

# NE40E Series Universal Service Routers



## Product Overview

Huawei® NetEngine40E Universal Service Router (NE40E) Series routers are high-end network products developed by Huawei. The NE40E Series routers are usually deployed at core nodes on enterprise wide area networks (WANs), access nodes on large-scale enterprise networks, interconnection and aggregation nodes on campus networks, and edge nodes on large-scale Internet Data Center (IDC) networks. The NE20E, NE40E, and NE5000E can work together to provide a complete hierarchical IP network solution.

The NE40E Series includes the NE40E-X3, NE40E-X8, NE40E-X16, NE40E-X3A, NE40E-X8A and NE40E-X16A, as shown in Figure 1.

**Figure 1** Huawei NE40E Series routers (Front)



**Figure 2** Huawei NE40E Series routers (Back)

The NE40E Series routers run on the Versatile Routing Platform (VRP<sup>®</sup>) operating system and use Huawei-developed NP chips and hardware-based forwarding and non-blocking switching technologies. Based on distributed hardware forwarding, non-blocking switching technologies, distributed Clos architecture, and industry-leading 2T bps platform, the NE40E Series routers have the following features:

- Support for 1T routing line cards in each slot, with excellent compatibility with currently used line cards to protect carriers' investments to the largest extent.
- Line speed forwarding capabilities, industry-leading reliability, excellent scalability, a well-designed quality of service (QoS) mechanism, and strong service processing capabilities.
- Powerful service access and aggregation capabilities and various features, such as Layer 2 virtual private network (L2VPN), L3VPN, multicast, multicast VPN (MVPN), and Multiprotocol Label Switching - Traffic Engineering (MPLS-TE).
- Various service features, such as IP Security (IPSec), Network Address Translation (NAT), and NetStream.
- Support for IPv6 and smooth transition from IPv4 to IPv6.

The NE40E can be flexibly deployed at the edge or core of IP or MPLS networks, simplifying network structure. With its ability to provide an extensive range of services and reliable service quality, the NE40E is driving IP and MPLS bearer networks to develop greater broadband capacity and to become more secure, more intelligent, and more service-oriented.

## Product Features

Table 1 lists the features of the Huawei NE40E Series Routers.

**Table 1.** Features of Huawei NE40E Series Routers

Features	Description
<b>Powerful Service Support</b>	
Comprehensive access and aggregation capabilities	The NE40E supports various interface types (E1, POS, CPOS, FE, GE, 10GE, 40GE, and 100GE) and high-density fixed ports to provide access and aggregation WAN services as well as Ethernet multi-service transmission platform (MSTP) aggregation services, satisfying various service requirements.
Powerful routing capabilities	The NE40E supports various routing protocols, such as Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Intermediate System-to-Intermediate System (IS-IS), Border Gateway Protocol version 4 (BGP4), and multicast routing protocols. The NE40E supports plaintext and ciphertext authentication as well as fast convergence. These features ensure network stability and security in complex routing environments.
Strong service bearer capabilities	The NE40E can have L2VPN, L3VPN, and MVPN deployed at the same time, as networks require. The NE40E supports various interface types (IMA E1, TDM, POS, Ethernet, etc.). The NE40E also supports TE, selective 802.1Q-in-802.1Q (QinQ), Dynamic Host Configuration Protocol (DHCP)/IP over Ethernet (IPoE), IPSec, NAT, GRE, BRAS broadband service access, and 1588v2, meeting the integrated service bearer requirement. In addition, the NE40E provides the NetStream function to meet conventional access requirements and new service requirements.
Powerful and expandable multicast capabilities	The NE40E supports IPv4/IPv6 multicast protocols, such as Protocol Independent Multicast - Sparse Mode (PIM-SM), PIM - Source Specific Multicast (PIM-SSM), Multicast Listener Discovery Version 1 (MLDv1), MLDv2, Internet Group Membership Protocol Version 3 (IGMPv3), and IGMP snooping. The NE40E has the flexibility to carry video services, such as Internet Protocol Television (IPTV), and satisfy multicast service requirements on networks of any scale.
Future-Oriented IPv6-Compatible Solutions	The NE40E supports a variety of IPv6 features, such as IPv6 leased line, dual stack, tunneling, etc. The NE40E supports Next Hop Separation to optimize the IPv6 convergence time and larger IPv6 FIB to improve the scalability. All of them help to provide comprehensive solutions based on the high performance for transition from IPv6 to IPv4. And owing to the variety of technologies and different situations of provider networks, each provider will certainly select a conservative, reposable, or aggressive transition technology that is the most suitable for its own network.
<b>High Availability</b>	
Equipment-level reliability	The NE40E provides redundancy backup for key components. These key components support hot swap and hot backup. The NE40E also uses technologies, such as Non-Stop Routing (NSR), Non-Stop Forwarding (NSF), and In-Service Software Upgrade (ISSU), to ensure uninterrupted service forwarding.
Network-level reliability	The NE40E uses the following technologies to provide network-level reliability: IP fast reroute (FRR), Label Distribution Protocol (LDP) FRR, TE FRR, VPN FRR, hot standby, fast convergence of Interior Gateway Protocols (IGP), BGP, and multicast routes, Rapid Ring Protection Protocol (RRPP), trunk load balancing and backup, hardware-based Bidirectional Forwarding Detection (BFD) of 3.3 ms, MPLS OAM, and Ethernet OAM. The NE40E provides an end-to-end protection switching speed of 200 ms with no service interruption.

