QuantaMesh T5032-LY6

A Powerful Spine/Leaf Switch for Data Center and Cloud Computing

Rear view

- **VxLAN**
- **Multi-Chassis Link Aggregation (MLAG)**
- **OSPF, BGP4 with ECMP**
- **Network Automation**
- **OpenFlow**

The QuantaMesh T5032-LY6 is a high performance and low latency layer 2/3/4 Ethernet switch with 32 40GbE QSFP+ ports in a 1U form factor. Each 40G QSFP+ port can be independently configured as 40GbE or 4 10GbE. The T5032-LY6 supports up to 24 40G QSFP+ ports spliting into 4 10G SFP+ ports to perform 96 10G and 8 40G ports configuration. Built for Infrastructure-as- a-service (IaaS) data center deployment, high performance computing clusters, and financial applications, the QuantaMesh T5032-LY6 - with its very high port density and high performance as well as ultra-low latency characteristic - is ideal for demanding workloads and provides optimal TCO.

Automation

With the rapid adoption of cloud computing and the proliferation of big data and parallel calculations, the need fo data center network devices is growing exponentially, making network automation a critical factor. Supporting auto installation, RESFful, Ansible and PSME (Pooled System Management Engine), QuantaMesh T5032-LY6 facilitates easy deployment to build-up a mass data center with Infrastructure-as-a-Service (IaaS).

Virtualization

Network virtualization is becoming an important topic of data centers. QuantaMesh T5032-LY6 offers a hardware-based VXLAN to support virtual machine mobility. Not limited by 4K VLANs, VXLAN enables network scale-out across L3 subnets and can support up to 16.7M possible virtual networks.

High Availability

The QuantaMesh T5032-LY6 is designed for high availability from both hardware and software perspectives. The key features include:

- 1+1 hot-swappable power supplies
- N+1 hot-swappable fans
- Spanning Tree with Guarding Features
- Up to 64 Groups of LACP with per Group 32 Member Ports
- Multi-chassis Link Aggregation (MLAG)
- Up to 48 paths ECMP routing for load balancing and redundancy
- Virtual Router Redundancy Protocol (VRRP)

Software Defined Network (SDN)

SDN has emerged as a new approach to support open, vendor- agnostic, and programmable networks. QNOS is equipped with OpenFlow v1.3 features 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.

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QuantaMesh T5032-LY6 Specifications

Physical ports
- **Port configuration:** 32 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:** 2.56Tbps
- **Maximum forwarding rate:** 1904Mpps
- **Latency:** <600ns
- **MAC:** Unified Forwarding Table to dynamically allocate the L2/L3 tables

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

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**

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
- **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
- **OSPFv2/v3**
- **ECMP**
- **BGP4**
- **IGMP v1/v2/v3**
- **PIM-SM/-SM6**
- **MLD v1/v2**
- **VRRPv2**
- **VRRPv3**
- **BFD**
- **VRF Lite**

Management Features
- **Industrial command-line interface**
- **CLI filtering**
- **CLI scheduler**
- **SSH**
- **Software update:** TFTP, SCP, SFTP
- **Configuration download/upload:** TFTP, SCP, SFTP
- **Dual Images**
- **SNMP v1/v2c/v3**
- **SNMP inform v2**
- **RMON1 Groups: 1, 2, 3, & 9**
- **DHCP client/relay**
- **EVENT/Error log**
- **DNS client/relay**
- **Remote PING**
- **Traceroute**
- **SNTPv4**
- **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 client**
- **SNMP over IPv6**
- **SSH over IPv6**
- **IPv6 DNS Resolver**
- **IPv6 RADIUS**
- **IPv6 TACACS+**
- **IPv6 Syslog**
- **IPv6 SNTP**
- **IPv6 TFTP**

High Availability
- **Multi-Chassis Link Aggregation (MLAG)**
  - L2 Unicast/Multicast
  - L3 Unicast
  - RSTP/MSTP
  - VXLAN

Data Center Features
- **Enhanced Transmission Selection (802.1Qaz)**
- **Priority-based Flow Control (802.1Qbb)**
- **DCBX:**
  - DCBX for ETS
  - DCBX for PFC
  - PCBX for Application Priority
- **FCoE Initiation Protocol (FIP) snooping**

Automation
- **Auto Installation**
- **RESTful API**
- **Ansible**

Virtualization Features
- **VxLAN**

SDN
- **OpenFlow v1.3**

Mechanical
- **Dimension (HxWxD):** 44x435x483mm
- **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:** 200 watts (L2 line rate; 40G-SR optics, 100% fan duty)

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

EMC
- **CE, FCC, VCCI, RCM, 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
- **AOC cable (QSFP+, 850nm, MMF):** 7m, 10m, and 20m
- **40G optic (QSFP+, MPO, 850nm, MMF):** 40GBASE-SR4
- **40G optic (QSFP+, LC, 1310nm, SMF):** 40GBASE-LR4

Order Information
- **T5032-LY6 (1LY6BZZ0STF) (F-2-B, AC, P2020)**
- **T5032-LY6 (1LY6BZZ0STG) (B-2-F, AC, P2020)**
- **PSU - Blue (1HY9ZZZ016B) (F-2-B, AC, 470W)**
- **PSU - Green (1HY9ZZZ016C) (B-2-F, AC, 470W)**
- **FAN Module (1HY9ZZZ022X) (F-2-B, Red)**
- **FAN Module (1HY9ZZZ022Y) (B-2-F, Blue)**

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