



NetEngine 8000 F1A Service Router Datasheet

Overview

NetEngine 8000 F1A is a high-density compact box router designed for the cloud era. It's feature for its 1U height, and up to 1.2T port capacity, flexible combination of up to 56 ports (100GE, 50GE, 25GE, 10GE, GE ports), which is highest density in the industry. It also supports features such as SRv6, EVPN, and 1588v2 high-precision clock. The compact design of 400 mm saves precious resources, greatly reduces Capex, and protects existing investments. It is the best choice for high-density bearer in the future cloud era.

NetEngine 8000 F1A Service Router



NetEngine 8000 F1A



NetEngine 8000 F1A (DC)



NetEngine 8000 F1A (AC)

Product Features

Table 2-1 lists the features of Huawei NetEngine8000 F1A router.

Features of Huawei NetEngine8000 F1A Router

| Features | Description |
|-----------|---|
| L2 | IEEE802.1q, IEEE802.1p, IEEE 802.3ad, IEEE 802.1ab, STP/RSTP/MSTP |
| L3 | OSPF、RIP、IS-IS、BGP、ACL、IPv4、6VPE |
| MPLS | LDP, RSVP-TE, L2VPN(VPLS, HVPLS, and VLL), L3VPN, and seamless MPLS |
| SRv6/EVPN | support |
| VAS | BNG/BRAS、CGN/NAT |
| Multicast | IGMP、Static Multicast Routing、PIM-SM/SSM、MBGP、NGMVPN |
| QoS | 5 level H-QoS |
| ISIS | 1M |
| OSPF | 1M |
| IPv4 FIB | 4M |
| IPv6 FIB | 2M |
| ACL | 32K |

Product Specifications

| Item | NetEngine 8000 F1A |
|------|--------------------|
|------|--------------------|

| Item | NetEngine 8000 F1A |
|---|--|
| Dimensions (H x W x D) | 44 mm x 442 mm x 420 mm (1.73 in. x 17.40 in. x 16.54 in.) (1U) |
| Weight without packaging (full configuration) | DC: 8.4 kg(18.52 lb) AC: 8.75 kg(19.29 lb) |
| Cabinet installation standard | IEC 19-inch |
| Typical power consumption | 325 W |
| Typical heat dissipation | 1054.44 BTU/Hour |
| DC input voltage | <ul style="list-style-type: none"> • Input voltage range: -40V to -72V • Input rated voltage: -48V/-60V |
| AC input voltage | <ul style="list-style-type: none"> • Input voltage range: 90 V to 290 V • Input rated voltage: 100 V to 240 V |
| MTBF | DC: 25.52 years AC: 25.65 years |
| MTTR | 0.5 hour |
| Availability | 0.9999996143 |
| Redundant fans | 3+1, if a single fan fails, the system can still work for a short period of time at an ambient temperature of 40°C. |
| Redundant power supply | Supports two power input redundancy backup |
| Forwarding performance | 453Mpps |
| Switching capacity | 2.4T bit/s |
| Long-term operating temperature | <ul style="list-style-type: none"> • Front to back (port-side intake): -5°C to +45°C • Back to front (port-side exhaust): -5°C to +40°C • Remarks: The temperature change rate limit is 30°C/hour. |
| Short-term operating temperature | N/A |
| Restriction on the operating temperature variation rate | Restriction on the temperature variation rate: 30°C/hour (86°F/hour). |
| Storage temperature | -40 °C to 70 °C (-40°F to 158°F) |
| Long-term operating relative humidity | 5% to 90% RH, non-condensing |
| Short-term operating relative humidity | 5% to 95% RH, non-condensing |
| Relative storage humidity | 5% to 95% RH, non-condensing |
| Long-term operating altitude | Front to back (port-side intake): 1800 meters at the temperature of 45°C Back to front (port-side exhaust): 1800 meters at the temperature of 40°C <= 4000 m (13123.2 ft.) (For the altitude in the range of 1800 m to 4000 m [5905.44 ft. to 13123.2 ft.], the operating temperature of the device must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.] |
| Storage altitude | Lower than 5000 meters(16404 ft.) |
| Regulatory compliance | EMC <ul style="list-style-type: none"> • EN 55032 • CISPR 32 |

