Product Overview

The Centec E550 Series Routing Switches (whose abbreviation is "E550") are high performance switches designed based on Centec's fifth generation ethernet switching chip CTC7148. E550's product position is to meet the requirements of next generation Enterprise, Data Center, Metro and HCI (Hyper-Converged Infrastructure) networks.

E550's CentecOS system software supports mainstream protocols and applications which can be conveniently deployed and managed.

The E550 Series Switches currently includes 2 configurations: E550-24T16Y/ E550-24T16X.

Figure 1 Centec E550 Series

Features

Technical highlights

- Standard 1RU pizza-box solution
- Up to 848G bps switching capacity
- Cut-Through switching method
- Very low system power consumption: 55W
- 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 64K MAC and 24K IP Routing tables
- RJ45 Console port and Out-band RJ45 Eth Management port

Layer 2 Features

- Up to 64K 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/VLAN Mapping
- 802.3ad Link Aggregation/LACP
- Multi-Chassis Link Aggregation (MLAG)

Layer 3 Features

- Up to 24K IPv4 Routes
- IPv4 standard support, ICMP, ARP
- VRF
- RIP v1/v2
- OSPF
- BGP
- 64-way Equal Cost Multi-path Routing (ECMP)
- VRRP / VRRP v3
- Virtual ARP (VARP)
- IS-IS
- URPF
- IP Unnumbered

MPLS Features

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

Multicast

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

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

Advanced Metro 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, 4 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/access accounting/keep

alive

➢ 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/SCP
➢ SNMPv1/v2/v3
➢ Syslog
➢ Role based Access Control
➢ User block feature
➢ Industry Standard CLI
➢ Blue Beacon LED for system identification
➢ WEB UI
➢ SmartConfig

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

Applications

E550 with 1GE + 10GE/25GE ports are suitable for HCI (Hyper-Converged Infrastructure) networks. Using 1GE ports for management network and using 10G/25G ports for data traffic network:
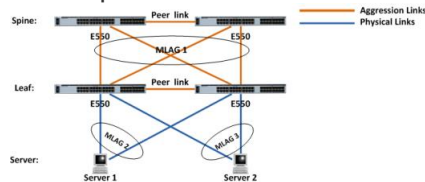

Figure 2 HCI Networks with E550

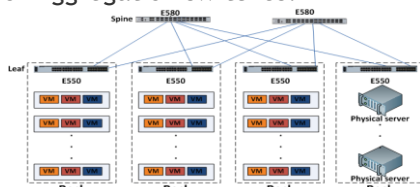E550 series provide 1GE/10GE/25GE ports for Access or Aggregation switches:

Figure 3 Data Center Servers Access Network with E550

Performance comparison

Product	E550-24T16Y	E550-24T16X
Switch capability	848Gbps	368Gbps
Throughput	630.9 Mpps	273.7 Mpps
MAC addresses	48K	
LPM/host routes	24K	
Multicast routes	1024	
Ingress ACLs	2464	
Egress ACLs	928	
Spanning Tree instances	64	

Table 1 E550 Module comparison

Ordering Information

Product	Description
E550-24T16Y	Standard 1U 19'' rack mountable 24x10/100/1000 Base-T Ports 16x25GE SFP28 Ports Dual modular AC power supply
E550-24T16X	Standard 1U 19'' rack mountable 24x10/100/1000 Base-T Ports 16x10GE SFP+ Ports Dual modular AC power supply

Table 2 E550 Ordering Information

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