Leading Intelligent IP Networks

# Ultra-high-density Multi-service Aggregation Router

# NetEngine 8000 F8

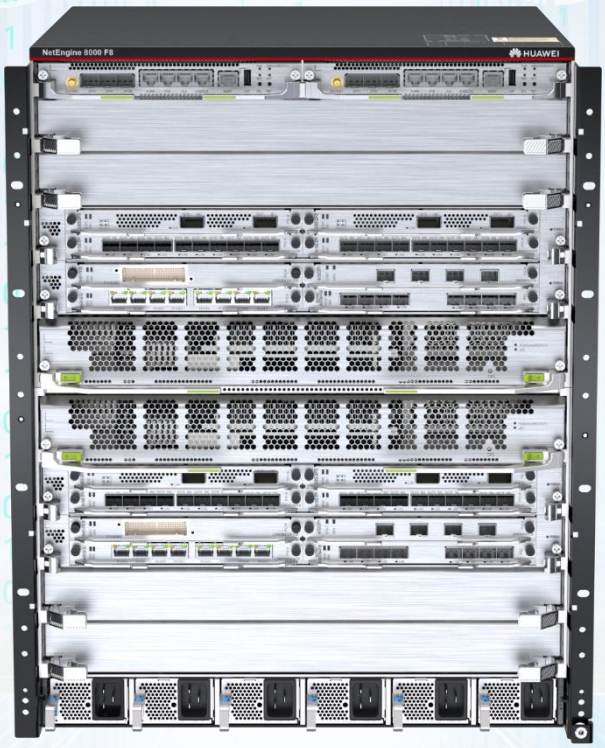
SLA Guarantee

network slicing

5 in 1

SRv6

Energy Saving



## Ultra high density

- 2Tbps capacity, 6.4Tbps Evolvable
- 4*400GE/24*100GE/48*50GE 240*10GE/448*GE

## Reliable and Flexible

- Separated MPU and SRU, key component backup
- Support Flexible card and Combined Line Processing Unit

## Various Ports

- 400GE/100GE/50GE/40GE/25GE/ 10GE/GE/FE/E1/STM-1c/STM-4c/ 2.5GE POS

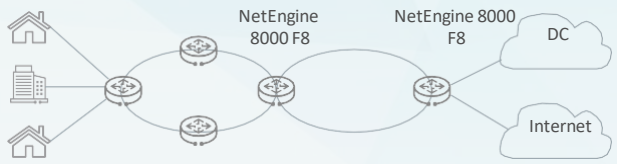
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## Product Overview

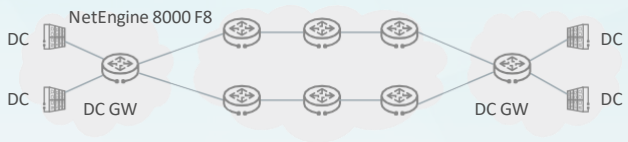
The NetEngine 8000 F8 is the ultra-high-density multi-service aggregation Router. It only 13U high and 482.8 mm deep, it provides a port capacity of up to 2 Tbps. Moreover, it provides eight service slots, supporting combined line processing units and physical interface cards designed by parent-child cards to flexibly adapt to various services. It supports 100GE, 50GE, 10GE, GE, FE, POS, CPOS, and E1 interfaces. Its key hardware components support redundancy backup, achieving high reliability. And with features such as SRv6/EVPN, FlexE, and 1588v2, the NetEngine 8000 F8 is an ideal choice for converged multi-service transport in the cloud era.

## Usage Scenarios

### Converged transport



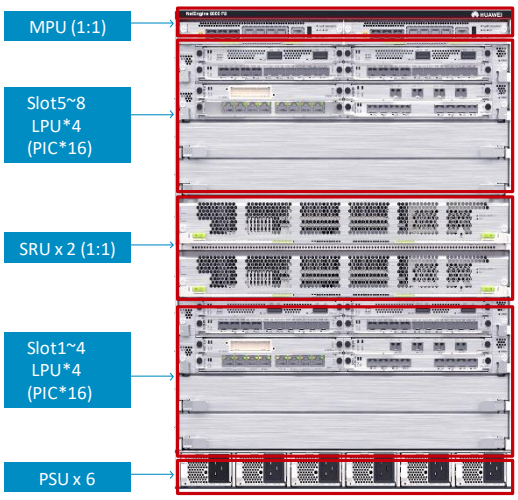

### DC/Campus egress




## Product Specifications

| Specifications | Description |
|---|---|
| Dimensions (H x W x D) | 578.5 mm (13U) x 442 mm x 482.8 mm |
| Forwarding capacity | 2 Tbps, can be evolved to 6.4 Tbps |
| Voltage range | DC: –40 V to –72 V<br>AC: 90 V to 290 V |
| Typical power consumption | 1680 W |
| Maximum number of slots | 8, supporting parent-child cards and combined line processing units, up to 32 PICs, 8 LPUCs |
| Maximum capacity per slot | 400G |
| Maximum interface capacity per device | 4 x 400GE; 24 x 100GE; 48 x 50GE; 96*25GE; 240 x 10GE; 448 x GE; 512 x E1; 256 x STM-1/-4; 256*2.5GE POS |
| Operating temperature | Long term: 0°C to +45°C<br>Short term: –5°C to +55°C |
| Operating humidity | Short term: 5% RH to 95% RH, non-condensing<br>Long term: 5% RH to 85% RH, non-condensing |

