QuantaMesh T7032-IX7D

The Next Wave 100G Ethernet Switch for Data Center and Cloud Computing

Rear view

- **100G Ethernet Switch**
- **In-Service Software Upgrade (ISSU)**
- **Virtual eXtensible LAN (VXLAN) and Routing In and Out of Tunnels (RIOT)**
- **Multi-Chassis Link Aggregation (MLAG)**
- **OSPF, BGP4 with ECMP**
- **Network Automation**
- **RoCEv1/v2,DCBX, and FIP SNP**

United States
QCT LLC., Silicon Valley office
1010 Rincon Circle, San Jose, CA 95131
TOLL-FREE: 1-855-QCT-MUST
TEL: +1-510-270-6111
FAX: +1-510-270-6161
Support: +1-510-270-6216

China
云达科技，北京办公室
(Quanta Cloud Technology)
北京市朝阳区东大桥路 12 号润诚中心 2 号楼
TEL: +86-10-5920-7600
FAX: +86-10-5981-7958

云达科技，杭州办公室
(Quanta Cloud Technology)
浙江省杭州市西湖区古墩路
浙商财富中心 4 号楼 303 室
TEL: +86-571-2819-8650

Japan
Quanta Cloud Technology Japan 株式會社
日本国東京都港区芝大門二丁目五番八号牧田ビル 3 階
TEL: +81-3-5777-0818
FAX: +81-3-5777-0819

Taiwan
雲達科技 (Quanta Cloud Technology)
桃園市龜山區文化二路 211 號 1 樓
TEL: +886-3-286-0707
FAX: +886-3-327-0001

Germany
Quanta Cloud Technology Germany GmbH
Hamborner Str. 55, 40472 Düsseldorf
TEL: +49-211-74077-300

Other regions
Quanta Cloud Technology
No. 211 Wenhua 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan
TEL: +886-3-327-2345
FAX: +886-3-397-4770

QCT T7032-IX7D is a high-performance and low- latency layer 3 managed switches deployed as the Data Center Leaf Switch to connect to 100G servers or deployed as Data Center Spine Switch to aggregate 100G connections from Leaf Switches to expend the network scalability. T7032-IX7D supports 32 QSFP28 (10/25/40/50/100GbE speed) equipped with BMC in a 1-Rack-Unit (1RU) switch that supports 3.2 Terabits per second (Tbps) of bandwidth. By levering merchant silicon chip, T7032-IX7D is a high performance and high density Ethernet switch with advanced features such as a smart table, dynamic load balancing, and VXLAN/RIOT support. T7032-IX7D also supports larger tables size, improves the performance for larger packet buffers and reduces the latency. QNOS (Quanta Network OS) is the best choice for Data Center applications.

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, RESTful API, NETCONF/RESTCONF, and Ansible, QNOS facilitates easy deployment to build-up a mass data center with Infrastructure-as-a-Service (IaaS).

Virtualization

Virtualization technology has been booming up fast and widely required in data center for the Cloud computing and virtual machines (VMs) applications. To provide the scalability and stretched ability of L2 environment, QNOS supports Virtual eXtensible LAN (VXLAN) and Routing
in and out of tunnels (RIOT) running over the existing L3 network infrastructure. BGP-EVPN is also introduced in QNOS to support the VXLAN tunnel creation automatically and reduce network overhead.

High Availability

For data center network robust operations, QNOS eliminates single- point of failure with the following features:

- Spanning Tree with Guarding Features
- In-Service Software Upgrade (ISSU)
- Multi-chassis Link Aggregation (MLAG)
- Up to 48 paths ECMP routing for load balancing and redundancy
- Virtual Router Redundancy Protocol (VRRP) and BidirectionalForwarding Detection (BFD)

Data-Center Orientated

To build up a network infrastructure with a high bandwidth and low latency for network storage or high computing requirements, QNOS supports ROCEv1/v2, DCBX, and FIP SNP to fulfill the needs of modern data center applications.

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.

Powered by Intel Atom® processors
Intel Inside®. New Possibilities Outside.

Found at: www.QCT.io/wheretobuy

QuantaMesh T7032-IX7D 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:** USB 2.0

Performance
- **Switching capacity:** 6.4Tbps
- **Maximum forwarding rate:** 3.3Bpps
- **Latency:** Ultra-low latency

Major Components
- **ASIC:** Broadcom TD3 56870
- **CPU:** Intel Atom® Denverton
- **Memory:** 8GB DDR4 with ECC
- **Storage:** 128GB M.2 SATA for storage

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 Fallback
- **Link State Tracking**
- **Port Backup**
- **Loopback Detection**
- **Private VLAN**
- **Link Debounce**

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/TACACS+:** Authentication, Authorization, Accounting
- **SSH 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
- **SSH Public Key Authentication**
- **Control Plane Policing / CoPP**
- **Service Prohibit Access**
- **Role Base Access Control (RBAC)**
- **Signed firmware image**

Layer 3 Features
- **IP Multinetting/CIDR**
- **/31 subnets**
- **Proxy ARP**
- **Static route:** IPv4, IPv6
- **OSPF v2/v3**
- **ECMP**
- **BGP4**
- **IGMP v1/v2/v3**
- **PIM-SM/-SM6**
- **MLD v1/v2**
- **VRRP v2**
- **Policy-Based Routing (PBR)**
- **BFD**
- **VRF Lite**
- **Black Hole Detection (BHD)**
- **VRRPv3**
- **IP SLA**

Management Features
- **Industrial standard command-line interface**
- **CLI filtering**
- **CLI schedule**
- **SSH**
- **Software update:** TFTP, SCP, SFTP
- **Configuration Update:** TFTP, SCP, SFTP
- **Dual Images**
- **SNMP v1/v2c/v3**
- **SNMP inform v2**
- **RMON1 Groups: 1, 2, 3, & 9**
- **DHCP client/relay**
- **DNS client/relay**
- **Remote PING**
- **Traceroute**
- **NTPv4**
- **LLDP:**
  - 802.1ab
  - 802.MED
  - Potential error detection
- **UDLD**
- **Port mirroring:** SPAN, RSPAN
- **EVENT / Error log**
- **sFlow v5**
- **Email alerting:** SMTP
- **Error-Disable Recovery**

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

High Availability
- **Multi-Chassis Link Aggregation (MLAG)**
  - L2 Unicast/Multicast
  - L3 Unicast
  - RSTP/MSTP
  - VXLAN
- **In-Service Software Upgrade (ISSU)**

Data Center Features
- **Priority-based Flow Control (802.1Qbb)**
- **DCBX:**
  - DCBX for ETS
  - DCBX for PFC
  - PCBX for Application Priority
- **FCoE Initiation Protocol (FIP) snooping**
- **RoCEv1/v2**

Automation
- **Auto installation**
- **RESTful API**
- **Ansible**
- **NETCONF/RESTCONF**

Virtualization Features
- **VXLAN**
- **RIOT with VRF**
- **BGP-EVPN for VXLAN**

SDN
- **OpenFlow v1.3**

Mechanical
- **Dimension (HxWxD):** 44 x 440 x 508mm
- **Weight:** 9.33kg/20.55lbs (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-IX7D (1IX7U7Z0002)**
  Front to Back, with Rail Kit
- **T7032-IX7D (1IX7U7Z0003)**
  Back to Front, with Rail Kit

Intel Inside®. New Possibilities Outside.