

T5850-48S8C Network Packet Broker

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



Overview

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

T5850-48S8C supports flexible features of traffic aggregation, filtering, editing and distributing.

T5850-48S8C comes with CNOS based system software that supports various NPB functions, including M : N, symmetrical HASH, time stamps and packet truncation. The system supports multiple management mechanisms for rapid and flexible service deployment.

Benefits

- Supports 1G/10G/25G/40G/100G Networks
- Support L2~L4 Traffic Aggregation, Filtering, Replication, Load Balancing, Deduplication
- 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 4 Smart Fans

Primary Features And Benefits

1. Network Packet Brokers Function Highlights

Function Highlights	
Provide 10G / 25G /100G ports	Support to match PPPOE packets and support PPPOE decapsulation
Up to 6.4Tbps switching capacity	Support to match PBB packets
Cut-Through switching mode	Support IPFIX
Flow aggregation / copy / distribution	Support port-group
Support packet de-duplicate	Support UDF
Support packet de-sensitive	Support Hash based load balancing, session stickiness
Support packet truncation	Support 5-tuple (ipsa, ipda, ip src port, ip dst port, ip protocol), IP truncation analysis, User defined fields(UDF) filtering
Support VxLAN decryption	Support editing the IPv6SA/IPv6DA/ IPDA/IPSA and MACDA/MACSA and VLAN of packets
Support GRE / NVGRE encryption and decryption	Support TACAS+ authentication
Support M:N traffic aggregation and replication	Supports console, Tenlet, SNMP, Syslog, SSH, Open API and WebUI management
Support Ingress and Egress filter	Support redundant power supply
Support time stamping and Vlan port tagging	Low power consumption
Support ERSPAN encapsulation	
Support Vxlan encapsulation	
Support to match MPLS packets and support MPLS decapsulation	

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

- T5850-48S8C is powered by Hot-swappable power modules which supports AC/DC 1+ 1 redundancy and fans support 2+2 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)		4.4 x 44.2 x 42.25 cm (1.73 x 17.5 x 18.9 in.)
Weight		9.2KG
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
SFP+ Ports		48
SFP28 Ports		-
QSFP28 Ports		8
Latency		~700ns
CPU		4 cores, Xeon D-1527,2.2 GHz
Memory		16 GB
Flash		128 GB
Packet Buffer Memory		36 MB
Power Supply	AC	Operating Voltage: 100 ~ 240V; 50/60H Maximum Voltage: 90 ~ 264V; 47~63Hz
	DC	Operating Voltage: -40 ~ -72V
Hot-swap Power Supplies		2 (1+1 redundant)

Features	Specifications
Airflow Option	Front- Rear
Hot-swappable Fans	4 pluggable fans
Typical Power Draw	140W
Max Power Draw	160W
MTBF (Hour)	>162213
MTBF (Year)	>18.5

2. Environment Specifications

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

3. Safety and Compliance

Features	Specifications
Safety Certifications	Ready to CE Marking
Electromagnetic Emissions Certifications	Ready to FCC Part 15 Class A Ready to CE
Warranty	5 years