Features	Description
Service-level reliability	The NE40E uses the following technologies to provide service-level reliability for L2VPNs and L3VPNs: VPN FRR, E-VRPP, VLL FRR, Ethernet OAM, PW redundancy, E-trunk and E-APS. These technologies ensure stable and reliable service operation with no service interruption.
<b>High Security</b>	
Device security	<p>The NE40E supports multiple security mechanisms to ensure that the packets sent for central processing (CP) conform to the configured specifications. The NE40E can filter the spoofing and malformed packets sent for CP through unicast reverse path forwarding (URPF) on an interface and TCP/IP attack defense, discard packets with invalid TTLs through Generalized TTL Security Mechanism (GTSM) detection of TTLs of packets sent for CP, classify packets sent for CP according to protocol granularities and restrict the bandwidth, protect management interfaces and service interfaces through management plane protection.</p> <p>The NE40E also supports Management Plane Access Control (MPAC) function to protect devices from attacks. MPAC enables devices to filter packets destined for the CPU based on rules specified in an MPAC policy and discard unnecessary packets, which helps prevent attacks to the CPU.</p>
Service security	<p>The NE40E supports IPSec tunnel to provide high quality, interoperable and cryptology-based security for IP protocol packets.</p> <p>The NE40E supports Unicast Reverse Path Forwarding (URPF) to defend a network against attacks that are based on source address spoofing.</p> <p>The NE40E supports Layer 2 loop detection, which is a security mechanism used to detect loops on a Layer 2 Ethernet network.</p> <p>The NE40E supports Keychain to provide authentication functionality to the applications such as Routing Protocol Application (RPA), Transmission Control Protocol (TCP), and signaling protocols (such as LDP). It also provides dynamic change of authentication keys to all required applications. Keychain supports Message Digest 5 (MD5), Secure Hash Algorithm-1 (SHA-1)-12, Hash Message Authentication Code for Message Digest 5 (HMAC-MD5), HMAC-SHA1-12, HMAC-SHA1-20, SHA2-256, and HMAC-HA2-256 as authentication algorithms.</p>
Flexible VS technologies	The NE40E supports flexible virtual system (VS) technologies. A physical router can be divided into multiple logical routers between which resources are separated. Services can be deployed on different VSs to form a multi-service network with service separation. The use of VSs enhances security and reliability.
<b>QoS</b>	
Well-designed QoS mechanism	<p>The NE40E provides high-quality QoS. With an advanced queue scheduling algorithm and congestion control algorithm, the NE40E can carry out accurate multi-level scheduling for data flows. This meets the quality requirements of different users and different levels of services.</p> <p>The well-designed traffic scheduling mechanism of the NE40E provides the following functions to ensure QoS:</p> <ul style="list-style-type: none"> <li>• Five-level HQoS scheduling for the access side to satisfy the service requirements of access users at different levels in a differentiated and diversified manner.</li> <li>• MPLS HQoS for the network side to provide QoS for MPLS VPN, VLL, and PWE3</li> </ul>

Features	Description
Flexible and Scalable, Investment Protection	
Industry-leading 2T platform	Based on the industry-leading 2T platform, each slot of the NE40E supports a maximum of 2 Tbit/s bandwidth to achieve large-capacity service bearer, meeting future bandwidth increase requirements. Based on the existing VRP operating system, the NE40E is compatible with line cards currently in use, protecting carriers' investments to the largest extent. With high port density and compact design, the NE40E significantly reduces the required installation space.
Commercial-ready SDN capabilities	<p>With the innovative SDN architecture, the NE40E helps resolve various problems on conventional networks, such as load imbalance, low bandwidth usage, and low network convergence efficiency caused by repeated network topology calculation in the case of a fault.</p> <p>The SDN-based AtomEngine developed by Huawei supports OAM technologies, such as RFC 2544, IP FPM, Two-Way Active Measurement Protocol (TWAMP), and Y.1731, implementing real-time service measurement and fast fault locating. The AtomEngine uses Huawei-developed chips. It is the smallest router in the industry. It supports plug-and-play and can be inserted into any network node of any vendor.</p> <p>Currently, Huawei has provided multiple SDN solutions, such as PCE+, IP+optical, etc.</p>
Flexible VS technologies	The NE40E supports flexible virtual system (VS) technologies. A physical router can be divided into multiple logical routers between which resources are separated. Services can be deployed on different VSs to form a multi-service network with service separation. The use of VSs enhances security and reliability.
Control- and forwarding-plane separation	The NE40E adopts a centralized routing engine and a distributed forwarding architecture, which helps to provide rich and flexible service and to perform large-capacity forwarding. In addition, the NE40E has a monitoring plane, which helps ensure stable addressing and forwarding performance. The data plane, control plane, and monitoring plane are separated and you can upgrade each plane separately.
Huawei-developed chips, service on demand	The NE40E uses in-built Huawei-developed NP chips that allow the NE40E to have a flexible programmable architecture. Microcode programming can be used for new service deployment, without the need to replace hardware, which saves investments. In addition, this architecture drastically shortens the technological innovation cycle and accelerates new service launch speed, helping customers build flexible and scalable networks.
OAM	
OAM	<p>The NE40E supports IP FPM developed by Huawei to measure IP network performance. IP FPM directly measures IP service packets and monitors service changes online for fast fault locating. IP FPM provides highly-accurate measurements. It can be flexibly deployed and has no impact on services.</p> <p>The NE40E supports RFC 2544, Two-Way Active Measurement Protocol (TWAMP), and Y.1731, implementing real-time service measurement and fast fault locating.</p>

Features	Description
Energy Saving Design	
Regulation Compliance	<p>The NE40E complies with the following energy conservation and emission reduction regulations:</p> <ul style="list-style-type: none"> <li>• Directive 2002/95/EC on the Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).</li> <li>• Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).</li> <li>• Directive 2002/96/EC on waste electrical and electronic equipment (WEEE).</li> <li>• ATIS-0600015.03.2009 Energy Efficiency for Telecommunications Equipment: Methodology for Measurement and Reporting for Router and Ethernet Switch Products.</li> <li>• Directive 2009/125/EC establishing a framework for the setting of ecodesign requirements for energy-related products (recast).</li> </ul>
Dynamic energy-saving design	<p>The NE40E uses Huawei-developed NP 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 NE40E also supports 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.</p>

## Product Specifications

Table 2 lists the specifications of Huawei NE40E Series Routers.

