T5850-24S2C Network Packet Broker

Traffic Aggregation and Distribution Visibility for SMEs, Data Centers and Service Providers.



Overview

The Network Packet Broker is high performance Pizza box switch to meet next generation metro and enterprise network requirements for traffic analysis and traffic monitoring.

T5850-24S2C supports flexible features of traffic aggregation, filtering, editing and distributing.

T5850-24S2C supports various Network Packet Broker functions, including M: N, symmetrical HASH, time stamps and packet truncation. The system supports multiple management mechanism for rapid and flexible service deployment.

Benefits

- Supports 1G/10G/25G/40G/100G Networks
- Support L2~L4 Traffic Aggregation, Filtering, Replication, Load Balancing
- Support Time Stamps, Editing VLAN of Packets, Packet Truncation, Header Modification
- Support Web GUI, CLI, Telnet, SNMP, SSH, JSON-RPC
- 2 Redundant Hot-Swappable Power Supplies and 3 Smart Fans

Primary Features And Benefits

1. Network Packet Brokers Function Higlights

Function Higlights	
Provide 1G / 10G / 40G /100G ports	Support UDF
Up to 880Gbps switching capacity	Support Hash based load balancing, session stickiness
Cut-Through switching mode	Support Round Robin style load balancing
Flow aggregation / copy / distribution	Support 5-tuple (ipsa, ipda, ip src port, ip dst port, ip protocol), IP truncation analysis, User defined fields(UDF) filtering
Support packet truncation	Support editing the IPv6SA/IPv6DA/ IPDA/IPSA and MACDA/MACSA and VLAN of packets
Support VxLAN decryption	Support TACAS+ authentication
Support GRE/NVGRE encryption and decryption	Supports console, Tenlet, SNMP, Syslog， SSH, Open API and WebUI management
Support M:N traffic aggregation and replication.	Support to decapsulate the GTP v1/v2 packets from user
Support Ingress and Egress filter.	Support to telnet other devices via management interface
Support time stamping and Vlan port tagging	Support to calculate the md5sum of a file
Support ERSPAN encapsulation	Support to operate the device with IPv6 address of the management interface
Support Vxlan encapsulation	Support to set the banner of the device
Support to match MPLS packets and support MPLS decapsulation	Support Strip header for all packets
Support to match PPPOE packets and support PPPOE decapsulation	Support redundant power supply
Support to match PBB packets	Low power consumption
Support IPFIX	
Support port-group	

2. System Design for Green and Energy Saving

- Intelligent FAN adjustment and real-time power consumption monitoring technology are provided for the cost of maintenance redundancy and help to build a green and energy saving data center.

3. High Reliability

- T5850-24S2C is powered by Hot-swappable power modules which supports AC/DC 1+1 redundancy, and the fans support N+1 redundancy; it supports Real-time environment monitoring technology to detect the chipset temperature, status of fan and power, etc.

Product Parameters

1. System Specifications

Features	Specifications
Size (H×W×D)	4.36 x 44.0 x 37.0 cm (1.73 x 17.5 x 14.6 in.)
Weight	5.95KG
RS-232 Serial Ports	1 RJ-45 port located at the left side of front panel
Management Ports	1 RJ-45 outband management port located at the left side of front panel
USB Ports	1 Type-A USB port located at the left side of front panel
10/100/1000 Base-T Ports	/
SFP Ports	/
SFP+ Ports	24
QSFP+ Ports	/
QSFP28 Ports	2
POE Ports	/
Latency	Min: 660ns
CPU	SOC (Dual core/ARM A53)
Memory	2 GB
Flash	8 GB (eMMC)
Packet Buffer Memory	9 MB
Power Supply AC	Operating Voltage: 100 ~ 240V; 50/60H Maximum Voltage : 90 ~ 264V; 47~63Hz
Power Supply DC	Operating Voltage : -48 ~ -60V
Hot-swap Power Supplies	2 (1+1 redundant)

Features	Specifications
Airflow Option	Front-Rear
Hot-swappable Fans	3 fixed fan
Typical Power Draw	53W
Max Power Draw	59W
MTBF (Hour)	206988
MTBF (Year)	23.63

2. Environment Specifications

Features	Specifications
Operating Temperature	0 to 45 ºC
Storage Temperature	-40 to 70 ºC
Relative Humidity	0 to 95% (non-condensing)

3. Safety and Compliance

Features	Specifications
Operating Temperature	0 to 45 ºC
Storage Temperature	-40 to 70 ºC
Relative Humidity	0 to 95% (non-condensing)

