

# NE40E Series 200G Flexible Card Line Processing Units



## Product Overview

Huawei® NE40E Series Universal Service Routers support 200G Gbps flexible card line processing units (LPUF-200 Series). The LPUF-200 Series line processing units handle all the network data-plane traffic-processing tasks of Huawei NE40E series universal service routers.

**Figure 1.** 200 Gbps flexible card line processing units



Flexible Card Line Processing Unit(LPUF-200)



Flexible Card Line Processing Unit B(LPUF-200-B)



1-Port 100GBase-CFP Flexible Card A(P240-A)



10-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)



1-Port 100GBase-CFP2 Flexible Card A(P240-A)



12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)



1-Port 100GBase-QSFP28 Flexible Card A(P240-A)

## Product Features

The LPUF-200 uses Huawei-developed Solar chips and provides powerful service capability. The LPUF-200 supports the combination of IP, MPLS, Ethernet, L2VPN, and L3VPN services. In addition, the LPUF-200 supports the 1588v2 feature, which allows for submicrosecond time synchronization based on specific hardware to ensure high-precision time synchronization between devices for applications and services that require 1588v2 clock synchronization, such as IP RAN and TDM migration. The LPUF-200 supports IPv6, which helps implement smooth IPv4-to-IPv6 transition. The LPUF-200 has a flexible programmable architecture. Microcode programming can be used for new service deployment, without the need to replace hardware, which reduces investments. In addition, this architecture drastically shortens the technological innovation cycle and accelerates new service rollout, helping customers build flexible and scalable networks.

LPUF-200 Series line processing units use Huawei-developed Solar chips and can dynamically change the number of forwarding chip processing cores, frequency, and bus bandwidth to compensate for service traffic changes, reducing boards' power consumption. The LPUF-200 Series line processing units also support dynamic frequency adjustment and intelligent fan speed adjustment, which significantly reduces power consumption, with less than 0.9 W for each gigabit, lowest in the industry.

LPUF-200 Series line processing units and flexible cards support for online insertion and removal (OIR) without system impact, which offers maximum investment protection and flexibility by allowing operators to upgrade to future LPU on NE40E.

## Product Compatibility

**Table 1.** 200G Flexible Card Line Processing Units Compatible Chassis ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	NE40E-					
			X3	X8	X16	X3A	X8A	X16A
03056598	CR5DLPUFE070	Flexible Card Line Processing Unit(LPUF-200)	-	-	-	●	●	●
03057713	CR5DLPUFE07B	Flexible Card Line Processing Unit B(LPUF-200-B)	-	-	-	●	●	●
03030QDF	CR5D00E1NC74	1-Port 100GBase-CFP Flexible Card A(P240-A)	-	●	●	●	●	●
03030TUL	CR5D00LAXF70	10-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	-	-	-	●	●	●
03032GLA	CR5D00E1NC7A	1-Port 100GBase-CFP2 Flexible Card A(P240-A)	-	●	●	●	●	●

BOM	Order Name	Description	NE40E-					
			X3	X8	X16	X3A	X8A	X16A
03030QDD	CR5DooLBXF71	12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	-	•	•	•	•	•
03032HGG	CR5DooE1ND73	1-Port 100GBase-QSFP28 Flexible Card A(P240-A)	-	•	•	•	•	•

**Table 2.** 200G Flexible Card Line Processing Units Compatible Optical/Electrical Modules

BOM	Order Name	Description	Optical type supported
03030QDD	CR5DooLBXF71	12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	1Gbps electrical module 1.25Gbps eSFP optical module 1.25Gbps eSFP CWDM optical module 1.25Gbps eSFP BIDI optical module 125M~2.67Gbps eSFP DWDM optical module 10Gbps SFP+ optical module 10Gbps SFP+ CWDM optical module 10Gbps SFP+ BIDI optical module 10Gbps SFP+ DWDM optical module 1.25/9.953/10.3125Gbps SFP+ optical module

BOM	Order Name	Description	Optical type supported
03030TUL	CR5D00LAXF70	10-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	1Gbps electrical module 1.25Gbps eSFP optical module 1.25Gbps eSFP CWDM optical module 1.25Gbps eSFP BIDI optical module 125M~2.67Gbps eSFP DWDM optical module 10Gbps SFP+ optical module 10Gbps SFP+ CWDM optical module 10Gbps SFP+ BIDI optical module 10Gbps SFP+ DWDM optical module 1.25/9.953/10.3125Gbps SFP+ optical module
03030QDF	CR5D00E1NC74	1-Port 100GBase-CFP Flexible Card A(P240-A)	100Gbps CFP optical module
03032GLA	CR5D00E1NC7A	1-Port 100GBase-CFP2 Flexible Card A(P240-A)	100Gbps CFP2 optical module NOTE When optical modules with the BOM number 02311LYG are used, 2x40G and 10x10G breakout optical fibers are not supported.
03032HGG	CR5D00E1ND73	1-Port 100GBase-QSFP28 Flexible Card A(P240-A)	100Gbps QSFP28 optical module 40Gbps QSFP+ optical module

## Product Specifications

**Table 3.** Flexible Card Line Processing Unit(LPUF-200) Specifications

Item	Specification
Order Name	CR5DLPUFE070
Silkscreen	LPUF-200
Dimensions (H x W x D)	40.1 mm x 399.2 mm x 535.6 mm (1.58 in. x 15.72 in. x 21.09 in.)