| Item | NetEngine 8000 F1A |
|------|--|
| | <ul style="list-style-type: none"> • EN 55024 • CISPR 24 • ETSI EN 300 386 • ETSI ES 201 468 • VCCI-CISPR 32 • AS/NZS CISPR 32 • IEC 61000-3-2 • IEC 61000-3-3 • IEC 61000-6-2 • IEC 61000-6-4 • IEC 61000-4-11 • IEC 61000-4-2 • IEC 61000-4-29 • IEC 61000-4-3 • IEC 61000-4-4 • IEC 61000-4-5 • IEC 61000-4-6 <p>Environment</p> <ul style="list-style-type: none"> • ETSI EN 300 019-1-1 • ETSI EN 300 019-1-2 • ETSI EN 300 019-1-3 • ETSI EN 300 019-2-1 • ETSI EN 300 019-2-2 • ETSI EN 300 019-2-3 • ETSI EN 300753 • GB/T 2423.26-2008 • IEC 60068-2-1 • IEC 60068-2-14 • IEC 60068-2-2 • IEC 60068-2-27 • IEC 60068-2-30 • IEC 60068-2-31 • IEC 60068-2-6 • IEC 60068-2-64 • IEC 60068-2-78 • ISO 7779 • ISTA 2A <p>Safety</p> <ul style="list-style-type: none"> • IEC/EN/UL/CSA 60950-1 |

| Item | NetEngine 8000 F1A |
|------|---|
| | <ul style="list-style-type: none"> IEC/EN 62368-1 <p>Environmental protection</p> <ul style="list-style-type: none"> 2011/65/EU & (EU)2015/863 (EU RoHS) Regulation (EC) No.1907/2006 (REACH) 2012/19/EU (WEEE) 2006/66/EC & 2013/56/EU on batteries and accumulators |

NOTE

- Regarding the physical dimensions provided in the table, the width (W) does not take mounting ears into account.
- Temperature and humidity are measured at 1.5 m (4.92 ft.) above the ground and 0.4 m (1.31 ft.) in front of the cabinet. There should be no protection board on the front or back of the cabinet.
- "Short-term" refers to continuous working time that does not exceed 96 hours and an accumulated working time per year that does not exceed 15 days. If the working time exceeds either of these values, it is considered "long-term".

Ordering Information

Basic Hardware Configurations

NetEngine 8000 F1A Basic Configurations

| BOM | Order Name | Description | Remarks |
|----------|--------------|---|---------|
| 02353AEW | CR8PF1ABASC2 | NetEngine 8000 F1A Basic Configuration Bundle (Includes F1A Chassis, Fixed Interface(8*100GE+20*25GE+28*10GE),2*DC Power,Port-side Intake,without Software and Document) | |
| 02353AEV | CR8PF1ABASC3 | NetEngine 8000 F1A Basic Configuration Bundle (Includes F1A Chassis, Fixed Interface(8*100GE+20*25GE+28*10GE),2*AC Power,Port-side Intake,without Software and Document) | |
| 02353AHB | CR8PF1ABASC8 | NetEngine 8000 F1A Basic Configuration Bundle (Includes F1A Chassis, Fixed Interface(8*100GE+20*25GE+28*10GE),2*DC Power,Port-side Exhaust,without Software and Document) | |
| 02353AHC | CR8PF1ABASC9 | NetEngine 8000 F1A Basic Configuration Bundle (Includes F1A Chassis, Fixed Interface(8*100GE+20*25GE+28*10GE),2*AC Power,Port-side Exhaust,without Software and Document) | |
| 02353WWB | CR8PF1ABASCC | NetEngine 8000 F1A Basic Configuration CM (Includes F1A Chassis, Fixed Interface(Enable 8*40GE+10*10GE+28*GE),2*DC Power,Port-side Intake,without Software and Document) | |
| 02353WWC | CR8PF1ABASCJ | NetEngine 8000 F1A Basic Configuration CM (Includes F1A Chassis, Fixed Interface(Enable 8*40GE+10*10GE+28*GE),2*AC Power,Port-side | |

