Density Half-Width
JBOD with up to 6TB
Storage Capacity

Controller Module	1x SAS Interface Modules (SIM)
External I/O Ports	2x 6Gb/s mini-SAS port
Storage	10x 3.5" fixed SAS/SATA HDD/SSDs
Form Factor	Half-width blade

Rackgo® X

OPEN Compute Project
SOLUTION PROVIDER

The Rackgo X is a rack solution inspired by the Open Compute Project (OCP, http://opencompute.org/) standard. Designed for low CAPEX and OPEX with simplicity, energy and cooling efficiency, high density, serviceability, scalability, and manageability, Rackgo X is ideally suited for cloud service providers and large enterprise datacenters looking for the highest level of efficiency.

Like the LEGO concept, Rackgo X provides modular units to be built on each other. The QCT Rackgo X includes four server options, one microserver, one JBOD storage and QuantaMesh network switches as the basic building blocks. Customers can choose components to fit the specific needs of their datacenter applications.

JBR

F06A

QuantaMesh Network Switch

Power Shelf

Rackgo X F06A (4-Node)

High Density 2U 4-Node System with
Optimal IO Expansion

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 Mhz DDR4 RDIMM / LRDIMM per node
Drive Bay	2x 2.5" hot-plug per node
Network Controller	QCT OCP network mezzanine options per node
	* please refer to QCT Mezzanine Card Portfolio on website
Expansion Slot	Two x8 PCIe 3.0 LP MD-2 per node
Form Factor	4 nodes in 2OU (Open Rack) rackmount

Rackgo X F06D (4-Node)

Revolutionary Converaged Multi-node
Infrastructure

Processor	Intel® Xeon® processor E5-2600 v3 product family
Chipset	Intel® C610
Memory	16x 2133 Mhz DDR4 RDIMM / LRDIMM per node
Drive Bay	8x 2.5" hot-plug per node
Network Controller	QCT OCP network mezzanine options per node
	* please refer to QCT Mezzanine Card Portfolio on website
Expansion Slot	One x8 PCIe 3.0 LP MD-2 per node
Form Factor	4 nodes in 2OU (Open Rack) rackmount

Rackgo X F03A (4-Node)

High Density 2U4N System for Maximum
Performance

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	16x 1866/1600/1333 MHz DDR3 RDIMM per node
Drive Bay	Option 1: 4x 2.5" hot-plug per node
	Option 2: 2x 2.5" hot-plug per node
Network Controller	QCT Mellanox® ConnectX-3 dual-port 10G SFP+
	mezzanine card per node (optional)
Expansion Slot	Option 1: One x8 PCIe 3.0 LP MD-2 per node
	Option 2: Two x8 PCIe 3.0 LP MD-2 per node
Form Factor	4 nodes in 2OU (Open Rack) Rackmount

Rackgo X F03C (3-Node)

2U3N Design is Ideally for
the Balance Workload and
Flexible IO Options

Processor	Intel® Xeon® processor E5-2600, E5-2600 v2 product family
Chipset	Intel® C602
Memory	16x 1866/1600/1333 MHz DDR3 RDIMM per node
Drive Bay	1x 3.5" fixed SATA per node
Network	QCT Intel® 82599ES dual-port 10G SFP+
Controller	mezzanine card per node (optional)
Expansion Slot	Two x8 PCIe 3.0 LP MD-2 per node
Form Factor	3 nodes in 2OU (Open Rack) Rackmount

Quanta® www.QuantaQCT.com

Rackgo X S1M (42-Node)

World's Densest 42-Node Microserver System

Processor	Intel® AtomTM processor C2000 product family
Chipset	Intel® AtomTM processor C2000 SoC
Memory	4x 1333/1067 MHz DDR3 ECC SODIMM per node
Storage	1x mSATA connector per node
Network Controller	Intel® AtomTM processor C2000 SoC 2.5 per node
Form Factor	2OU (Open Rack) rackmount

Rackgo X JBR

High Density 2U JBOD with Tool-less Tray Design

Controller Module	2x SAS Interface Modules (SIM)
External I/O Ports	2x 6Gb/s mini-SAS port per SIM
Storage	28x 3.5" or 2.5" hot-plug SAS/SATA HDD/SSDs
Management Port	1x OCP debug management port
Fan	6x Hot-swappable dual roter fan modules per system
Form Factor	2OU (Open Rack) rackmount

To help customers get started with the Rackgo X rack solution quickly, QCT offers three rack architectures to suit different types of workloads. Datacenter customers can choose from the three rack configurations or build their own racks.

X300
Compute Intensive
- 64 compute nodes
- 2 power zones
- 1052 kg

X500
Storage Intensive
- 14 compute nodes
- 14 storage nodes
- 392 HDD/1.56PB
- 1 power zone
- 1108 kg

X700
Balanced workloads
- 24 compute nodes
- 12 storage nodes
- 336 HDD/1.34PB
- 1 power zone
- 1086 kg

About Quanta Cloud Technology (QCT)

Quanta Cloud Technology (QCT) provides advanced hardware systems to cloud datacenters worldwide. Product lines include servers, storage, network switches, and integrated rack systems. QCT customers want the same innovative cloud hardware technology in use by hyperscale cloud datacenter operators, but in off-the-shelf SKUs with global services. QCT sells cloud hardware that delivers hyperscale performance, efficiency and advanced engineering, with flexible product configuration, rack integration, performance tuning and engineering consulting services to help customers deploy optimized cloud solutions for their unique cloud workloads.

QCT's parent is Quanta Computer Inc., a Fortune Global 500 company with more than 100,000 employees located at engineering, manufacturing and services facilities worldwide. http://www.QuantaQCT.com

v3.2

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