TROPOS Networking
T3040-LY3

A powerful Top-of-Rack Switch for Data Center and Cloud Computing

Quanta

Product Highlight

Performance
- 40 100BASE-TX/1000BASE-T/10GBASE-T and 8 1/10GbE SFP+ ports in 1RU
- 960 gigabits per second
- 714 million packets per second

Robust hardware
- Redundant and hot-swappable power supply
- Out-of-band management port
- 4 fixed fans

Management
- CLI/Web/SNMP
- sFlow
- IPv6
- Auto-Installation

Layer 3 features
- RIP v1/v2
- OSPF/ECMP
- IGMP v1/v2/v3
- PIM-DM/SM
- Policy-based Routing

IPv6 support
- RIPng
- OSPFv3
- MLD v1/v2
- PIM-DM6/SM6

Data Center application
- Multi-Chassis LAG (MLAG)
- VMTracer
- CN (802.1Qau)
- ETS (802.1Qaz)
- PFC (802.1Qbb)
- DCBX (802.1Qaz)
- FIP snooping
- EVB

Overview

The Quanta TROPOS T3040-LY3 is a high performance and low latency layer 2/3/4 Ethernet switch with 40 100BASE-TX/1000BASE-T/10GBASE-T and 8 1/10GBASE-X SFP+ ports in a compact rack unit size. The 40 10GBASE-T ports are backwards compatible with 100/1000M Ethernet networks. The 8 SFP+ ports can aggregate bandwidth up to the core switch. With the energy saving requirements, T3040-LY3 is designed with high power efficiency to save OPEX.

Simplicity

The Quanta TROPOS T3040-LY3 can be managed through industry standard command-line interface (CLI) which reduces the training and operating costs. A user friendly Web GUI is provided via a standard Web browser to manage. The T3040-LY3 also supports Simple Network Management Protocol (SNMP) both from standard MIB and private MIB for network administrator to easily configure, monitor, and manage remotely. The Auto-Installation feature implemented in the T3040-LY3 helps centralized management to simplify deployment of a truly plug-and-play experience. With the evolution from IPv4 to IPv6, The T3040-LY3 is a IPv6 integrated management device.

High Availability

The Quanta TROPOS T3040-LY3 is designed for high availability from both hardware and software perspective. The key features include :
- 1+1 hot-swappable power supplies
- Out-of-band management supported
- 802.1D, 802.1w, and 802.1s supported
- Up to 8 ports per link aggregation group (LACP) and up to 64 groups
- Multi-chassis LAG for preventing the risks of single point failure
- Up to 32 paths ECMP routing for load balancing and redundancy
- Virtual Router Redundancy Protocol supported

High-Performance L2/L3 access deployments

With the compact 1U form factor, high density 40 100BASE-TX/1000BASE-T/10GBASE-T and 8 1/10GBASE-X SFP+ ports in the front panel, front to back or back to front airflow design, the Quanta TROPOS T3040-LY3 is ideal for top-of-rack deployments in high-performance, highly demanding data centers. The 960 gigabits per second switching capacity and 714Mpps forwarding rate with low power consumption ensure T3040-LY3 to be a powerful solution to aggregate high-performance servers in the data center.

Advanced IPv4 and IPv6 routing

The Quanta TROPOS T3040-LY3 is a full layer 2 and layer 3 routing switch that supports advanced IPv4 and IPv6 routing features such as RIP v1/v2, OSPF/ECMP, RIPng and OSFPv3. The multicast routing features for IGMP v1/v2/v3, DVMRP, PIM-DM/SM, MLD v1/v2 and PIM-DM6/SM6 are all supported in the T3040-LY3.

Data Center application

The Quanta TROPOS T3040-LY3 is an IEEE DCB-based switch delivering a high-performance solution to integrate server edge access. The key features include:
- Congestion Notification (CN, 802.1Qau)
- Enhanced Transmission Selection (ETS, 802.1Qaz)
- Priority-based Flow Control (PFC, 802.1Qbb)
- Data Center Bridging Extension (DCBX, 802.1Qaz)
- FCoE Initiation Protocol (FIP) snooping

TROPOS Networking T3040-LY3 specifications

Physical ports
- 40 100BASE-TX/1000BASE-T/10GBASE-T and 8 1/10GBASE-X SFP+ ports
- 1 RJ-45 out-of-band management port (10/100/1000M)
- 1 RJ-45 console port
- 1 USB2.0 port

Performance
- Switching capacity: 960Gbps
- Forwarding rate: 714Mpps
- Memory: 2GB
- Flash: 64MB
- MAC: 128K
- Packet buffer: 9MB
- Jumbo frame: 12K

L2 features
- Auto-negotiation for port speed and duplex
- Flow control: IEEE 802.3x & back-pressure
- Switching mode: store-and-forward
- Spanning Tree Protocol:
  - 802.1D, 802.1w, & 802.1s
  - Spanning Tree Fast Forwarding
  - Edge port
  - Loop guard
  - BPDU filter/guard
  - Auto Edge
  - TCN guard
  - Root guard
- VLANs
  - IEEE 802.1Q tagged based
  - Port-based (up to 4094 VLANs)
  - Private VLAN
  - GARP/GVRP/GMRP
  - 802.1v protocol VLAN
  - Voice VLAN
  - MAC-based VLAN
  - IP-subnet VLAN
  - QinQ
- VTP v1/v2
- Storm control
  - Broadcast
  - Unknown multicast
  - Unknown unicast
- IGMP snooping
  - IGMP snooping v1/v2/v3
  - IGMP v1/v2 querier
  - IGMP immediate leave
- Ling Aggregation
  - 802.3ad with LACP
  - Cisco EtherChannel Like
  - Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)
- Multi-chassis LAG (MLAG)
- Link state
- Port backup