| BOM | Order Name | Description | Remarks |
|----------|--------------|---|---------|
| | | Intake,without Software and Document) | |
| 02353WWD | CR8PF1ABASCK | NetEngine 8000 F1A Basic Configuration CM (Includes F1A Chassis, Fixed Interface(Enable 8*40GE+10*10GE+28*GE),2*DC Power,Port-side Exhaust,without Software and Document) | |
| 02353WWE | CR8PF1ABASCL | NetEngine 8000 F1A Basic Configuration CM (Includes F1A Chassis, Fixed Interface(Enable 8*40GE+10*10GE+28*GE),2*AC Power,Port-side Exhaust,without Software and Document) | |
| 02353AES | CR8B0BKP03C0 | NetEngine 8000 F1A Integrated Chassis Components | |
| 02353AGV | CR8B0BKP03C2 | NetEngine 8000 F1A Integrated Chassis Components | |

Software Configuration

License

| BOM | Order Name | Description | Remarks |
|----------|-------------------|---|---------|
| 88035YMT | N1-N8KF1F-LIC | N1-NetEngine 8000 F1 Series Foundation SW License | |
| 88035YMU | N1-N8KF1A-LIC | N1-NetEngine 8000 F1 Series Advanced SW License | |
| 88036AXU | N1-N8KF1F2A-LIC | N1-NetEngine 8000 F1 Series Foundation to Advanced SW License | |
| 88035YMV | N1-N8KF1TMSY-LIC | N1-NetEngine 8000 F1 Series Time Synchronization Function License | |
| 88035YMW | N1-N8KF1SRV6-LIC | N1-NetEngine 8000 F1 Series SRv6 Function License | |
| 88035YMX | N1-N8KF1SLI-LIC | N1-NetEngine 8000 F1 Series Port Slicing Function License | |
| 88036FKX | N1-N8KF1BNG-LIC | N1-NetEngine 8000 F1 Series BNG Function License | |
| 88036FKY | N1-N8KF1S1K-LIC | N1-NetEngine 8000 F1 Series Subscribers Quantity(1k Subscribers) | |
| 88036UQN | N1-N8KF1IPS-LIC | N1-NetEngine 8000 F1 Series IPSec Function License | |
| 88060TKA | N1-N8KF1F-SNS1Y | N1-NetEngine 8000 F1 Series Foundation SW License SnS(1 year) | |
| 88060TKC | N1-N8KF1A-SNS1Y | N1-NetEngine 8000 F1 Series Advanced SW License SnS(1 year) | |
| 88060UEU | N1-N8KF1F2A-SNS1Y | N1-NetEngine 8000 F1 Series Foundation to Advanced SW License SnS(1 year) | |

| BOM | Order Name | Description | Remarks |
|----------|--------------------|---|---------|
| 88060TKE | N1-N8KF1TMSY-SNS1Y | N1-NetEngine 8000 F1 Series Time Synchronization Function License SnS(1 year) | |
| 88060TKG | N1-N8KF1SRV6-SNS1Y | N1-NetEngine 8000 F1 Series SRv6 Function License SnS(1 year) | |
| 88060TKJ | N1-N8KF1SLI-SNS1Y | N1-NetEngine 8000 F1 Series Port Slicing Function License SnS(1 year) | |
| 88061DRM | N1-N8KF1BNG-SNS1Y | N1-NetEngine 8000 F1 Series BNG Function License SnS(1 year) | |
| 88061QXX | N1-N8KF1IPS-SNS1Y | N1-NetEngine 8000 F1 Series IPSec Function License SnS(1 year) | |
| 88036QRD | CR8S0F1AE1C5 | NetEngine 8000 F1 Series 1*100GE port upgrade RTU | |
| 88036QLD | CR8S0F1AE1C6 | NetEngine 8000 F1 Series 5* 25GE port upgrade RTU(10GE upg to 25GE) | |
| 88036QLE | CR8S0F1AE1C7 | NetEngine 8000 F1 Series 10*10GE upgrade RTU | |
| 88036QRF | CR8S0F1AE1C8 | NetEngine 8000 F1 Series 4*10GE upgrade RTU | |

