QuantaMesh T3048-LY2R

A Powerful Top-of-Rack Switch for Datacenters and Cloud Computing

QCT
NETWORKING

- Ultra-low Latency
- MLAG, OSPF, BGP4, & ECMP
- Network Automation

The QuantaMesh T3048-LY2R is a high performance and low latency layer 2/3/4 Ethernet switch with 48 1/10GbE SFP+ and 4 40GbE QSFP+ ports in a compact rack unit size. The 4 40GbE ports provide 160Gbps to aggregate bandwidth up to the core switch. Each 40 Gigabit Ethernet port can be independently configured as 40GbE or 4 x 10GbE for total 64 ports of 10GbE.

Simplicity

The QuantaMesh T3048-LY2R can be managed through an industry standard command-line interface (CLI) which reduces training and operating costs. The QuantaMesh T3048-LY2R also supports Simple Network Management Protocol (SNMP) both from standard MIB and private MIB for easy configuration, monitoring, and remote management for the network administrator. The Auto-Installation feature implemented in the QuantaMesh T3048-LY2R helps centralized management to simplify deployment of a truly plug-and-play experience. With the evolution from IPv4 to IPv6, the QuantaMesh T3048-LY2R is a IPv6 integrated management device.

High Availability

The QuantaMesh T3048-LY2R is designed for high availability from both hardware and software perspective. The key features include:

- 1+1 hot-swappable power supplies
- N+1 hot-swappable fans
- Out-of-band management supported
- Up to 32 ports per group (LACP) and up to 64 groups
- Up to 32 paths ECMP routing for load balancing and redundancy
- Virtual Router Redundancy Protocol supported
- Multi-chassis Link Aggregation

High-Performance L2/L3 access deployments

With the compact 1U form factor, high density 48 1/10G SFP+ and 4 40G QSFP+ ports in the front panel, front to back or back to front airflow design, the QuantaMesh T3048-LY2R is ideal for top-of-rack deployments in high-performance, highly demanding datacenters. The 1.28 terabits per second switching capacity and 952Mpps forwarding rate with low power consumption make the QuantaMesh T3048-LY2R a powerful solution to aggregate high-performance servers in the datacenter.

About QCT

Quanta Cloud Technology (QCT) is a global datacenter solution provider. We combine the efficiency of hyperscale hardware with infrastructure software from a diversity of industry leaders to solve next-generation datacenter 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 datacenter 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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QCT authorized partner

QuantaMesh T3048-LY2R

Physical ports
- **Port configuration:** 48 1/10GbE SFP+ and 4 40GbE QSFP+ 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:** 1.28Tbps
- **Maximum forwarding rate:** 952Mpps
- **Latency:** <1us
- **MAC:** 128K

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 Fallback
- **Link state**
- **Port backup**
- **Error-Disable Recovery**

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

Security Features
- **static and dynamic port security (MAC-based)**
- **802.1x:**
  - Port-based
  - MAC-based
  - Auto VLAN assignment
  - Guest VLAN
  - Unauthenticated VLAN
- **Access Control List:** L2/L3/L4
- **IPv6 ACL:** L3/L4
- **RADIUS:** Authentication, 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**
- **Control Plane Policing / (CoPP)**
- **Service Prohibit Access**

Layer 3 Features
- **IP Multinetting/CIDR**
- **/31 subnets**
- **Proxy ARP**
- **Static route:** IPv4 , IPv6
- **OSPF**
- **ECMP**
- **BGP4**
- **IGMP v1/v2/v3**
- **PIM-DM/-SM**
- **VRRP**
- **Policy-based routing**
- **BFD**
- **VRF Lite**

IPv6 L3 Features
- **OSPFv3**
- **MLD v1/v2**
- **PIM-DM6/-SM6**

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**

SDN
- **OpEN API:** RESTful API

Management Features
- **Industrial command-line interface**
- **CLI filtering**
- **Telenet/SSH**
- **Software download/upload:** TFTP, FTP, SCP, SFTP
- **Configuration download/upload:** TFTP, FTP, SCP, SFTP
- **Dual Image**
- **SNMP v1/v2c/v3:** Yes (read only)
- **SNMP inform**
- **RMON 1, 2, 3, & 9:** Yes (read only)
- **BOOTP:** client/relay
- **DHCP client**
- **DHCP relay**
- **EVENT/Error log**
- **DNS client**
- **DNS relay**
- **Remote PING**
- **Traceroute**
- **SNTPv4**
- **LLDP:**
  - 802.1ab
  - 802.MED
  - Potential error detection
- **UDLD**
- **Port mirroring:** SPAN, RSPAN
- **sFlow v5**
- **Email alerting:** Yes (SMTP)
- **Auto Install**

IPv6 Management
- **IPv4/IPv6 Dual Protocol Stack**
- **ICMPv6**
- **ICMPv6 Redirect**
- **IPv6 Neighbor Discovery**
- **Stateless Autoconfiguration**
- **Manual Configuration**
- **DHCPv6:** Yes (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
- **Redundant power supply:** 1+1
- **Hot-swappable fan tray:** N+1
- **Multi-chassis LAG**

Mechanical
- **Dimension (HxWxD):** 44x435x393mm
- **Weight:** 7.83kg/17.31lbs (NET)

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

Electrical
- **Power requirement:** 100~240VAC, 50/60Hz
- **Power consumption:** 179 watts (L2 64B line rate; 10G-SR optics, 100% fan duty)

Safety
- **UL, cUL, CB, BSMI, CCC**

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

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

Supported Optics and Cables
- **DAC cable (SFP+):** 0.5m, 1m, 1.5m, 2m, 2.5m, 3m, and 5m
- **AOC cable (SFP+, 850nm, MMF):** 1m, 3m, 7m, 10m, 20m, and 100m
- **DAC cable (QSFP+):** 1m, 3m, and 5m
- **DAC cable (QSFP+, fan-out):** 1m, 3m, and 5m
- **AOC cable (QSFP+, 850nm, MMF):** 7m, 10m, and 20m
- **10G optic (SFP+, LC, 850nm, MMF):** 10GBASE-SR optic
- **10G optic (SFP+, LC, 1310nm, SMF):** 10GBASE-LR optic
- **40G optic (QSFP+, MPO, 850nm, MMF):** 10GBASE-SR4
- **40G optic (QSFP+, LC, 1310nm, SMF):** 10GBASE-LR4

Order Information
- **T3048-LY2R (1LY2BZZ001M) (F-2-B, AC, P2020)**
- **T3048-LY2R (1LY2BZZ001N) (B-2-F, AC, P2020)**
- **PSU - Blue (1HY9ZZZ0061) (F-2-B, AC, 470W)**
- **PSU - Green (1HY9ZZZ002P) (B-2-F, AC, 470W)**
- **FAN Module (1HY9ZZZ022S)(F-2-B, Red)**
- **FAN Module (1HY9ZZZ022W)(F-2-B, Blue)**

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