QuantaMesh T3048-LY8

A Powerful Spine/Leaf Switch for Datacenter and Cloud Computing

- • x86 CPU Board Support
- • MLAG, OSPF, BGP, & ECMP
- • VXLAN/NVGRE
- • OpenFlow Support
- • OpEN API

The QuantaMesh T3048-LY8 is a high performance and low latency layer 2/3/4 Ethernet switch with 48 SFP+ ports and up to 6 QSFP+ port in a 1U form factor. Each 40G QSFP+ port can be independently congured as 40GbE or 4 x 10GbE ports. Built for Infrastructure-as-a-service (IaaS) datacenter deployment, high performance computing clusters, and nancial applications, the very high port density and high performance as well as ultra-low latency characteristic makes QuantaMesh T3048-LY8 ideal for demanding workloads and provides the best TCO.

Automation

Accompanied by the application of cloud computing, big data and parallel calculation, datacenter network devices continue to grow fast and make network automation a critical factor. Supporting auto installation and integration with orchestration tools like Chef and Puppet, QuantaMesh T3048-LY8 helps for easy deployment of mass datacenter IaaS build-up.

Virtualization

Network virtualization is becoming an important topic for datacenters. QuantaMesh T3048-LY8 provides hardware-based VXLAN feature to support virtual machine mobility. Not limited by 4K VLANs, VXLAN helps for the network scaling out across L3 subnets and can support up to 16.7M possible virtual networks.

SDN

Software Dened Network has emerged as a new approach to support open, vendor-agnostic, and programmable networks. QuantaMesh T3048-LY8 provides OpenFlow and OpEN API with Python script support as SDN solution to full the modern datacenter trend.

High Availability

The QuantaMesh T3048-LY8 is designed for high availability from both hardware and software perspectives. The key features include:

- • 1+1 hot-swappable power supplies
- • 2+1 hot-swappable fans
- • Out-of-band management supported
- • Multi-chassis LAG for preventing the risks of single point failure
- • Up to 64 paths ECMP routing for load balancing and redundancy

About QCT

QCT (Quanta Cloud Technology) is a global datacenter solution provider extending the power of hyperscale datacenter design in standard and open SKUs to all datacenter customers. Product lines include servers, storage, network switches, integrated rack systems and cloud solutions, all delivering hyperscale efficiency, scalability, reliability, manageability, serviceability and optimized performance for each workload. QCT offers a full spectrum of datacenter products and services from engineering, integration and optimization to global supply chain support, all under one roof. The parent of QCT is Quanta Computer Inc., a Fortune Global 500 technology engineering and manufacturing company.

Get a quote: www.QuantaQCT.com

QCT authorized partner

QuantaMesh T3048-LY8

Physical ports
· **Port configuration:** 48 1/10GbE SFP+ and 6 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:** 1440Gbps
· **Maximum forwarding rate:** 1071Mpps
· **Latency:** <600ns
· **MAC:** Unified Forwarding Table to dynamically allocate the L2/L3 tables

CPU Board 1
· **CPU:** Freescale P2020
· **Memory:** 2GB DDR3/ECC
· **Flash:** 128MB
· **Storage:** 8GB Micro SD

CPU Board 2
· **CPU:** Intel Rangeley
· **Memory:** 4GB DDR3/ECC
· **Storage:** 32G SSD

L2 Features
· **Switching mode:** store-and-forward
· **Spanning Tree:**
  - 802.1D, 802.1w & 802.1s
  - Fast Forwarding
  - Edge port
  - Loop guard
  - BPDU filter/guard
  - Auto Edge
  - TCN guard
  - Root guard
· **VLAN :**
  - IEEE 802.1Q Tagged Base
  - Port-Based
  - Private VLAN
  - 802.1v Protocol VLAN
  - MAC-Based VLAN
  - IP-Subnet VLAN
  - VTP v1/v2
  - QinQ
· **Storm control:**
  - Broadcast
  - Unknown multicast
  - DLF (Unknown unicast)
· **IGMP snooping:**
  - v1/v2/v3
  - v1/v2 Querier
  - Immediate Leave
· **Link Aggregation:**
  - 802.3ad with LACP (64 groups)
  - Static Trunk
  - Unicast/Multicast Traffic Balance over Trunking Port
  - LACP Fallback
· **Multi-chassis LAG (MLAG)**
· 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**
· **Auto VoIP**
· **Port rate limit**

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 and accounting
· **TACACS+:** Authentication
· **HTTPS and SSL:** AES128-cbc, 3ES-cbc, Blowfish-cbc
· **SSH 1.5/V2.0:** AES128-cbc, 3ES-cbc, Blowfish-cbc
· **User name and password:** Local Authentication, Remote Authentication via RADIUS/TACACS+, AAA
· **Denial of Service control**
· **Management IP filtering:** SNMP/Web/Telnet/SSH
· **MAC filtering**
· **IP Source Guard**
· **Dynamic ARP inspection (DAI)**
· **DHCP snooping**

Management Features
· **Industrial command-line interface**
· **CLI filtering**
· **Telenet/SSH**
· **Software download/upload:** TFTP, Xmodem, FTP, and SCP/SFTP
· **Configuration download/upload:** TFTP, Xmodem, FTP, and SCP/SFTP
· **Dual Image**
· **SNMP v1/v2c/v3**
· **RMON 1, 2, 3, & 9**
· **BOOTP:** client/relay
· **DHCP client**
· **DHCP relay**
· **DHCP L2 option 82 Relay**
· **DHCP L3 option 82 Relay**
· **DDNS**
· **DNS client**
· **DNS relay**
· **Remote PING**
· **Traceroute**
· **SNTPv4**
· **LLDP:** 802.1ab
· **CDP**
· **UDLD**
· **Port mirroring:** SPAN
· **sFlow v5**
· **Cable test**
· **Email alerting**
· **Auto Install**

IPv6 Management
· **IPv4/IPv6 Dual Protocol Stack**
· **ICMPv6**
· **ICMPv6 Redirect**
· **IPv6 Path MTU Discovery**
· **IPv6 Neighbor Discovery**
· **Stateless Autoconfiguration**
· **Manual Configuration**
· **SNMP over IPv6**
· **HTTP 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**
· **Remote IPv6 Ping**

Layer 3 Features
· **IP Multinetting/CIDR**
· **/31 subnets**
· **Proxy ARP**
· **IRDP**
· **Static route**
· **OSPF**
· **ECMP**
· **BGP4**
· **IS-IS**
· **IGMP v1/v2/v3**
· **DVMRP**
· **PIM-DM/-SM**
· **VRRP**
· **Source IP configuration**
· **Policy-based routing**

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

High Availability
· **Redundant power supply:** 1+1
· **Hot-swappable fan tray:** N+1

Data Center Features
· **FCoE Initiation Protocol (FIP) snooping**
· **EVB/802.1Qbg**

Virtualization Features
· **VXLAN**
· **NVGRE**

SDN
· **OpEN API**
· **OpenFlow:** v1.0, v1.2, v1.3

Mechanical
· **Dimension (HxWxD):** 44x435x508mm
· **Weight:** P2020: 9.13kg/20.111lbs (NET)
            Rangeley: 9.02kg/ 19.87lbs (NET)

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

Electrical
· **Power requirement:** 100~240VAC, 50/60Hz -48~60V DC
· **Power consumption:** 215 watts (L2 64B line rate; 10G-SR optics, 100% fan duty)
· **Safety:** UL, cUL, CB
· **EMC:** CE, FCC

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