QoS
- Priority queues: 8 queues
- Scheduling for priority queue: WRR, Strict and hybrid (WRR+Strict)
- COS: 802.1p, IP Precedence, & DSCP
- DiffServ
- Port rate limit
- Auto VoIP
- iSCSI optimization

Security
- Static and dynamic port security (MAC-based)
- 802.1x: port-based, MAC-based, auto VLAN assignment, QoS assignment, guest VLAN, unauthenticated VLAN
- ACL: L2/L3/L4
- IPv6 ACL: L3/L4
- RADIUS: authentication and accounting (up to 32 servers)
- TACACS+: authentication (up to 5 servers)
- HTTPS and SSL (AES 128-cbc, 3ES-cbc, Blowfish-cbc)
- SSH 1.5/v2.0 (AES 128-cbc, 3ES-cbc, Blowfish-cbc)
- User name and password: local authentication and remote authentication via RADIUS/TACACS+
- Denial of Service control
- Management IP filtering (SNMP/Web/Telnet/SSH)
- MAC filtering
- IP Source Guard
- Dynamic ARP inspection (DAI)
- DHCP snooping

Management
- Industrial command-line interface
- CLI filtering
- Telnet/SSH
- Software download/upload: TFTP/Xmodem/FTP
- Configuration download/upload: TFTP/Xmodem/FTP
- Dual image supported
- SNMP v1/v2c/v3
- RMON 1, 2, 3 & 9
- BOOTP: client/relay
- DHCP: client/relay/option 82
- Auto-Installation
- Event/error log: local flash and remote server via system log (RFC3164)
- DNS: client/relay
- SNTPv4
- LDAP Client
- LLDP (802.1ab, Link Layer Discovery Protocol)
- CDP (Cisco Discovery Protocol) version 2
- UDLD
- Port mirroring: one to one & many to one
- sFlow v5
- IPv6 management:
  - IPv4/IPv6 Dual Stack
  - ICMPv6
  - ICMPv6 redirect
  - IPv6 Path MTU Discovery
  - IPv6 Neighbor Discovery
  - stateless auto-configuration
  - manual configuration
  - DHCPv6 (client)
  - SNMP/HTTP/SSH/Telnet over IPv6
  - IPv6 DNS resolver
  - IPv6 RADIUS/TACACS+ support
  - IPv6 Syslog support
  - IPv6 SNTP & NTP
  - IPv6 TFTP
  - IPv6 Ping

Layer 3 features
- IP Multinetting
- CIDR
- /31 subnets
- ARP (static: 128 & dynamic 3968)
- Proxy ARP
- Local proxy ARP
- IRDP
- Static route
- Unicast Routing: RIP v1/v2, OSPF
- ECMP
- Multicast Routing: IGMP v1/v2/v3, DVMRP, PIM-DM/-SM
- VRRP
- Source IP Configuration
- Policy-based routing

IPv6 Layer 3 features
- Static route
- Unicast Routing: RIPng & OSPFv3
- Multicast Routing: MLD v1/v2, PIM-DM6/-SM6
- DHCPv6: relay

Data Center features
- 802.1Qau, 802.1Qaz, 802.1Qbb, DCBX
- FIP snooping
- EVB

VM Tracer features
- VMware vSphere support
- VM Auto Discovery
- VM Adaptive Segmentation
- VM host view

Ethernet Virtual Bridge
- Ethernet Virtual Bridging (EVB, IEEE 802.1Qbg)

Mechanical
- Dimension (HxWxD): 42.8x435x393.7 mm
- Weight: 7.9kg(NET)

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

Electrical
- Power consumption: 376W (full loading)

Safety
- UL 60950-1 (2nd Ed.)
- CSA C22.2 60950-1-07 (2nd Ed.)
- IEC 60950-1 2005 (2nd Ed.)+A1:2009
- EN 60950-1 (2011)
- GB4943.1-2011

EMC
- FCC 47 CFR, Part 15 Subpart B Class A
- Canada Standard ICES-003
- EN 55022:2010 Class A
- EN 55024:2010
- CISPR 22: 2008 Class A
- CISPR 24: 2010
- EN 61000-3-2: A2: 2009
- IEC 61000-3-2: A2: 2009
- EN 61000-3-3: 2008
- IEC 61000-3-3: 2008
- EN 300 386 v1.5.1: 2010
- VCCI V-3 Class A ITE
- GB9254-2008(A)

Environmental
- Reduction of Hazardous Substances (RoHS) 6

Order information
- T3040-LY3 (1LY3BZZ0ST2) (Front to Back)
- T3040-LY3 (1LY3BZZ0ST3) (Back to Front)

Warranty
- Limited lifetime warranty

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