



QuantaMesh T7032-IX1

The Next Wave Ethernet Switch for Data Center and Cloud Computing

- 100G Ethernet Switch
- VXLAN
- Multi-Chassis Link Aggregation (MLAG)
- OSPF, BGP4 with ECMP
- Network Automation



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The QuantaMesh T7032-IX1 is a high performance and low latency layer 2/3/4 Ethernet switch with 32 100GbE QSFP28 ports in a 1U form factor. Each 100G QSFP28 port can be independently configured to support 10/25/40/50/100GbE speed and can support up to 128 10/25G connections or 64 50G connections via split out cables. Built for infrastructure-as-a-service (IaaS) data center deployment, high performance computing clusters, and financial applications, the QuantaMesh T7032-IX1 – with its very high port density and high performance as well as ultra-low latency characteristic – is idea for demanding workloads and provides optimal TCO.

Automation

With the rapid adoption of cloud computing and the proliferation of big data and parallel calculations, the need for data center network devices is growing exponentially, making network automation a critical factor. Supporting auto installation, RESFful, Ansible and PSME (Pooled System Management Engine), QuantaMesh T7032-IX1 facilitates easy deployment to build-up a mass data center with Infrastructure-as-a-Service (IaaS).

Virtualization

Network virtualization is becoming an important topic of data centers. QuantaMesh T7032-IX1 offers a hardware-based VXLAN to support virtual machine mobility. Not limited by 4K VLANs, VXLAN enables network scale-out across L3 subnets and can support up to 16.7M possible virtual networks.

High Availability

The QuantaMesh T7032-IX1 is designed for high availability from both hardware and software perspectives. The key features include:

- 1+1 hot-swappable power supplies
- N+1 hot-swappable fans
- Spanning Tree with Guarding Features
- Up to 64 Groups of LACP with per Group 32 Member Ports
- Multi-chassis Link Aggregation (MLAG)
- Up to 48 paths ECMP routing for load balancing and redundancy
- Virtual Router Redundancy Protocol (VRRP)

About QCT

Quanta Cloud Technology (QCT) is a global data center solution provider. We combine the efficiency of hyperscale hardware with infrastructure software from a diversity of industry leaders to solve next-generation data center design and operation challenges. QCT serves cloud service providers, telecoms and enterprises running public, hybrid and private clouds.

Product lines include hyper-converged and software-defined data center solutions as well as servers, storage, switches, integrated racks with a diverse ecosystem of hardware component and software partners. QCT designs, manufactures, integrates and services cutting edge offerings via its own global network. The parent of QCT is Quanta Computer, Inc., a Fortune Global 500 corporation.

QuantaMesh T7032-IX1 Specifications

Physical ports

- **Port configuration:** 32 QSFP28 ports
- **Management Port:** Out-of-band management port (RJ-45, 10/100/1000Base-T)
- **Console Port:** 1 (RJ-45)
- **USB:** 1 (v2.0)

Performance

- **Switching capacity:** 6.4Tbps
- **Maximum forwarding rate:** 3.3Bpps
- **Latency:** <450ns

CPU Board

- **Memory:** 8GB DDR3/ECC
- **Storage:** 32G SSD

Layer 2 Features

- **Switching Mode:** Store-and-Forward
- **Spanning Tree:**
 - 802.1w
 - 802.1s
 - Auto Edge
- **VLAN :**
 - IEEE 802.1Q Tagged Base
 - Port-Based
 - QinQ (802.1ad)
- **Storm Control:**
 - Broadcast
 - Unknown Multicast
 - DLF (Unknown Unicast)
- **IGMP Snooping:**
 - v1/v2/v3
 - v1/v2 Querier
 - Immediate Leave
- **MLD Snooping v1/v2**
- **Link Aggregation:**
 - 802.3ad with LACP
 - Static Trunk
 - Unicast/Multicast Traffic Balance over Trunking Port
 - LACP Falback
- **Link State Tracking**
- **Port Backup**
- **Loopback Detection**
- **Private VLAN**

QoS Features

- **Scheduling for priority queue:** WRR, Strict, Hybrid
- **COS:** 802.1p, IP TOS precedence, DSCP
- **DiffServ**
- **iSCSI optimization**

Security Features

- **Static and dynamic port security (MAC-based)**
- **802.1x (MD5, MS-CHAPv2):**
 - Port-based
 - MAC-based
 - Auto VLAN assignment
 - Guest VLAN
 - Unauthenticated VLAN
- **Access Control List:** L2/L3/L4
- **IPv6 ACL:** L3/L4
- **RADIUS:** Authentication, Authorization, Accounting
- **TACACS+:** Authentication
- **SSH 1.5/V2.0**
- **User name and password:**
 - Local Authentication
 - Remote Authentication via RADIUS/TACACS+, AAA
- **Management IP filtering:**
 - SNMP

