

# T5850-48S6Q-R 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 next generation metro and enterprise network requirements for traffic analysis and traffic monitoring.

T5850-48S6Q-R supports flexible features of traffic aggregation, filtering, editing and distributing.

T5850-48S6Q-R supports various Network Packet Broker functions, including any to any port aggregation and replication, load balancing, tunnel de-encapsulation, traffic filtering and packet editing. In addition, the system offers a wide set of capabilities for management needs, such as WEB GUI, Open API, SNMP etc.

## Benefits

- Supports 1G/ 10G/ 40G Networks
- Support L2~L4 Traffic Aggregation, Filtering, Replication, Load Balancing
- Support Time Stamps, Editing VLAN of Packets, Packet Truncation, Header Modification 1+1 Redundant Power Supply
- 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 1G / 10G / 40G ports<br>Up to 1.44Tbps switching capacity<br>Cut-Through switching mode<br>Flow aggregation / copy / distribution<br>Support packet truncation<br>Support VxLAN decryption<br>Support GRE/NVGRE encryption and decryption<br>Support M:N traffic aggregation and replication.<br>Support Ingress and Egress filter.<br>Support time stamping and Vlan port tagging<br>Support ERSPAN encapsulation<br>Support Vxlan encapsulation<br>Support to match MPLS packets and support MPLS decapsulation<br>Support to match PPPOE packets and support PPPOE decapsulation | Support to match PBB packets<br>Support IPFIX<br>Support UDF<br>Support port-group<br>Support Hash based load balancing, session stickiness<br>Support 5-tuple (ipsa, ipda, ip src port, ip dst port, ip protocol), IP truncation analysis, User defined fields(UDF) filtering<br>Supports console, Tenlet, SNMP, Syslog, SSH, Open API and WebUI management<br>Support to telnet other devices via management interface<br>Support to calculate the md5sum of a file<br>Support to operate the device with IPv6 address of the management interface<br>Support to set the banner of the device<br>Support Strip header for all packets<br>Support redundant power supply. Low power consumption |

### 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

- T5850-48S6Q-R is powered by Hot-swappable power modules which supports AC/DC 1+1 redundancy; Fans support N+1 redundancy; Support Real-time environment monitoring technology to detect the chipset temperature, status of fan and power, etc.

## Product Parameters

### 1. System Specifications

| Features                |    | Specifications                                                                |
|-------------------------|----|-------------------------------------------------------------------------------|
| RS-232 Serial Ports     |    | 1RJ-45port located                                                            |
| Management Ports        |    | 1 RJ- 4 5 outband management port                                             |
| SFP+ Ports              |    | 48                                                                            |
| QSFP+ Ports             |    | 6                                                                             |
| Latency                 |    | 700ns                                                                         |
| CPU                     |    | 2 cores, ARM A53                                                              |
| Memory                  |    | 2GB                                                                           |
| Flash                   |    | 8GB                                                                           |
| Packet Buffer Memory    |    | 36MB                                                                          |
| Power Supply            | AC | Operating Voltage: 100 ~ 240V; 50/60Hz<br>Maximum Voltage: 90 ~ 264V; 47~63Hz |
|                         | DC | Operating Voltage: -40 ~ -72V                                                 |
| Hot-swap Power Supplies |    | 2 (1+1 redundant)                                                             |
| Airflow Option          |    | Front- Rear                                                                   |
| Hot-swappable Fans      |    | 4 pluggable fans (2+2)                                                        |
| Typical Power Draw      |    | 100W                                                                          |
| Max Power Draw          |    | 145W                                                                          |
| MTBF (Hour)             |    | >70080                                                                        |
| MTBF (Year)             |    | >8.0                                                                          |
| Weight                  |    | 9.2KG                                                                         |
| Size (H×W×D)            |    | 4.4 x 44.2 x 45.1 cm<br>(1.73 x 17.4 x 17.75 in.)                             |