## Card Types




NetEngine 8000 F8

Subcard Layout for the LPUT

| | |
|---|---|
| PIC2 | PIC3 |
| PIC0 | PIC1 |

| Type | Service card | | Available 200G slots(1/2/7/8) | Available 400G slots(3/4/5/6) |
|---|---|---|---|---|
| Flexible Card | VSUP-100 | / | Yes (supported only on PIC0/2) | Yes. |
| | 2*50GE/1*100GE | QSFP28 | | |
| | 4*25GE/10GE | SFP28/SFP+ | | |
| | 10*10GE | SFP+ | | |
| | 4*10GE | SFP+ | | |
| | 10*GE | SFP | Yes. | Yes. |
| | 8*GE (electrical) | RJ45 | Yes. | Yes. |
| | 16*E1 | DB96 | Yes. | Yes. |
| | 4*CPOS | SFP | Yes. | Yes. |
| | 8*STM-1/4 | SFP | Yes. | Yes. |
| LPUC | 72*GE LPUC-100 | SFP | Yes. | No. |
| | 1*400GE LPUC-400 | QSFP-DD | No. | Yes. |

*LPUT: Trunk Line Processing Unit

## Features

| Features | Description |
| --- | --- |
| L2 function | IEEE 802.1q, IEEE 802.1p, IEEE 802.3ad, IEEE 802.1ab, STP/RSTP/MSTP |
| L3 function | OSPF, RIP, IS-IS, BGP, ACL, 6VPE, ARP, VLANIF, VXLAN, EVPN |
| Routing | Routing protocols such as RIP, RIPng, OSPF, OSPFv3, IS-IS, IS-ISv6, BGP, BGPv6, static routing, IPv4 multicast, IPv6 multicast, and static multicast<br>TCP/IP protocol family, such as ICMP, IP, TCP, UDP, Socket (TCP/UDP/RAW IP), and ARP<br>Static DNS, DNS Client, FTP Server, FTP Client, TFTP Client<br>DHCP relay and DHCP server |
| Network slicing | FlexE slicing, minimum 1G FlexE granularity, channelized sub-interface, and network slicing based on slice IDs |
| Service visibility | Flow-based detection IFIT |
| MPLS | LDP, RSVP-TE, L2VPN, L3VPN, Seamless MPLS |
| Segment Routing | SR BE, SR Policy, SRv6 BE, SRv6 Policy, EVPN L3VPN, EVPN VPWS, EVPN VPLS, SRv6 FlexAlgo, G-SRv6 |
| Multicast | IGMP, Static Multicast Routing, PIM-SM/SSM, MBGP, BIER, BIER-MPLS, MVPN over BIERv6, NG MVPN over BIER |
| Clock | 1588v2, 1588 ATR, 1588 ACR, CES ACR, synchronous Ethernet, extended SSM |
| NAT | NAT44, NAT ALG, NAT internal server, NAPT, No-PAT |
| Security | IPsec, mirroring, ARP, BGP FlowSpec, DHCP, URPF, 802.1x, loop detection, MACsec, VLAN-IN-Clear, CMPv2, IKEv2, GRE over IPsec, NAT traversal, IPsec VPN, Keepalive and DPD for Peer Detection and Dynamic Remote IPsec Access |
| IPv4 | Tracert, NQA, IP policy-based routing, specified next hop for forwarding based on flows, IP policy-based routing load balancing, QinQ interfaces (QinQ and dot1q termination), IPv4 load balancing, and enabling/disaipating the fast reply function based on the interface board, egress of the MPLS in UDP tunnel |
| IPv6 | IPv6 (ND), Path MTU (PMTU), TCP6, Ping IPv6, Tracert IPv6, Socket IPv6, DHCPv6 Relay, Static IPv6 DNS, TFTP IPv6 Client, IPv6 Policy Routing, IPv6 ND fast reply |
| OAM | IFIT, IP FPM, NQA, TWAMP, BFD, MPLS OAM, MPLS-TP OAM, VRRP, Ethernet OAM, 802.3ah, Y.1731, Ethernet LPT, bit-error-triggered switching |
| QoS | QPPB, DifferServ, HQoS, redirection |

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