Product Overview

Huawei NE40E Series Universal Service Routers support 50Gbps integrated line processing units (include LPUI-51-B Series, LPUI-51-E Series and LPUI-51-L Series) and 20Gbps integrated line processing units (include LPUI-21-L Series). Both the LPUI-51 Series and LPUI-21 Series line processing units handle all the network data-plane traffic-processing tasks of Huawei NE40E series universal service routers.

Product Features

The NE40E series provide 50G integrated line processing units with 5-port/4-port/3-port /2-port 10GE and 48-port FE/GE, and 20G integrated line processing units with 1-port 10GE and 24-port FE/GE, for flexible solutions. A 5-port/4-port/3-port/2-port/1-port 10GE integrated line processing unit provides multiple 10 Gbit/s line-rate Ethernet interfaces and supports medium-scale 10 Gbit/s link aggregation. A 48-port/24-port FE/GE integrated line processing board boasts high port density and supports compatibility and communications with standard fast Ethernet. It can be used for large-scale 10M, 100M, and 1000M Ethernet interconnection.

These high-capacity line processing units are designed to remove bandwidth bottlenecks that are caused by next-generation high-speed and high-requirement computing applications and technologies. LPUI-51 Series and LPUI-21 Series provide economical, scalable, and reliable line-rate Ethernet and IP/MPLS services.

Both the LPUI-51 Series and LPUI-21 Series provides powerful service capability, and support the combination of IP, MPLS, Ethernet, L2VPN, and L3VPN services. In addition, the LPUI-51-B/-L Series and LPUI-21 Series support 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. Both the LPUI-51 Series and LPUI-21 Series support IPv6, which helps implement smooth IPv4-to-IPv6 transition.

The LPUI-51 Series and LPUI-21 Series have 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.

The LPUI-51 Series and LPUI-21 Series line processing units 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 LPUI-51 Series and LPUI-21 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.

> 📖 **NOTE**
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> Differences between the LPUI-51-B, LPUI-51-E and LPUI-51-L:

- LPUI-51-B supports 1588v2, and does not support L3VPN by default. After being loaded with specific license, it supports L3VPN. LPUI-51-B does not support BRAS function, such as Enhanced Dynamic Service Gateway (EDSG).

- LPUI-51-E by default support BRAS function. LPUI-51-E with eTM sub-card does not support 1588v2 and support enhanced HQoS; LPUI-51-E without eTM sub-card support 1588v2 and does not support enhanced HQoS.

- LPUI-51-L supports 1588v2, and does not support L2TPv3. LPUI-51-L can not be used as an LNS of L2TP, and it is not recommended to install LPUI-51-L in the chassis deployed L2TP service. LPUI-51-L cannot function as a virtual cluster interconnection board.

LPUI-21-L can not be used as an LNS of L2TP, and it is not recommended to install LPUI-21-L in the chassis deployed L2TP service.

Product Compatibility

LPUI-51 Series Compatible Chassis

LPUI-51 Series Compatible Chassis("●" indicates supported items, "-" indicates unsupported items).

BOM	Order Name	Description	-	-	-	-	-	-
03054485	CR5D0L5XFA7B	5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-51-B)	●	●	●	●	●	●
03054486	CR5D0L4XFA7B	4-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-51-B)	●	●	●	●	●	●
03054488	CR5D0EMGFA7B	48-Port 100/1000Base-X-SFP Integrated Line Processing Unit B(LPUI-51-B)	●	●	●	●	●	●
03054489	CR5DL2XEFG7B	2-Port 10GBase LAN/WAN-SFP+ + 24-Port 100/1000Base-X-SFP Integrated Line Processing Unit B(LPUI-51-B)	●	●	●	●	●	●

LPUI-51 Series Compatible Optical/Electrical Modules

LPUI-51 Series Compatible Optical/Electrical Modules

BOM Number	Order Name	Board Name	Optical type supported
03054485	CR5D0L5XFA7B	5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-51-B)	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
03054486	CR5D0L4XFA7	4-Port 10GBase LAN/WAN-SFP+ Integrated	1Gbps electrical module

BOM Number	Order Name	Board Name	Optical type supported
	B	Line Processing Unit B(LPUI-51-B)	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
03054488	CR5D0EMGFA7B	48-Port 100/1000Base-X-SFP Integrated Line Processing Unit B(LPUI-51-B)	155Mbps eSFP optical module 155Mbps eSFP BIDI optical module 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
03054489	CR5DL2XEFG7B	2-Port 10GBase LAN/WAN-SFP+ + 24-Port 100/1000Base-X-SFP Integrated Line Processing Unit B(LPUI-51-B)	155Mbps eSFP optical module 155Mbps eSFP BIDI optical module 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

2-Port 10GBase LAN/WAN-SFP+ + 24-Port 100/1000Base-X-SFP Integrated Line Processing Unit E(LPUI-51-E) Specifications

2-Port 10GBase LAN/WAN-SFP+ + 24-Port 100/1000Base-X-SFP Integrated Line Processing Unit E(LPUI-51-E) Specifications

Item	Description
Order Name	CR5DL2XEFG7J
Silkscreen	LPUI-51-E 2x10GBase LAN/WAN-SFP+ -24xGE-SFP-A
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	9.0 kg (19.85 lb)
Typical power consumption	241.5 W
Typical heat dissipation	783.5 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	SFP+,SFP
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-51-E) Specifications

5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-51-E) Specifications

Item	Description
Order Name	CR5D0L5XFA7J
Silkscreen	LPUI-51-E 5x10GBase LAN/WAN-SFP+ -A
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	8.1 kg (17.86 lb)
Typical power consumption	209.0 W
Typical heat dissipation	678.1 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.

5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-52-E,Enhanced HQos) Specifications

5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-52-E,Enhanced HQos) Specifications

Item	Description
Order Name	CR5D0L5XFA7F
Silkscreen	LPUI-52-E 5x10GBase LAN/WAN-SFP+-E
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	8.2 kg (18.08 lb)
Typical power consumption	215.2 W
Typical heat dissipation	698.2 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+
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

2-Port 10GBase LAN/WAN-SFP+ +24-Port 1000Base-X-SFP Integrated Line Processing Unit E(LPUI-52-E,Enhanced HQos) Specifications

2-Port 10GBase LAN/WAN-SFP+ +24-Port 1000Base-X-SFP Integrated Line Processing Unit E(LPUI-52-E,Enhanced HQos) Specifications

Item	Description
Order Name	CR5DL2XFFG7E
Silkscreen	LPUI-52-E 2x10GBase LAN/WAN-SFP+ -24xGE-SFP-E
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	9.2 kg (20.29 lb)
Typical power consumption	295.2 W
Typical heat dissipation	957.8 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/SFP+
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

48-Port 100/1000Base-X-SFP Integrated Line Processing Unit E(LPUI-51-E) Specifications

48-Port 100/1000Base-X-SFP Integrated Line Processing Unit E(LPUI-51-E) Specifications

Item	Description
Order Name	CR5D0EMGFA7J
Silkscreen	LPUI-51-E 48xFE/GE-SFP-A
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	9.1 kg (20.07 lb)
Typical power consumption	254.0 W
Typical heat dissipation	824.1 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
Working mode	Full-duplex
Frame format	Ethernet_II, Ethernet_SAP and Ethernet_SNAP
Reliability and availability	Hot swappable.

For More Information

For more information about the   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