Documents

2 Documents for NetEngine 8000 F1A

| | Order Name | Description | Remarks |
|----------|--------------|---|---------|
| 31180BJK | CR8I820DOCC2 | HUAWEI NetEngine 8000 F Series Router Product Documentation | |

Optical/Electrical Transceivers

1Gbps electrical module

| BOM Number | Order Name | Description | Remarks |
|------------|------------|-------------------------|---------|
| 02310VPT | OEGD01N02 | 1Gbps-SFP-100m-industry | |

155Mbps eSFP optical module

| BOM Number | Order Name | Description | Remarks |
|------------|---------------------|---|---------|
| S4015755 | eSFP-FE-LX-SM1310 | 155Mbps-eSFP-SMF-1310nm-15km-commercial | |
| S4015715 | eSFP-FE-LH40-SM1310 | 155Mbps-eSFP-SMF-1310nm-40km-commercial | |
| S4015716 | eSFP-FE-LH80-SM1550 | 155Mbps-eSFP-SMF-1550nm-80km-commercial | |

155Mbps eSFP BIDI optical module

| BOM Number | Order Name | Description | Remarks |
|------------|------------|--|---------|
| 02310QNG | OSC015B01 | 155Mbps-eSFP-SM-1310nm-15km-commercial | |
| 02310QNH | OSC015B02 | 155Mbps-eSFP-SM-1550nm-15km-commercial | |

1.25Gbps eSFP optical module

| BOM Number | Order Name | Description | Remarks |
|------------|--------------------------------|--|---------|
| 34060286 | eSFP-850nm-1000Base-Sx/FC200MM | 1.25Gbps-eSFP-MMF-850nm-500m-extended | |
| S4016067 | OSG010N05 | 1.25Gbps-eSFP-SMF-1310nm-10km-commercial | |
| S4016954 | OSG040002 | 1.25Gbps-eSFP-SMF-1310nm-40km-commercial | |
| 02310RAW | OSG080N01 | 1.25Gbps-eSFP-SMF-1550nm-80km-commercial | |

1.25Gbps eSFP BIDI optical module

| BOM Number | Order Name | Description | Remarks |
|------------|-----------------------|--|---------|
| 34060470 | SFP-GE-LX-SM1310-BIDI | 1.25Gbps-eSFP-SMF-1310nm-10km-commercial | |
| 34060475 | SFP-GE-LX-SM1490-BIDI | 1.25Gbps-eSFP-SMF-1490nm-10km-commercial | |
| 34060540 | OGEBIDI40 | 1.25Gbps-eSFP-SMF-1490nm-40km-commercial | |
| 34060539 | OGEBIDI41 | 1.25Gbps-eSFP-SMF-1310nm-40km-commercial | |

1.25/9.953/10.3125Gbps SFP+ optical module

| BOM Number | Order Name | Description | Remarks |
|------------|------------|--|---------|
| 34061042 | OSX010N13 | 1.25/9.953/10.3125Gbps-SFP+-SMF-1310nm-10km-commercial | |

10Gbps SFP+ optical module

| BOM Number | Order Name | Description | Remarks |
|------------|------------|--|---------|
| S4017482 | OSX040N03 | 10Gbps-SFP+-MMF-850nm-0.3km-commercial | |
| S4017483 | OSX001002 | 10Gbps-SFP+-SMF-1310nm-10km-commercial | |
| S4017484 | OMXD30002 | 10Gbps-SFP+-SMF-1550nm-40km-commercial | |
| 02310PVU | OSX080N04 | 10Gbps-SFP+-SMF-1550nm-80km-commercial | |