Item	Specification
Weight	8.4 kg (18.52 lb)
Typical power consumption	191.0 W
Typical heat dissipation	619.7 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Reliability and availability	Hot swappable.

**Table 4.** Flexible Card Line Processing Unit B(LPUF-200-B) Specifications

Item	Specification
Order Name	CR5DLPUFE07B
Silkscreen	LPUF-200-B
Dimensions (H x W x D)	40.1 mm x 399.2 mm x 535.6 mm (1.58 in. x 15.72 in. x 21.09 in.)
Weight	8.4 kg (18.52 lb)
Typical power consumption	191.0 W
Typical heat dissipation	619.7 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Reliability and availability	Hot swappable.

**Table 5.** 1-Port 100GBase-CFP Flexible Card A(P240-A) Specifications

Item	Specification
Order Name	CR5D00E1NC74
Silkscreen	P240-1x100GBase LAN-CFP-A
Dimensions (H x W x D)	37.2 mm x 178.7 mm x 193.3 mm (1.46 in. x 7.04 in. x 7.61 in.)
Weight	1.3 kg (2.87 lb)

Item	Specification
Typical power consumption	51.0 W
Typical heat dissipation	165.5 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Connector type	CFP
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

**Table 6.** 1-Port 100GBase-CFP2 Flexible Card A(P240-A) Specifications

Item	Specification
Order Name	CR5D00E1NC7A
Silkscreen	P240-1x100GBase-CFP2-A
Dimensions (H x W x D)	37.2 mm x 178.7 mm x 193.3 mm (1.46 in. x 7.04 in. x 7.61 in.)
Weight	0.8 kg (1.76 lb)
Typical power consumption	40.0 W
Typical heat dissipation	129.7 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Connector type	CFP2
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

**Table 7.** 1-Port 100GBase-QSFP28 Flexible Card A(P240-A) Specifications

Item	Specification
Order Name	CR5DooE1ND73
Silkscreen	P240-1x100Gbase-QSFP28-A
Dimensions (H x W x D)	37.2 mm x 178.7 mm x 193.3 mm (1.46 in. x 7.04 in. x 7.61 in.)
Weight	0.8 kg (1.65 lb)
Typical power consumption	34.0 W
Typical heat dissipation	110.3 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Connector type	QSFP28/QSFP+
Working mode	Full-duplex
Frame format	Ethernet_II,Ethernet_SAP,Ethernet_SNAP
Reliability and availability	Hot swappable.

**Table 8.** 10-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A) Specifications

Item	Specification
Order Name	CR5DooLAXF70
Silkscreen	P240-10x10GBase LAN/WAN-SFP+ -A
Dimensions (H x W x D)	37.2 mm x 178.7 mm x 193.3 mm (1.46 in. x 7.04 in. x 7.61 in.)
Weight	0.8 kg (1.65 lb)
Typical power consumption	52.0 W
Typical heat dissipation	168.7 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Connector type	SFP/SFP+

Item	Specification
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

**Table 9.** 12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A) Specifications

Item	Specification
Order Name	CR5DooLBXF71
Silkscreen	P240-12x10GBase LAN/WAN-SFP+-A
Dimensions (H x W x D)	37.2 mm x 178.7 mm x 193.3 mm (1.46 in. x 7.04 in. x 7.61 in.)
Weight	0.8 kg (1.65 lb)
Typical power consumption	52.0 W
Typical heat dissipation	168.7 BTU/hour
Ambient temperature	Long terms: 0 °C to 45 °C (32°F to 113°F) Short terms: -5 °C to 55 °C (23°F to 131°F)
Connector type	SFP/SFP+
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.



## Product Performance

**Table 10.** Product Performance of the LPUF-200

Feature	Specification
FIB	IPv4: up to 4,096,000 routes IPv6: up to 2,048,000 routes Mixed: up to 2,048,000 IPv4 routes and 1,024,000 IPv6 routes
Multicast	IPv4: up to 64,000 routes IPv6: up to 8,000 routes
QoS	Up to 192,000 queues in the upstream Up to 256,000 queues in the downstream Up to 5 levels of hierarchy Up to 100ms packet buffer time
Access Control List (ACL) rules	ACLv4: up to 256 * 1,024/slot(Only unidirectional transmission is supported.) ACLv6: up to 32 * 1,024/slot

## For More Information

For more information about the Huawei NE40E 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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