

## Product Overview

The Centec E680 Series Routing Switches (whose abbreviation is “E680”) are high performance switches designed by ethernet switching chip CTC8180. E680’s product position is to meet the requirements of next generation Enterprise, Data Center, Metro and HCI (Hyper-Converged Infrastructure) networks.

E680’s CentecOS system software supports mainstream protocols and applications which can be conveniently deployed and managed.

The E680 Series Switches currently includes following configurations: E680-32C/E680-48Y8C/E680-48X8C/E680-24X4C.

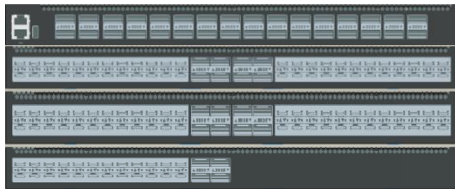


Figure 1 Centec E680 Series

## Features

### Technical highlights

- Standard 1RU pizza-box solution
- Up to 4Tbps switching capacity
- Cut-Through switching method
- Very low system power consumption
- L2/L3/Data Center capability
- Support NVGRE/ VXLAN/ GENEVE, Support Tunnel

Routing & Bridging without limitation.

- Configurable profiles for different MAC/IP/Data Center distribution
- Up to 122K MAC and 60K IP Routing tables
- RJ45 Console port and Out-band RJ45 Eth Management port

### Layer 2 Features

- Up to 122K L2 Forwarding Entries
- Jumbo Frames (9600 Bytes)
- 802.1d Spanning Tree Protocol
- 802.1w Rapid Spanning Tree Protocol
- 802.1s Multiple Spanning Tree Protocol
- 802.1ab Link Layer Discovery Protocol
- 802.3x Flow Control
- Storm Control
- MAC limit per port/rate limiting per port
- 802.1Q VLAN(4094 VID)
- Private VLANs
- Port/MAC based VLAN
- 802.1ad QinQ
- 802.3ad Link Aggregation/LACP
- Multi-Chassis Link Aggregation (MLAG)

### Layer 3 Features

- Up to 60K IPv4 Routes

- IPv4 standard support, ICMP, ARP
- VRF
- RIP v1/v2
- OSPF
- BGP
- 64-way Equal Cost Multi-path Routing (ECMP)
- VRRP
- Virtual ARP (VARP)
- IS-IS
- URPF

### Multicast

- IGMP v1/v2/v3 snooping/ IGMP
- IGMP Fast Leave & Static Join/ IGMP proxy

### Metro Features

- LDP
- MPLS Forwarding
- VPWS
- VPLS
- MPLS OAM
- MPLS Stats
- L2VPN/L3VPN
- MPLS ACL
- MPLS QoS

### Data Center DCB Features

- Data Center TCP
- Per-Priority Flow Control (PFC)
- Data Center Bridging Extensions (DCBX)
- NVGRE, VXLAN, GENEVE
- Open API interfaces to achieve SDN
- EVPN
- IPFIX

### Reliability Features

- ERPS (Ethernet Ring Protection Switching)
- ITU-T G.8031/Y.1342 ELPS protocol
- ITU-T G.8032/Y.1344 ERPS protocol
- Ethernet OAM: IEEE 802.1ag/Y.1731
- Link OAM IEEE802.1ah (EFM) support

### QoS Features

- Up to 8 unicast queue, 1 multicast queue and 1 SPAN queue per port
- Strict priority queueing
- 802.1p based classification
- DSCP based classification and remarking
- Egress Rate Shaping/WRR
- Policers
- Rate limiting

### Security

- Centralized port-based and MAC-based 802.1x authentication
- Port based MacSec
- Standard and extended ACL.
- MAC port binding, port isolation, private VLAN, MAC security and MAC filtering
- DoS attack and CPU traffic protection
- RADIUS
- TACACS+
- COPP(Control Plane Protect)

## Advanced Monitoring and Provisioning

- CPU Mirror
- Elephant Flow Detection(EFD)
- Latency monitor \*
- Buffer monitor \*
- Microburst Detection \*

## Network Management

- SmartConfig
- 100/1000 Management Port
- RS-232 Serial Console Port
- USB Port
- Telnet and SSHv1/v2
- AAA
- TFTP/FTP
- SNMPv1/v2/v3
- Syslog
- Role based Access Control
- Industry Standard CLI
- Blue Beacon LED for system identification
- WEB UI
- SmartConfig

Notes: Features remarked with "\*" are in roadmap.

## Applications

A two-tier design has spine switches at the top tier and leaf switches at the bottom tier with servers/compute/storage always attached to leaf switches at the top of every rack and leaf switches uplink to 2 or more spine switches. The E680 is ideal for Spine/Leaf network and scalability as provided by the solution.

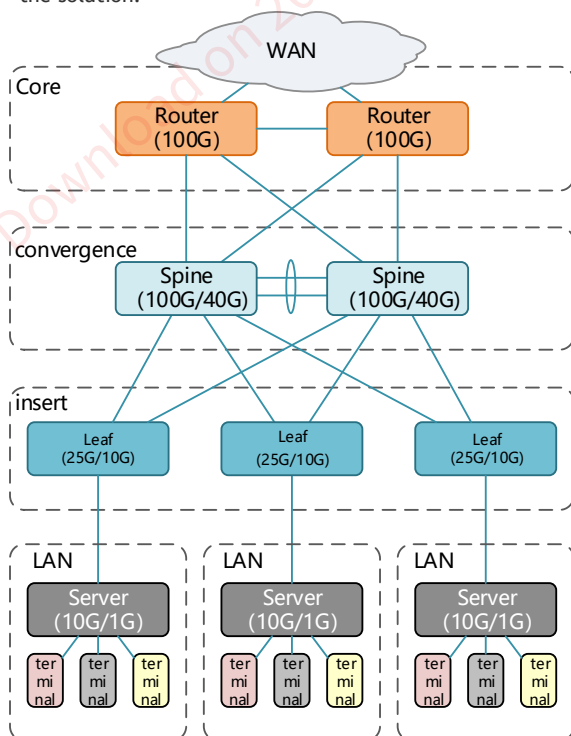


Figure 2 E680 Spine/Leaf Network Designs

## Performance comparison

Product	E680-32C	E680-48Y8C	E680-48X8C	E680-24Y4C
Switch capability	4.8Tbps	4Tbps	2.56Tbps	2Tbps
Throughput	1024Mpps	1024Mpps	1024Mpps	1024Mpps
Forward Mode	Store and Forwarding / Cut Through			
Packet Cache	40MB			
Latency	700ns	700ns	700ns	700ns
Type of Power Supply	AC/DC	AC/DC	AC/DC	AC/DC
Max Power Draw	140W/160W	140W/160W	140W/160W	140W/160W

## Ordering Information

Product	Description
E680-32C	Standard 1U 19" rack mountable 32 x 100GE QSFP28 Ports Modular pluggable FANs Dual Modular pluggable power supplies (Dual AC for default)
E680-48Y8C	Standard 1U 19" rack mountable 48 x 25GE SFP28 Ports 8 x 100GE QSFP28 Ports Modular pluggable FANs Dual Modular pluggable power supplies (Dual AC for default)
E680-48X8C	Standard 1U 19" rack mountable 48 x 10GE SFP+ Ports 8 x 100GE QSFP28 Ports Modular pluggable FANs Dual Modular pluggable power supplies (Dual AC for default)
E680-24Y4C	Standard 1U 19" rack mountable 24 x 25GE SFP28 Ports 4 x 100GE QSFP28 Ports Modular pluggable FANs Dual Modular pluggable power supplies (Dual AC for default)



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