



# NetEngine 8000 F1A Service Router



## 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
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
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)

Item	NetEngine 8000 F1A
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"> <li>• Input voltage range: -40V to -72V</li> <li>• Input rated voltage: -48V/-60V</li> </ul>
AC input voltage	<ul style="list-style-type: none"> <li>• Input voltage range: 90 V to 290 V</li> <li>• Input rated voltage: 100 V to 240 V</li> </ul>
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"> <li>• Front to back (port-side intake): -5°C to +45°C</li> <li>• Back to front (port-side exhaust): -5°C to +40°C</li> <li>• Remarks: The temperature change rate limit is 30°C/hour.</li> </ul>
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	<b>EMC</b> <ul style="list-style-type: none"> <li>• EN 55032</li> <li>• CISPR 32</li> <li>• EN 55024</li> <li>• CISPR 24</li> </ul>

Item	NetEngine 8000 F1A
	<ul style="list-style-type: none"> <li>• ETSI EN 300 386</li> <li>• ETSI ES 201 468</li> <li>• VCCI-CISPR 32</li> <li>• AS/NZS CISPR 32</li> <li>• IEC 61000-3-2</li> <li>• IEC 61000-3-3</li> <li>• IEC 61000-6-2</li> <li>• IEC 61000-6-4</li> <li>• IEC 61000-4-11</li> <li>• IEC 61000-4-2</li> <li>• IEC 61000-4-29</li> <li>• IEC 61000-4-3</li> <li>• IEC 61000-4-4</li> <li>• IEC 61000-4-5</li> <li>• IEC 61000-4-6</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>• ETSI EN 300 019-1-1</li> <li>• ETSI EN 300 019-1-2</li> <li>• ETSI EN 300 019-1-3</li> <li>• ETSI EN 300 019-2-1</li> <li>• ETSI EN 300 019-2-2</li> <li>• ETSI EN 300 019-2-3</li> <li>• ETSI EN 300753</li> <li>• GB/T 2423.26-2008</li> <li>• IEC 60068-2-1</li> <li>• IEC 60068-2-14</li> <li>• IEC 60068-2-2</li> <li>• IEC 60068-2-27</li> <li>• IEC 60068-2-30</li> <li>• IEC 60068-2-31</li> <li>• IEC 60068-2-6</li> <li>• IEC 60068-2-64</li> <li>• IEC 60068-2-78</li> <li>• ISO 7779</li> <li>• ISTA 2A</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• IEC/EN/UL/CSA 60950-1</li> <li>• IEC/EN 62368-1</li> </ul>

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

#### 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)	
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	
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)	
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)	

## Documents

### 2 Documents for NetEngine 8000 F1A

	Order Name	Description	Remarks
31180BJK	CR81820DOCC2	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
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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	OGE BIDI40	1.25Gbps-eSFP-SMF-1490nm-40km-commercial	
34060539	OGE BIDI41	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
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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
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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	

#### 100Gbps QSFP28 optical module

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](mailto:support_e@huawei.com)

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