



# QuantaMesh T4048-IX8D

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

- **25G & 100G Ethernet Switch**
- **VXLAN**
- **Multi-Chassis Link Aggregation (MLAG)**
- **OSPF, BGP4 with ECMP**
- **Network Automation**
- **Enlarge Table Sizes**

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Rear view

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 lines provide 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 application.

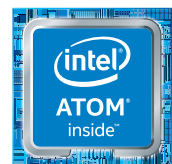
QuantaMesh T4048-IX8D is a high-performance, high port-density, and low latency layer 3 managed switches for Data Center Leaf Switch or ToR (Top of Rack) application. T4048-IX8D supports 48 SFP28 and 8 QSFP28 ports and is equipped with BMC in a 1-Rack-Unit (1RU) switch that supports 2.0 Terabits per second (Tbps) of bandwidth. The 48-port downlink ports on the T4048-IX8D can be configured to work as either 1/10/25-Gbps ports, offering deployment flexibility and investment protection. The uplink can support up to eight 100-Gbps or eight 40-Gbps ports, or a combination of 10-, 25-, 40-, and 100-Gbps connectivity, offering flexible migration options. By leveraging merchant silicon chip, T4048-IX8D is fully compliant with IEEE 802.3by and is a high performance high density Ethernet switch with advanced features such as smart table, dynamic load balancing, and VxLAN/RIOT support. T4048-IX8D also support larger tables size, improves the performance for larger packet buffers and reduced the latency. With QNOS (Quanta Network OS) supported, T4048-IX8D is the best fit for Data Center application.

## 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](http://www.QCT.io/wheretobuy)

# QuantaMesh T4048-IX8D Specifications

## Physical ports

- **Port configuration:**
  - 48 25G SFP28 and 8 100G QSFP28
- **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:** 4Tbps
- **Maximum forwarding rate:** 2Bpps
- **Latency:** Ultra-low latency

## Major Components

- **ASIC:** BRCM TD3 BCM56873
- **CPU:** Intel Atom® Denverton
- **Memory:** 16GB DDR4 with ECC
- **Storage:** 64GB M.2 SATA for storage

## CPU

- **CPU:** Intel Atom® Denverton
- **Memory:** 16GB DDR4 with ECC
- **Storage:** 64GB 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
- **Link Aggregation:**
  - 802.3ad with LACP
  - Static Trunk
  - Unicast/Multicast Traffic Balance over Trunking Port
  - LACP Falback
- **Link State**
- **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:**
  - MAC-based
  - Port-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**
- **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)**
- **BFDP**
- **VRF Lite**

## Management Features

- **Industrial standard command-line interface**
- **CLI filtering**
- **CLI schedule**
- **Telnet/SSH**
- **Software update:** TFTP, FTP, SCP, SFTP
- **Configuration Update:** 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**
- **DNS client**
- **DNS relay**
- **Remote PING**
- **Traceroute**
- **NTPv4**
- **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**
- **SNMP over IPv6**
- **SSH over IPv6**
- **IPv6 Telnet Support**
- **IPv6 DNS Resolver**
- **IPv6 RADIUS Support**
- **IPv6 TACACS+ Support**
- **IPv6 Syslog Support**
- **IPv6 SNMP 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):** 44x435x508mm
- **Weight:** 9.35kg/20.59lbs (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, CCC**

## EMC

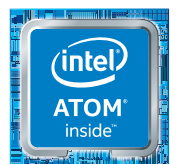
- **CE, FCC, VCCI, BSMI, CCC**

## RoHS

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

## Order Information

- **T4048-IX8D (11X8UZZ0006)**
  - Front to Back, with Rail Kit
- **T4048-IX8D (11X8UZZ0007)**
  - Back to Front, with Rail Kit



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