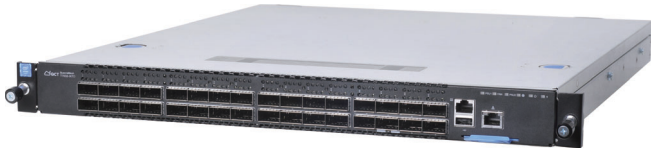
QuantaMesh T7032-IX7D

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



Rear view

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

Data center networks face the changes with hardware and meet the requirements of the software it hosts. Quanta Cloud Technology provides a series of Ethernet Switches, the QCT QuantaMesh switch product line, that addresses these changes and provides the advanced features that meet the demands for the contemporary data center applications. The QCT QuantaMesh product line provides the connections from 1G to 100Gbps speeds on its Ethernet Switches. To meet the requirements of high- performance, high- availability, fast scale out, low-latency performance, and continuous serviceability for data center applications. The QCT QuantaMesh Ethernet Switch product line supported with QNOS (Quanta Network OS) to provide the advanced features, which is the best choice for Data Center applications.

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.

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.

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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)**

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**
- **Fluentd**

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**
- **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

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