**Table 2.** Specifications of Huawei NE40E Series Routers

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Switching capacity	1.08 Tbit/s	7.08 Tbit/s	12.58 Tbit/s	4.19 Tbit/s	25.16 Tbit/s	81.92 Tbit/s
Forwarding performance	540 Mpps	2,880 Mpps	5,760 Mpps	900 Mpps *	9,600 Mpps	48,000 Mpps
Number of slots supported	5	11	22	5	12	22
Number of interface board slots supported	3	8	16	3	8	16
Redundant MPUs	1:1	1:1	1:1	1:1	1:1	1:1
Redundant Switch fabrics	N/A	2+1	3+1	N/A	3+1	3+1
MTBF	27.44 years	21.91 years	21.66 years	22.85 years	22.32 years	22.33 years

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
MTR	0.5 hours	0.5 hours	0.5 hours	0.5 hours	0.5 hours	0.5 hours
Availability	0.99999792	0.999997395	0.999997365	0.999997502	0.999997443	0.9999974444
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>DC: (4 U) 175 mm x 442 mm x 650 mm (6.89 in. x 17.40 in. x 25.59 in.)</li> <li>AC: (5 U) 220 mm x 442 mm x 650 mm (8.66 in. x 17.40 in. x 25.59 in.)</li> </ul>	<ul style="list-style-type: none"> <li>(14 U) 620 mm x 442 mm x 650 mm (24.41 in. x 17.40 in. x 25.59 in.)(Chassis main body)</li> <li>(14 U) 620 mm x 442 mm x 770 mm (24.41 in. x 17.40 in. x 30.31 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> </ul>	<ul style="list-style-type: none"> <li>(32 U) 1420 mm x 442 mm x 650 mm (55.91 in. x 17.40 in. x 25.59 in.)(Chassis main body)</li> <li>(32 U) 1420 mm x 442 mm x 770 mm (55.91 in. x 17.40 in. x 30.31 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> </ul>	<ul style="list-style-type: none"> <li>(6 U) 264 mm x 442 mm x 710 mm (10.39 in. x 17.40 in. x 27.95 in.)(Chassis main body)</li> <li>DC: (6 U) 264 mm x 442 mm x 758 mm (10.39 in. x 17.40 in. x 29.84 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> <li>AC: (6 U) 264 mm x 442 mm x 770 mm (10.39 in. x 17.40 in. x 30.31 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> </ul>	<ul style="list-style-type: none"> <li>(21 U) 930 mm x 442 mm x 650 mm (36.61 in. x 17.40 in. x 25.59 in.)(Chassis main body)</li> <li>(21 U) 930 mm x 442 mm x 750 mm (36.61 in. x 17.40 in. x 29.53 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> </ul>	<ul style="list-style-type: none"> <li>(40 U) 1778 mm x 442 mm x 650 mm (70.00 in. x 17.40 in. x 25.59 in.)(Chassis main body)</li> <li>(40 U) 1778 mm x 442 mm x 750 mm (70.00 in. x 17.40 in. x 29.53 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> <li>[2T bundle](40 U) 1778 mm x 442 mm x 946 mm (70.00 in. x 17.40 in. x 37.24 in.)(Dimensions of the chassis body together with cable trays and front and back attachments)</li> </ul>

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Weight (empty)	<ul style="list-style-type: none"> <li>DC: 12 kg (26.46 lb)</li> <li>AC: 20 kg (44.1 lb)</li> </ul>	25.8 kg (56.89 lb) (without filler panels)	69.6 kg (153.47 lb) (without filler panels)	26 kg (57.33 lb)	<ul style="list-style-type: none"> <li>DC: 68.1 kg (150.16 lb) (without filler panels)</li> <li>HVDC&amp;AC: 63.7 kg (140.46 lb) (without filler panels)</li> </ul>	<ul style="list-style-type: none"> <li>DC: 120.5 kg (265.7 lb) (without filler panels)</li> <li>HVDC&amp;AC: 111.7 kg (246.3 lb) (without filler panels)</li> </ul>
Weight (full configuration)	<ul style="list-style-type: none"> <li>DC: 42 kg (92.61 lb)</li> <li>AC: 52 kg (114.66 lb)</li> </ul>	136 kg (299.88 lb)	279 kg (615.2 lb)	<ul style="list-style-type: none"> <li>DC: 72.1 kg (158.98 lb)</li> <li>AC: 74.7 kg (164.71 lb)</li> </ul>	<ul style="list-style-type: none"> <li>[400G bundle] DC:186.1 kg (410.35 lb)</li> <li>[400G bundle] HVDC&amp;AC: 184.3 kg (406.38 lb)</li> <li>[1T bundle] DC:209 kg (460.85 lb)</li> <li>[1T bundle]HV DC&amp;AC:206.5 kg (455.33 lb)</li> </ul>	<ul style="list-style-type: none"> <li>[400G bundle] DC:356 kg (784.98 lb)</li> <li>[400G bundle] HVDC&amp;AC: 350.7 kg (773.29 lb)</li> <li>[1T bundle] DC:399.4 kg (880.68 lb)</li> <li>[1T bundle] HVDC&amp;AC: 395.1 kg (871.2 lb)</li> <li>[2T bundle] DC:461.3kg</li> <li>[2T bundle] HVDC&amp;AC: 453.3kg</li> </ul>



Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Cabinet installation standard	Can be installed in a standard 19" 800 mm-deep cabinet. A Huawei 2.2 m-high N68E cabinet is used by default.	Can be installed in a standard 19" 800 mm-deep cabinet. A Huawei 2.2 m-high N68E cabinet is used by default.	Can be installed in a standard 19" 800 mm-deep cabinet. A Huawei 2.2 m-high N68E cabinet is used by default.	Can be installed in a standard 19" 800 mm-deep cabinet. A Huawei 2.2 m-high N68E cabinet is used by default.	Can be installed in a standard 19" 800 mm-deep cabinet. A Huawei 2.2 m-high N68E cabinet is used by default.	<ul style="list-style-type: none"> <li>Can be installed in a standard 19" 800 mm-deep cabinet. A Huawei 2.2 m-high N68E cabinet is used by default.</li> <li>[2T bundle]Can be installed in a standard 19" 1000 mm-deep cabinet, part number is 02115109(CR5BoN610E60)</li> </ul>
Typical power consumption	<ul style="list-style-type: none"> <li>DC: 800 W (fully configured with LPUF-515)</li> <li>AC: 950 W (fully configured with LPUF-515)</li> <li>DC: 920 W (fully configured with LPUF-120s)</li> <li>AC: 1070 W (fully configured with LPUF-120s)</li> </ul>	3220 W (fully configured with LPUF-240s)	6210 W (fully configured with LPUF-240s)	1120 W (fully configured with LPUF-200s)	<ul style="list-style-type: none"> <li>4110 W (fully configured with LPUF-240s)</li> <li>4770 W (fully configured with LPUF-480s)</li> <li>6520 W (fully configured with LPUI-1Ts)</li> </ul>	<ul style="list-style-type: none"> <li>7720 W (fully configured with LPUF-240s)</li> <li>9040 W (fully configured with LPUF-480s)</li> <li>12390 W (fully configured with LPUI-1Ts)</li> <li>22250 W (fully configured with LPUI-2Ts)</li> </ul>

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Typical heat dissipation	<ul style="list-style-type: none"> <li>DC: 2595.5 BTU/hour (fully configured with LPUF-51s)</li> <li>AC: 3082.2 BTU/hour (fully configured with LPUF-51s)</li> <li>DC: 2984.9 BTU/hour (fully configured with LPUF-120s)</li> <li>AC: 3471.5 BTU/hour (fully configured with LPUF-120s)</li> </ul>	10447 BTU/hour (fully configured with LPUF-240s)	20147.9 BTU/hour (fully configured with LPUF-240s)	3633.8 BTU/hour (fully configured with LPUF-200s)	<ul style="list-style-type: none"> <li>13334.6 BTU/hour (fully configured with LPUF-240s)</li> <li>15475.9 BTU/hour (fully configured with LPUF-480s)</li> <li>21153.6 BTU/hour (fully configured with LPUI-1Ts)</li> </ul>	<ul style="list-style-type: none"> <li>25046.9 BTU/hour (fully configured with LPUF-240s)</li> <li>29329.6 BTU/hour (fully configured with LPUF-480s)</li> <li>40198.4 BTU/hour (fully configured with LPUI-1Ts)</li> <li>72188.3 BTU/hour (fully configured with LPUI-2Ts)</li> </ul>
DC input voltage	<ul style="list-style-type: none"> <li>input voltage range: -38.4 V to -72 V</li> <li>input rated voltage: -48 V/-60 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: -38.4 V to -72 V</li> <li>input rated voltage: -48 V/-60 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: -38.4 V to -72 V</li> <li>input rated voltage: -48 V/-60 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: -40 V to -72 V</li> <li>input rated voltage: -48 V/-60 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: -40 V to -72 V</li> <li>input rated voltage: -48 V/-60 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: -40 V to -72 V</li> <li>input rated voltage: -48 V/-60 V</li> </ul>
AC input voltage	<ul style="list-style-type: none"> <li>input voltage range: 180 V to 264 V</li> <li>input rated voltage: 200 V to 240 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: 180 V to 264 V</li> <li>input rated voltage: 200 V to 240 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: 180 V to 264 V</li> <li>input rated voltage: 200 V to 240 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: 180 V to 264 V</li> <li>input rated voltage: 200 V to 240 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: 180 V to 264 V</li> <li>input rated voltage: 200 V to 240 V</li> </ul>	<ul style="list-style-type: none"> <li>input voltage range: 180 V to 264 V</li> <li>input rated voltage: 200 V to 240 V</li> </ul>

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Redundant powers	1+1	2+2	4+4	1+1	<ul style="list-style-type: none"> <li>• [400G bundle] DC: 3+1</li> <li>• [400G bundle] HVDC&amp;AC: 3+3</li> <li>• [1T bundle] DC: 5+1</li> <li>• [1T bundle] HVDC&amp;AC: 4+4</li> </ul>	<ul style="list-style-type: none"> <li>• [400G bundle] DC: 6+1</li> <li>• [400G bundle] HVDC&amp;AC: 5+5</li> <li>• [1T bundle] DC: 9+1</li> <li>• [1T bundle] HVDC&amp;AC: 7+7</li> <li>• [2T bundle] DC: 12+1</li> <li>• [2T bundle] HVDC&amp;AC: 8+8</li> </ul>

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Redundant fans	Support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)	<ul style="list-style-type: none"> <li>• 2 assemblies</li> <li>• Support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)</li> </ul>	<ul style="list-style-type: none"> <li>• 2 partitions</li> <li>• 2 assemblies /partition, each partition in support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)</li> </ul>	Support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)	<ul style="list-style-type: none"> <li>• [400G bundle] 2 assemblies in support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)</li> <li>• [1T bundle] 3 assemblies in support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)</li> </ul>	<ul style="list-style-type: none"> <li>• [400G bundle] 2 partitions; 2 assemblies /partition; each partition in support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)</li> <li>• [1T/2T bundle] 2 partitions; 3 assemblies /partition; each partition in support for proper fan operation in case of a single fan failure for a short period at 40°C (104°F)</li> </ul>
Airflow	Left-to-back	Front-to-back	Front-to-back	Left-to-back	Front-to-back	Front-to-back