4. Service specifications

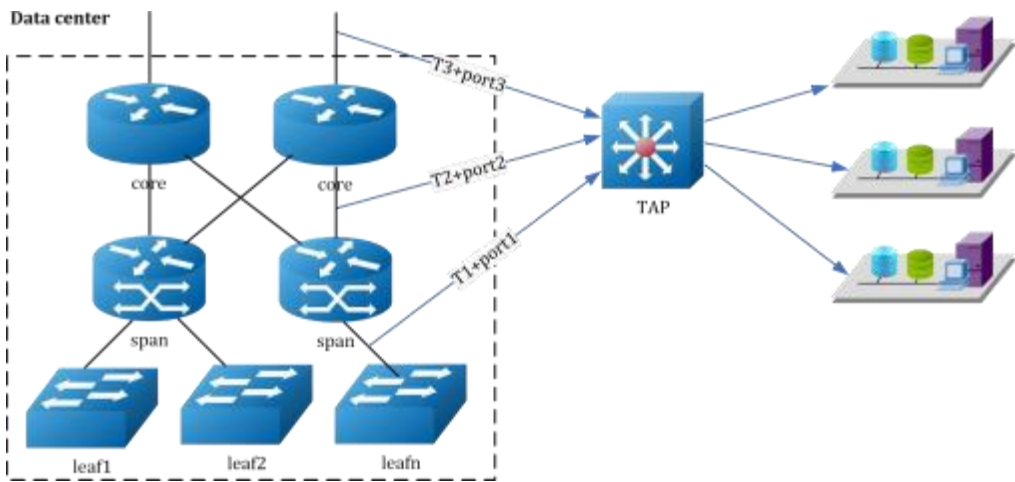
Features		Specifications
Line Speed Forwarding	Switch Capability	2.56 Tbps
	Throughput	1905 Mpps
Forward Mode		Support store-forward mode and cut-through mode
Maximum TAP Groups		512
TAP Groups Support Truncation		4
Maximum Linkagg Number		16
Maximum Linkagg Members		64
Ingress Flow Entries		8000
Ingress (udf) Flow entries		2000
Egress Flow Entries		253

Applications

1. Data center application

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

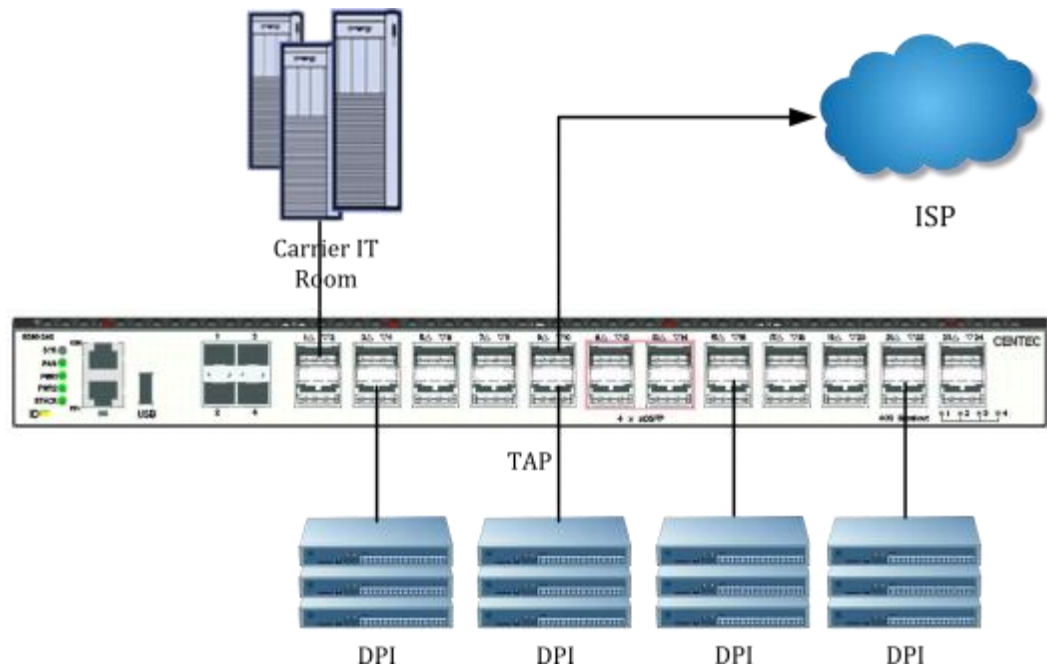
With the increase of scale of data center network, there is growing requirement in deeper performance monitoring within the data center. The high performance Network Packet Brokers can be used for such applications.



As shown in figure above, users 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, users 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, users can find out the bottleneck during packet forwarding for the further optimization of data center networks.

2. 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 a website or illegal information has been monitored, the flows will be blocked by a five-element table sent from the management channel between DPI and Network Packet Brokers.



Ordering Information

Product Number	Description
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
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