4. Service specifications

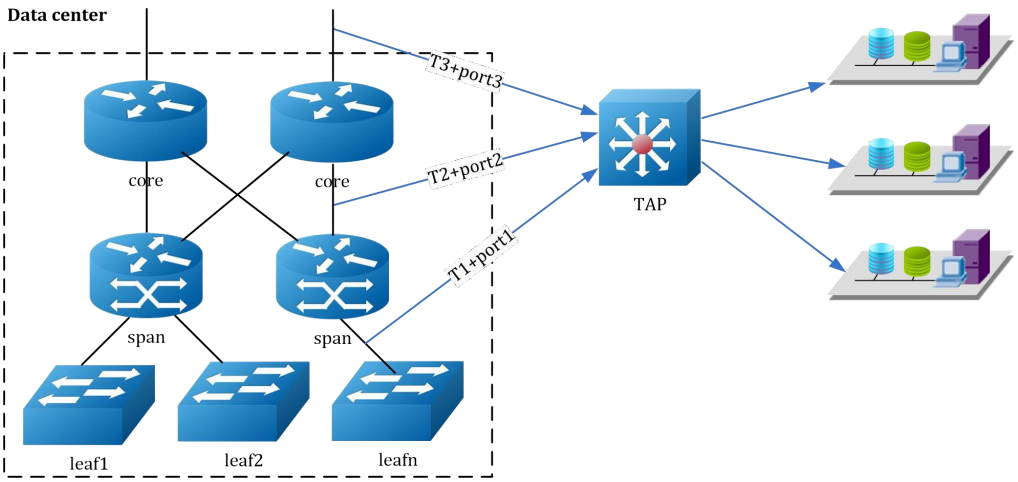
Features		Specifications
Line Speed Forwarding	Switch Capability	880 Gbps
	Throughput	540 Mpps
Forward Mode		Support store-forward mode and cut-through mode
Maximum TAP Groups		512
TAP Groups Support Truncation		4
Maximum Linkagg Number		16
Maximum Linkagg Members		64
Ingress Flow Entries		1800 (128 entries cut down after IPFIX enabled)
Egress Flow Entries		253

Applications

I . Data center application

In traditional data center applications, Network Packet Brokers are used to sample egress traffic flow of DC.

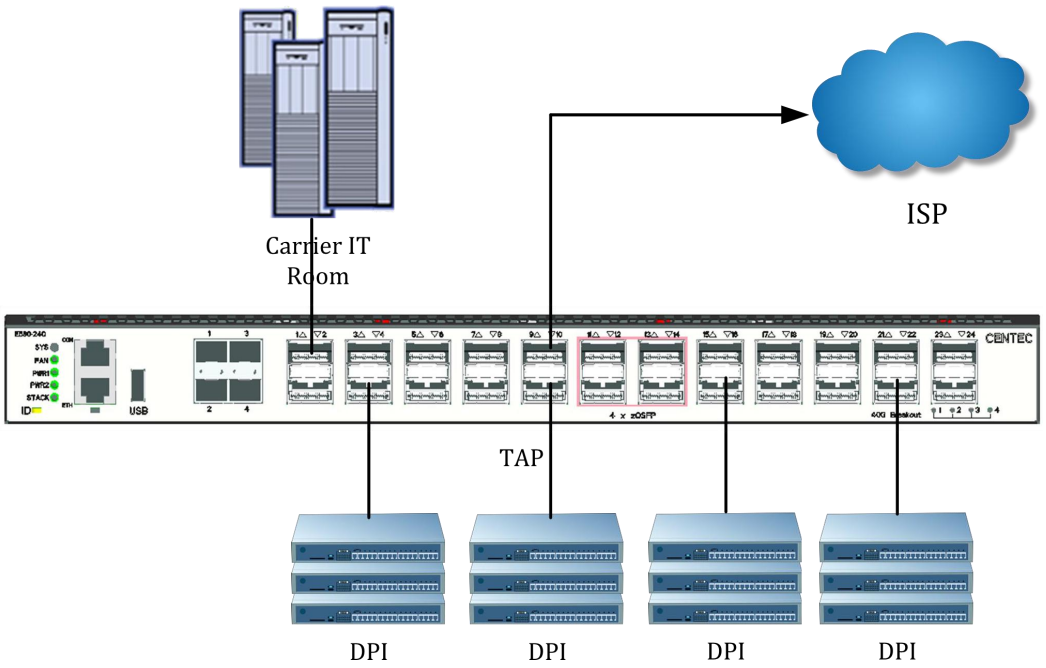
With the increase of scale of data center network, there is growing requirement in deeper performance monitoring within the data center. The high performance Network Packet Brokers can be used for such application.



As shown in figure above, user can enable the timestamp and source port label function of Network Packet Brokers , the server cluster can access the exact packet process time in each data center layer via source port and timestamp message carried by the packets. From port1, port2, port3, user can distinguish the devices that the streams come from. Through T1, T2 and T3, packets forward latency of each device can be calculated, according to that, user can find out the bottleneck during packet forwarding for the further optimization of data center network.

II . Application in Carrier network

Generally, Network Packet Brokers can be used to assist DPI (Deep Packet Inspection) in carrier networks. Network Packet Brokers is applied to forward flows of carrier at internet access point and sends a mirrored copy of the packet flow to DPI device at the same time. The DPI device is for traffic analysis, once a virus on website or illegal information has been monitored, the flows will be blocked by a five elements table sent from management channel between DPI and Network Packet Brokers.



Ordering Information

Product Number	Description
T5850-24S2C	Standard 1U 19'' rack mountable 24x 10G SFP+ Ports 2x 100G QSFP28 Ports Dual modular power supply Front-Rear Airflow, 2+1 redundant FAN
T5850-48S6Q -R	Standard 1U 19'' rack mountable 48x 10GE SFP+ Ports 6x 40GE QSFP+ Ports Dual modular power supply Front-Rear Airflow, 2+2 redundant FAN
T8550-32C	Standard 1U 19'' rack mountable 32x 100G QSFP28 Ports Dual modular power supply Front-Rear Airflow, 4 pluggable FAN
T5850-48S8C	Standard 1U 19'' rack mountable 48x 10GE SFP+ Ports 8x 100GE QSFP28 Ports Dual modular power supply Front-Rear Airflow, 2+2 redundant FAN