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A	
Operating temperature	<ul style="list-style-type: none"> <li>Long-term: 0°C to 45°C (32°F to 113°F)</li> <li>Short-term : -5°C to +55°C (23°F to 131°F)</li> <li>Remark: Restriction on the temperature variation rate: 30°C/hour (86°F/h)</li> </ul>	<ul style="list-style-type: none"> <li>Long-term: 0°C to 45°C (32°F to 113°F)</li> <li>Short-term : -5°C to +55°C (23°F to 131°F)</li> <li>Remark: Restriction on the temperature variation rate: 30°C/hour (86°F/h)</li> </ul>	<ul style="list-style-type: none"> <li>Long-term: 0°C to 45°C (32°F to 113°F)</li> <li>Short-term : -5°C to +55°C (23°F to 131°F)</li> <li>Remark: Restriction on the temperature variation rate: 30°C/hour (86°F/h)</li> </ul>	<ul style="list-style-type: none"> <li>Long-term: 0°C to 45°C (32°F to 113°F)</li> <li>Short-term : -5°C to +55°C (23°F to 131°F)</li> <li>Remark: Restriction on the temperature variation rate: 30°C/hour (86°F/h)</li> </ul>	<ul style="list-style-type: none"> <li>Long-term: 0°C to 45°C (32°F to 113°F)</li> <li>Short-term : -5°C to +55°C (23°F to 131°F)</li> <li>Remark: Restriction on the temperature variation rate: 30°C/hour (86°F/h)</li> </ul>	<ul style="list-style-type: none"> <li>Long-term: 0°C to 45°C (32°F to 113°F)</li> <li>Short-term : -5°C to +50°C (23°F to 122°F)</li> <li>Remark: Restriction on the temperature variation rate: 30°C/hour (86°F/h)</li> </ul>	
Storage temperature	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)	
Relative operating humidity	<ul style="list-style-type: none"> <li>Long term: 5% to 85% RH, non-condensing</li> <li>Short term: 5% to 95% RH, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Long term: 5% to 85% RH, non-condensing</li> <li>Short term: 5% to 95% RH, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Long term: 5% to 85% RH, non-condensing</li> <li>Short term: 5% to 95% RH, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Long term: 5% to 85% RH, non-condensing</li> <li>Short term: 5% to 95% RH, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Long term: 5% to 85% RH, non-condensing</li> <li>Short term: 5% to 95% RH, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Long term: 5% to 85% RH, non-condensing</li> <li>Short term: 5% to 95% RH, non-condensing</li> </ul>	
Relative storage humidity	5% to 95% RH, non-condensing	5% to 95% RH, non-condensing	5% to 95% RH, non-condensing	5% to 95% RH, non-condensing	5% to 95% RH, non-condensing	5% to 95% RH, non-condensing	
Long-term operating altitude	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])	<= 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 NEU100 must decrease by 1°C [33.8°F] for every 220 m [721.78 ft.])

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
Storage altitude	Less than 5000 m (16404 ft.)	Less than 5000 m (16404 ft.)	Less than 5000 m (16404 ft.)	Less than 5000 m (16404 ft.)	Less than 5000 m (16404 ft.)	Less than 5000 m (16404 ft.)
Regulatory compliance	<p><b>EMC</b></p> <ul style="list-style-type: none"> <li>• FCC Part15 Class A</li> <li>• ICES-003 Class A</li> <li>• AS/NZS CISRP22 Class A</li> <li>• VCCI Class A</li> <li>• BSMI ( CNS 13438 ) Class A</li> <li>• IEC/EN 61000-3-2</li> <li>• IEC/EN 61000-3-3</li> <li>• IEC/EN 61000-3-12</li> <li>• IEC/EN 61000-3-11</li> <li>• ETSI EN 300 386</li> <li>• ETSI EN 201 468</li> <li>• ETSI EN 300 253</li> <li>• CISPR22/EN55022 Class A</li> <li>• CISPR32/EN55032 Class A</li> <li>• CISPR24/EN55024</li> <li>• IEC/EN-61000-4-2、 GB17626.2</li> <li>• IEC/EN-61000-4-3、 GB17626.3</li> <li>• IEC/EN-61000-4-4、 GB17626.4</li> <li>• IEC/EN-61000-4-5、 GB17626.5</li> <li>• IEC/EN-61000-4-6、 GB17626.6</li> <li>• IEC/EN-61000-4-8、 GB17626.8</li> <li>• IEC/EN-61000-4-11、 GB17626.11</li> <li>• IEC/EN-61000-4-29</li> <li>• IEC/EN 61000-6-1</li> <li>• IEC/EN 61000-6-2</li> <li>• IEC/EN 61000-6-4</li> <li>• ITU K.27</li> <li>• ITU K.44</li> <li>• EN 301 605</li> </ul> <p><b>Environment</b></p> <ul style="list-style-type: none"> <li>• IEC 60068-2-1</li> <li>• IEC 60068-2-2</li> <li>• IEC 60068-2-6</li> <li>• IEC 60068-2-14</li> </ul>					