## 2. Environment Specifications

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

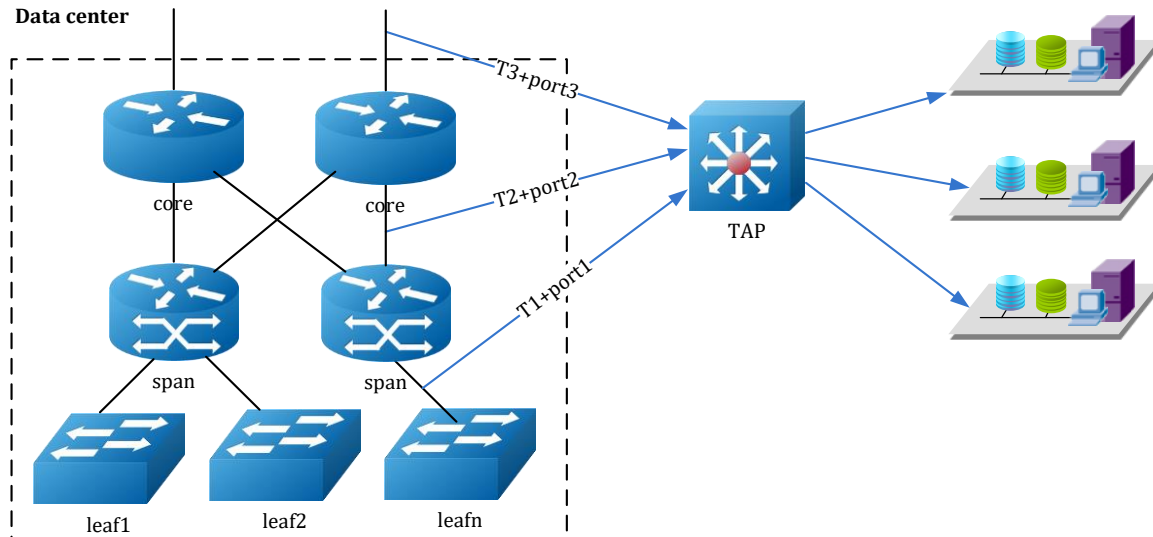
## 3. Service specifications

| Features                      | Specifications                                  |
|-------------------------------|-------------------------------------------------|
| Line Speed Forwarding         | Switch Capability<br>1.44 Tbps                  |
|                               | Throughput<br>1071.4 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                                            |
| Egress Flow Entries           | 253                                             |

## Applications

### I . Data center application

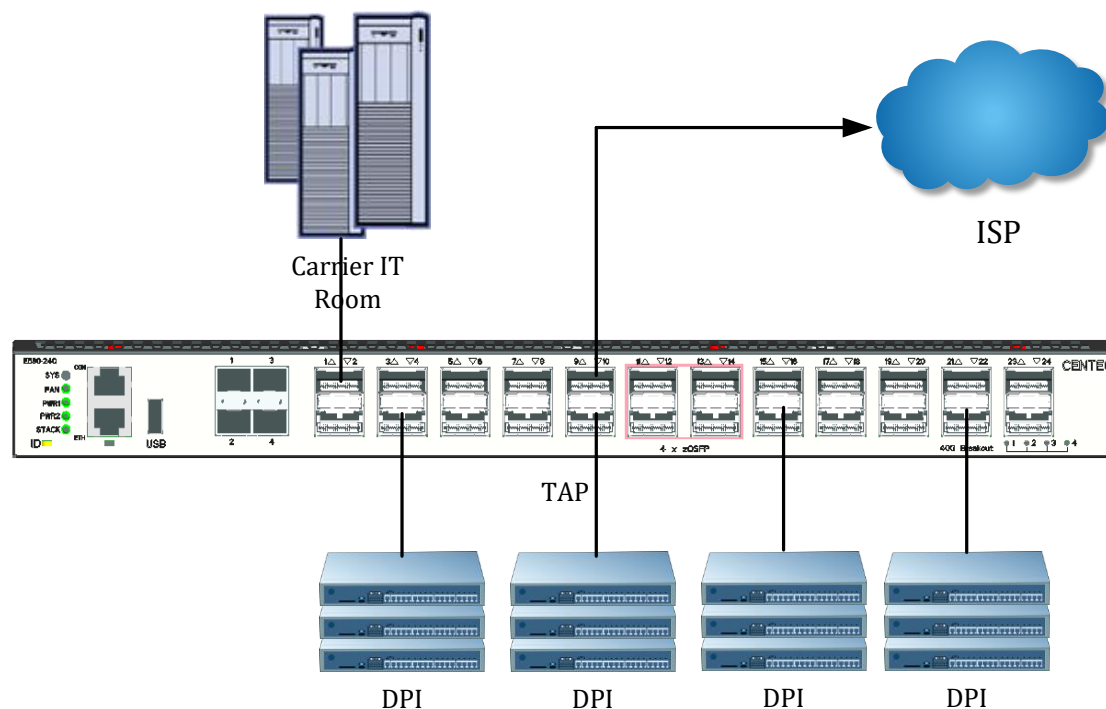
In traditional data center applications, Network Packet Brokers are used to sample egress traffic flow of DC. With the increase of scale of data center network, there is growing requirement in deeper performance monitoring within the data center. The high performance Network Packet Brokers can be used 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                                                                                                                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>T5850-48S6Q -R</b> | <ul style="list-style-type: none"><li>• Standard 1U 19" rack mountable</li><li>• 48x 10GE SFP+ Ports</li><li>• 6x 40GE QSFP+ Ports</li><li>• Dual modular power supply</li><li>• Front-Rear Airflow, 2+2 redundant FAN</li></ul>   |
| <b>T8550-32C</b>      | <ul style="list-style-type: none"><li>• Standard 1U 19" rack mountable</li><li>• 32x 100G QSFP28 Ports</li><li>• Dual modular power supply</li><li>• Front-Rear Airflow, 4 pluggable FAN</li></ul>                                 |
| <b>T5850-24S2C</b>    | <ul style="list-style-type: none"><li>• Standard 1U 19" rack mountable</li><li>• 24x 10G SFP+ Ports</li><li>• 2x 100G QSFP28 Ports</li><li>• Dual modular power supply</li><li>• Front-Rear Airflow, 2+1 redundant FAN</li></ul>   |
| <b>T5850-48S8C</b>    | <ul style="list-style-type: none"><li>• Standard 1U 19" rack mountable</li><li>• 48x 10GE SFP+ Ports</li><li>• 8x 100GE QSFP28 Ports</li><li>• Dual modular power supply</li><li>• Front-Rear Airflow, 2+2 redundant FAN</li></ul> |