25Gbps SFP28 optical module

| BOM Number | Order Name | Description | Remarks |
|------------|--------------------------------------|---|---------|
| 02312PDL | SFP28-25G-1310nm-10km-SM | 9.8304/10.1376/10.3125/24.33024/25.78125Gbps-SFP28-SMF-1310nm-10km-industry | |
| 02312PDK | SFP28-25G-850nm-0.1km-MM | 25.78125Gbps-SFP28-MMF-850nm-0.1km-commercial | |
| 02312TVC | SFP28-25G-TX1270/RX1330-10km-SM-BIDI | 25.78125Gbps-SFP28-SMF-1270nm(Tx)/1330nm(Rx)-10km-commercial | |
| 02312TXG | SFP28-25G-TX1330/RX1270-10km-SM-BIDI | 25.78125Gbps-SFP28-SMF-1330nm(Tx)/1270nm(Rx)-10km-commercial | |

40Gbps QSFP+ optical module

| BOM Number | Order Name | Description | Remarks |
|------------|------------|--|---------|
| 02310WUT | OMXD30009 | 40Gbps(4*10.3)-QSFP+-SMF-1271~1331nm-10km-commercial | |
| 02310WUU | OMXD30010 | 40Gbps(4*10.3)-QSFP+-MMF-850nm-0.1km-commercial | |
| 02311NUA | OSM010N11 | 40Gbps(4*10.3)-QSFP+-SMF-1310nm-10km-commercial | |

50Gbps QSFP28 BIDI optical module

| BOM Number | Order Name | Description | Remarks |
|------------|---------------------------|---|---------|
| 02312EVV | QSFP28-50G-BIDI-10km-SM-1 | 50Gbps-QSFP28-SMF-1331nm(Tx)/1271nm(Rx)-10km-commercial | |
| 02312EVW | QSFP28-50G-BIDI-10km-SM-2 | 50Gbps-QSFP28-SMF-1271nm(TX)/1331nm(RX)-10km-commercial | |
| 02312EVX | QSFP28-50G-BIDI-40km-SM-2 | 50Gbps-QSFP28-SMF-1295nm(Tx)/1309nm(Rx)-40km-commercial | |
| 02312EVY | QSFP28-50G-BIDI-40km-SM-1 | 50Gbps-QSFP28-SMF-1309nm(Tx)/1295nm(Rx)-40km-commercial | |

50Gbps QSFP28 optical module

| BOM Number | Order Name | Description | Remarks |
|------------|------------------------------|---|---------|
| 02311YNR | OSL010N01 | 50Gbps-QSFP28-SMF-1311nm-10km-commercial | |
| 02312AXF | QSFP28-50G-1311nm-40km-SM | 50Gbps-QSFP28-SMF-1311nm-40km-commercial | |
| 02312MLF | QSFP28-50G-1310nm-80km-SM-01 | 50Gbps-QSFP28-SMF-1295.56~1309.14nm-80km-commercial | |

| BOM Number | Order Name | Description | Remarks |
|------------|------------------------------------|---|---------|
| 02311NTY | OMND10N13 | 100Gbps(4*25.7)-QSFP28-MMF-850nm-0.1km-commercial | |
| 02311QDH | OSN020N15 | 100Gbps(4*25.7)-QSFP28-SMF-1271~1331nm-2km-commercial | |
| 02312BSS | OSN010N24 | 100Gbps(4*25.7)-QSFP28-SMF-1295.56~1309.14nm-10km-commercial | |
| 02312AUE | OSN030N05 | 100Gbps(4*25.7)-QSFP28-SMF-1310nm-30km(NO FEC)-40km(FEC)-commercial | |
| 02312NVQ | QSFP28-100G-1295~1310nm-40km-SM-02 | 100Gbps(4*25.7)-QSFP28-SMF-1295.56~1309.14nm-40km-commercial | |
| 02312NCX | QSFP28-100G-1310nm-80km-SM-01 | 100Gbps(4*25.7)-QSFP28-SMF-1295.56~1309.14nm-80km-commercial | |

For More Information


For more information about the NetEngine 8000 F1A Series Routers, visit <http://e.huawei.com> or contact us in the following ways:

- Global service hotline: <http://e.huawei.com/en/service-hotline>
- Logging into the Huawei Enterprise technical support web: <http://support.huawei.com/enterprise/>
- Sending an email to the customer service mailbox: support_e@huawei.com

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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base Bantian,
Longgang Shenzhen 518129 People's
Republic of China

Website: www.huawei.com