Item	NE40E-X3	NE40E-X8	NE40-X16	NE40E-X3A	NE40E-X8A	NE40-X16A
	<ul style="list-style-type: none"> <li>• IEC 60068-2-27</li> <li>• IEC 60068-2-30</li> <li>• IEC 60068-2-31</li> <li>• IEC 60068-2-64</li> <li>• IEC 60068-2-78</li> <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 300 753</li> <li>• ISTA 2B</li> <li>• IEC 60721-1</li> <li>• IEC 60721-2</li> <li>• IEC 60529</li> <li>• IEC 721</li> <li>• IEC 68</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• IEC/EN/AS/NZS 60950-1</li> <li>• UL/CSA 60950-1</li> <li>• IEC/EN 60825</li> <li>• AS/NZS 60950</li> <li>• FDA rules, 21 CFR 1040.10 and 1040.11</li> <li>• IEC/EN 60825-1</li> <li>• IEC/EN 60825-2</li> </ul> <p><b>Environmental protection</b></p> <ul style="list-style-type: none"> <li>• 2011/65/EU(RoHS)</li> <li>• Regulation(EC)No.1907/2006(REACH)</li> <li>• 2012/19/EU(WEEE)</li> </ul> <p><b>Operator</b></p> <ul style="list-style-type: none"> <li>• VZ.TPR.g205: Verizon TEEER</li> <li>• ATIS-0600015.03.2013</li> </ul>					

 **NOTE**

1. In the physical dimensions shown in the table, the width (W) does not include the rack-mounting ears.
2. Temperature and humidity are measured at 1.5 m (4.92 ft.) above the floor 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.

3. "Short-term" refers to continuous working time that does not exceed 96 hours and accumulated working time per year that does not exceed 15 days. If the working time exceeds either of these values, it is considered "nominal" or "long-term".
4. The bundle values in "Weight (full configuration)" include the weight of the interface boards in full configuration.

## Ordering Information

To place an order, visit the [UniSTAR SCT](#) Workspace.

### Basic Hardware Configurations

**Table 3.** NE40E-X16A Basic Configuration Bundle

BOM Number	Order Name	Description	Remarks
02350AQQ	CR5P16BASD76	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(480G),7 DC Power,4 Fan Tray, without Software Charge and Document)	Basic configuration for 480G with DC
02350AQR	CR5P16BASA76	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(480G), 10 AC Power,4 Fan Tray, without Software Charge and Document)	Basic configuration for 480G with AC
02351ECJ	CR5P16BASD7B	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(480G),10 HVDC Power,4 Fan Tray, without Software Charge and Document)	
02351PGK	CR5P16BASD7F	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(480G),7 DC Power,4 Fan Tray, without Software Charge and Document)	
02351PGM	CR5P16BASA7F	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(480G), 10 AC Power,4 Fan Tray, without Software Charge and Document)	
02351PGN	CR5P16BASH71	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(480G),10 HVDC Power,4 Fan Tray, without Software Charge and Document)	
02350AUC	CR5P16BASD77	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(1T), 10 DC Power,6 Fan Tray,without Software Charge and Document)	Basic configuration for 1T with DC
02350AUD	CR5P16BASA77	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(1T), 14 AC Power,6 Fan Tray, without Software Charge and Document)	Basic configuration for 1T with AC



BOM Number	Order Name	Description	Remarks
02351ECK	CR5P16BASD7C	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(1T), 14 HVDC Power, 6 Fan Tray, without Software Charge and Document)	
02351PGU	CR5P16BASD7G	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(2T), 13 DC Power, 6 Fan Tray, without Software Charge and Document)	
02351PGV	CR5P16BASA7G	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(2T), 16 AC Power, 6 Fan Tray, without Software Charge and Document)	
02351PGW	CR5P16BASH72	NE40E-X16A Basic Configuration (Including NE40E-X16A Chassis, 2 MPUs, 4 SFUs(2T), 16 HVDC Power, 6 Fan Tray, without Software Charge and Document)	
02351TRN	CR5P16UPGG70	NE40E-X16A 2T Upgrade Configuration (Including 2 MPUs, 4 SFUs(2T), 7 DC Power, 6 Fan Tray, 2 PMU, 1 Noise Reduction Module)	
02351TRP	CR5P16UPGG71	NE40E-X16A 2T Upgrade Configuration (Including 2 MPUs, 4 SFUs(2T), 6 AC Power, 6 Fan Tray, 2 PMU, 1 Noise Reduction Module)	
02351TRQ	CR5P16UPGG72	NE40E-X16A 2T Upgrade Configuration (Including 2 MPUs, 4 SFUs(2T), 6 HVDC Power, 6 Fan Tray, 2 PMU, 1 Noise Reduction Module)	
02351TRU	CR5P16UPGT70	NE40E-X16A 2T Upgrade Configuration (Including 2 MPUs, 4 SFUs(2T), 4 DC Power, 6 Fan Tray, 2 PMU, 1 Noise Reduction Module)	
02351TRW	CR5P16UPGT71	NE40E-X16A 2T Upgrade Configuration (Including 2 MPUs, 4 SFUs(2T), 2 AC Power, 6 Fan Tray, 2 PMU, 1 Noise Reduction Module)	
02351TRX	CR5P16UPGT72	NE40E-X16A 2T Upgrade Configuration (Including 2 MPUs, 4 SFUs(2T), 2 HVDC Power, 6 Fan Tray, 2 PMU, 1 Noise Reduction Module)	
02359914	CR5B0BKP1673	NE40E-X16A Integrated DC Chassis Components(Including 4 Fan Tray)	Includes: chassis and fan box. Not includes: DC power.
02359915	CR5B0BKP1674	NE40E-X16A Integrated AC Chassis Components(Including 4 Fan Tray)	Includes: chassis and fan box. Not includes: AC power.
02351CBD	CR5B0BKP1675	NE40E-X16A Integrated HVDC Chassis Components(Including 4 Fan Tray)	
02351PJP	CR5B0BKP1676	NE40E-X16A Integrated DC Chassis Components(2T,Including 6 Fan Tray)	