- Telnet
- SSH
- **IP Source Guard**
- **Dynamic ARP inspection (DAI)**
- **DHCP snooping:** IPv4, IPv6
- **Control Plane Policing (CoPP)**
- **Service Prohibit Access**
- **Role Base Access Control (RBAC)**

Layer 3 Features

- **IP Multinetting/CIDR**
- **/31 subnets**
- **Proxy ARP**
- **Static route:** IPv4 , IPv6
- **OSPFv2/v3**
- **ECMP**
- **BGP4**
- **IGMP v1/v2/v3**
- **PIM-SM/-SM6**
- **MLD v1/v2**
- **VRRPv2**
- **Policy-Based Routing (PBR)**
- **BFD**
- **VRF Lite**

Management Features

- **Industrial command-line interface**
- **CLI filtering**
- **CLI scheduler**
- **Telnet/SSH**
- **Software update:** TFTP, FTP, SCP, SFTP
- **Configuration download/upload:** TFTP, FTP, SCP, SFTP
- **Dual Images**
- **SNMP v1/v2c/v3**
- **SNMP inform v2**
- **RMON1 Groups: 1, 2, 3, & 9**
- **BOOTP:** client/relay
- **DHCP client**
- **DHCP relay**
- **EVENT/Error log**
- **DNS client**
- **Remote PING**
- **Traceroute**
- **SNTPv4**
- **LLDP:**
 - 802.1ab
 - 802.MED
 - Potential error detection
- **UDLD**
- **Port mirroring:** SPAN, RSPAN
- **sFlow v5**
- **Email alerting:** SMTP
- **Error-Disable Recovery**
- **Fluentd**

IPv6 Management

- **IPv4/IPv6 Dual Protocol Stack**
- **ICMPv6**
- **ICMPv6 Redirect**
- **IPv6 Neighbor Discovery**
- **Stateless Autoconfiguration**
- **Manual Configuration**
- **DHCPv6 client**
- **SNMP over IPv6**
- **SSH over IPv6**
- **IPv6 Telnet Support**
- **IPv6 DNS Resolver**
- **IPv6 RADIUS Support**
- **IPv6 TACACS+ Support**
- **IPv6 Syslog Support**

- **IPv6 SNTP Support**
- **IPv6 TFTP Support**

High Availability

- **Multi-Chassis Link Aggregation (MLAG)**

Data Center Features

- **Enhanced Transmission Selection (802.1Qaz)**
- **Priority-based Flow Control (802.1Qbb)**
- **DCBX:** DCBX for ETS, DCBX for PFC
- **FCoE Initiation Protocol (FIP) snooping**

Automation

- **Auto Installation**
- **RESTful API**
- **Ansible**
- **Pooled System Management Engine (PSME)**

Virtualization Features

- **VXLAN**

Mechanical

- **Dimension (HxWxD):** 44 x 440 x 508mm
- **Weight:** 9.27kg (NET)

Environmental Specifications

- **Operating temperature:** 0~45°C
- **Operating humidity:** 90% maximum relative humidity

Electrical

- **Power requirement:** 100~240VAC, 50/60Hz
- **Power consumption:** 378 watts

Safety

- **UL, cUL, CB**

EMC

- **CE, FCC, VCCI, CCC**

RoHS

- **Reduction of Hazardous Substances (RoHS) 6**

Supported Optics and Cables

- **DAC cable (QSFP+):** 1m, 3m, and 5m
- **DAC cable (QSFP+, fan-out):** 1m, 3m, and 5m
- **DAC cable (QSFP28):** 1m, 3m, and 5m
- **DAC cable (QSFP28, fan-out):** 3m
- **AOC cable (QSFP+, 850nm, MMF):** 7m and 10m
- **AOC cable (QSFP28, 850m, MMF):** 1m, 3m, 5m, and 10m
- **40G optic (QSFP+, MPO, 850nm, MMF):** 40GBASE-SR4
- **40G optic (QSFP+, LC, 1310nm, SMF):** 40GBASE-LR4
- **100G optic (QSFP28, MPO, 850nm, MMF):** 100GBASE-SR4
- **100G optic (QSFP28, MPO, 1310nm, SMF):** 100GBASE-PSM4
- **100G optic (QSFP28, LC, 1310nm, SMF):** 100GBASE-LR4

Order Information

- **T7032-IX1 (11X1UZZ0STM) Front to Back, with Rail Kit**
- **T7032-IX1 (11X1UZZ0STN) Back to Front, with Rail Kit**
- **PSU - Red (1HY9ZZZ071Y) (F-2-B, AC, 750W)**
- **PSU - Blue (1HY9ZZZ0720) (B-2-F, AC, 750W)**
- **FAN Module (1HY9ZZZ0721) (F-2-B)**
- **FAN Module (1HY9ZZZ0722) (B-2-F)**