BOM Number	Order Name	Description	Remarks
02351PJQ	CR5BoBKP1677	NE40E-X16A Integrated AC Chassis Components(2T,Including 6 Fan Tray)	
02351PJR	CR5BoBKP1678	NE40E-X16A Integrated HVDC Chassis Components(2T,Including 6 Fan Tray)	
03057366	CR5DMPUX8670	Main Processing Unit B6	
03057244	CR5DoMPUB571	Main Processing Unit B5(16G Memory)	Recommended quantity: two for each chassis.
03055780	CR5DSFUIM07B	480Gbps Switch Fabric Unit B(SFUI-480-B)	To be configured as needed. To be purchased only when it is used as a spare part.
03057824	CR5DSFUIM17B	480Gbps Switch Fabric Unit B(SFUI-480-B)	
03056091	CR5DSFUIU07B	1Tbps Switch Fabric Unit B(SFUI-1T-B)	To be configured as needed. To be purchased only when it is used as a spare part.
03057825	CR5DSFUIT27B	2Tbps Switch Fabric Unit B(SFUI-2T-B)	

**Table 4.** NE40E-X8A Basic Configuration Bundle

BOM Number	Order Name	Description	Remarks
02350AUE	CR5Po8BASD76	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(480G),4 DC Power,2 Fan Tray, without Software Charge and Document)	Basic configuration for 480G with DC
02350AUF	CR5Po8BASA76	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(480G),6 AC Power,2 Fan Tray,without Software Charge and Document)	Basic configuration for 480G with AC
02351ECN	CR5Po8BASD7A	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(480G),6 HVDC Power,2 Fan Tray, without Software Charge and Document)	
02351PGX	CR5Po8BASD7D	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(480G),4 DC Power,2 Fan Tray, without Software Charge and Document)	
02351PHA	CR5Po8BASA7D	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(480G),6 AC Power,2 Fan Tray,without Software Charge and Document)	

BOM Number	Order Name	Description	Remarks
02351PHB	CR5Po8BASH71	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(480G),6 HVDC Power,2 Fan Tray, without Software Charge and Document)	
02350AUG	CR5Po8BASD77	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(1T),6 DC Power,3 Fan Tray,without Software Charge and Document)	Basic configuration for 1T with DC
02350AUH	CR5Po8BASA77	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(1T),8 AC Power,3 Fan Tray,without Software Charge and Document)	Basic configuration for 1T with AC
02351ECP	CR5Po8BASD7B	NE40E-X8A Basic Configuration (Including NE40E-X8A Chassis,2 SRUs,2 SFUs(1T),8 HVDC Power,3 Fan Tray,without Software Charge and Document)	
02350AFW	CR5BoBKP0871	NE40E-X8A Integrated Chassis DC Components(Including 2 Fan Tray)	Includes: chassis and fan box.Not includes: DC power.
02351CCF	CR5BoBKP0873	NE40E-X8A Integrated Chassis HVDC Components(Including 2 Fan Tray)	
02350AFX	CR5BoBKP0872	NE40E-X8A Integrated Chassis AC Components(Including 2 Fan Tray)	Includes: chassis and fan box.Not includes: AC power.
03057257	CR5DoSRUA871	Switch and Route Processing Unit A8(16G Memory)	480G main control board, which cannot be used with any 1T main control board or SFU. Recommended quantity: two for each chassis.
03056095	CR5DSFUIM07C	480Gbps Switch Fabric Unit C(SFUI-480-C)	To be configured as needed.
03057822	CR5DoSRUA872	Switch and Route Processing Unit A8(16G Memory)	
03057823	CR5DSFUIM17C	480Gbps Switch Fabric Unit C(SFUI-480-C)	
03057261	CR5DoSRUA971	Switch and Route Processing Unit A9(16G Memory)	1T main control board, which cannot be used with any 480G main control board or SFU. Recommended quantity: two for each chassis.
03056094	CR5DSFUIU07C	1Tbps Switch Fabric Unit C(SFUI-1T-C)	To be purchased only when it is used as a spare part.

**Table 5.** NE40E-X3A Basic Configuration Bundle

BOM Number	Order Name	Description	Remarks
02350FWN	CR5P03BASD75	NE40E-X3A Basic Configuration (Including NE40E-X3A Chassis, 2 MPUs, 2 DC Power, without Software Charge and Document)	-
02350FWP	CR5P03BASA75	NE40E-X3A Basic Configuration (Including NE40E-X3A Chassis, 2 MPUs, 2 AC Power, without Software Charge and Document)	-
03057248	CR5DoMPUD471	Main Processing Unit D4(16G Memory)	-
02350FMK	CR5BoBKP0373	NE40E-X3A Integrated DC Chassis Components (Including Dual DC Power)	Include: chassis, fan box and dual DC power.
02350FML	CR5BoBKP0374	NE40E-X3A Integrated AC Chassis Components (Including Dual AC Power)	Include: chassis, fan box and dual AC power.

**Table 6.** NE40E-X16 Basic Configuration Bundle

BOM Number	Order Name	Description	Remarks
02359180	CR5P16BASD74	NE40E-X16 Basic Configuration (Including NE40E-X16 Chassis, 2 MPUs, 4 SFUs(200G), 8 DC Power, without Software Charge and Document)	-
02359181	CR5P16BASA74	NE40E-X16 Basic Configuration (Including NE40E-X16 Chassis, 2 MPUs, 4 SFUs(200G), 8 AC Power, without Software Charge and Document)	-
02351931	CR5BoBKP1670	NE40E-X16 Integrated Chassis Components (Including 8 DC Power)	Includes: chassis and fan box. Not includes: DC power.
03057244	CR5DoMPUB571	Main Processing Unit B5(16G Memory)	Recommended quantity: two for each chassis.
03053547	CR5DSFUIE07B	200Gbps Switch Fabric Unit B(SFUI-200-B)	-
02359471	CR5P16BASA7L	NE40E-X16 Basic Configuration (Including NE40E-X16 Chassis, 2 MPUs, 4 SFUs(200G), 8 AC Power(Power Cords Cable), without Software Charge and Document)	-
02351AFK	CR5P16BASA7H	NE40E-X16 Basic Configuration (Including NE40E-X16 Chassis, 2 MPUs, 4 SFUs(200G), 8 AC Power(Power Cords Cable), without Software Charge and Document)	16G Memory

**Table 7.** NE40E-X8 Basic Configuration Bundle

BOM Number	Order Name	Description	Remarks
02350REH	CR5P08BASD79	NE40E-X8 Basic Configuration (Including NE40E-X8 Chassis, 2+1 Redundant 200G SRU/SFU, 4 DC Power, without Software Charge and Document)	-
02350REJ	CR5P08BASA75	NE40E-X8 Basic Configuration (Including NE40E-X8 Chassis, 2+1 Redundant 200G SRU/SFU, 4 AC Power, without Software Charge and Document)	-
02351930	CR5B0BKP0870	NE40E-X8 Integrated Chassis Components (Including 4 DC Power)	-
03057054	CR5DoSRUB570	Switch and Route Processing Unit B5	-
03053548	CR5DSFUIE07C	200Gbps Switch Fabric Unit C(SFUI-200-C)	-
02351AFJ	CR5P08BASA7H	NE40E-X8 Basic Configuration (Including NE40E-X8 Chassis, 2+1 Redundant 200G SRU/SFU, 4 AC Power(Power Cords Cable), without Software Charge and Document)	16G Memory

**Table 8.** NE40E-X3 Basic Configuration Bundle

BOM Number	Order Name	Description	Remarks
02351596	CR52-BKPE-4U-DC	Integrated DC Chassis Components(NE40E-X3)-4U,Including Dual DC Power	Include: chassis, fan box and dual DC powers.
02355250	CR5B0BKP0370	NE40E-X3 Integrated AC Chassis Components, (Including Dual AC Power)	Include: chassis, fan box and dual AC powers.
03055705	CR5DoMPUD270	Main Processing Unit D3(Including 4G Memory and 2G USB)	Recommended quantity: two for each chassis.
02358577	CR5P03BASD73	NE40E-X3 Basic Configuration (Include NE40E-X3 Chassis, 2 MPUs, 2 DC Power, without Software Charge and Document)	Basic configuration for DC.
02358578	CR5P03BASA73	NE40E-X3 Basic Configuration (Include NE40E-X3 Chassis, 2 MPUs, 2 AC Power(2200W), without Software Charge and Document)	Basic configuration for AC.

**Table 9.** NE40E-X16A/X8A/X16/X8 Powers

BOM Number	Order Name	Description	Remarks
02120560	CR5M000PEM60	48V DC Power Entry Module	Required quantity: 4 for each X8 chassis; 8 for each X16 chassis

BOM Number	Order Name	Description	Remarks
02400376	CR5BoPWRBX60	Power Distribution Cabinet,220V,50/60HZ,72000mA,EPS200-4850A	AC-to-DC power distribution cabinet. Required quantity: 1 for each X8 chassis; 2 for each X16 chassis.
02310FJD	R4850G	Rectifier Module, R4850, 2U, 3000W, High Efficiency	Required quantity: 4 for each X8 chassis; 8 for each X16 chassis
02311CNP	PDC-2200WB	PSU-PDC-2200WB-PM2200W DC Power Supply	Applies to: X16A/X8A
02310VMA	PHD-3000WA	3000W AC&HVDC Power Module	Applies to: X16A/X8A. To be configured as needed for X16A/X8A.

**Table 10.** NE40E-X3A/X3 Powers

BOM Number	Order Name	Description	Remarks
02120529	CR52-PEMA	48V DC Power Entry Module	Applies to: X3. Recommended quantity: two for each chassis.
02310MKG	CR5MPWRBX070	Box Module,AC power,548.9mm*217.6mm*41.2mm,sheet metal	Applies to: X3. To be used with the rectifier order named CR5MPWRAC070.
02310FFA	CR5MPWRAC070	Function Module,1U 2200W Rectifier,Power Only	Applies to: X3. It is used with the CR5MPWRBX070 AC power box.
02121615	CR5BoPWRDC71	48V DC Power Entry Module	Applies to: X3A.
02131177	CR5BoPWRAC71	3000W AC&HVDC Power Module	Applies to: X3A.

**Table 11.** CF/SDRAM/Other Components

BOM Number	Order Name	Description	Remarks
02310MDH	CF-2G	2G CF Module	Applies to: X8/X16. To be purchased only when it is used as a spare part.
02316431	MEM-2G-240pin	2GB 240pin Memory Module	Applies to: X8/X16.
02310WTG	E008DDR10	8GB 240pin Memory Module	Applies to: X8/X8A/X16A. To be purchased only when it is used as a spare part.
02317806	CR5M000CMU60	Centralized Monitor Unit	Applies to: X8/X16.

BOM Number	Order Name	Description	Remarks
33010293	ESSSensor	Sensor-Smoke Sensor-12VDC-2 wire current mode output	Applies to: X8/X16.
33010286	ETHSensor	Temperature&Humidity Sensor,15V~24VDC,(+/-)0.8degC)/(+/-)5%RH(15~50) Celsius degree	Applies to: X8/X16.
02120562	CR5M000FBX60	Fan Box	Applies to: X8/X16. To be purchased only when it is used as a spare part.
02120866	E000FBX08	Fan Box	Applies to: X8A/X16A. To be purchased only when it is used as a spare part.
02122112	CR5M000FBX72	Fan tray assembly 2.0	Applies to: X16A.
02121143	CR5M000FBX71	Fan Box	Applies to: X3A.
02120514	CR5M000FBX61	Fan Box	Applies to: X3.
21243016	CR5B16NISE70	X16A total reflection noise reduction module	Applies to: X16A.

## Service Interface Boards

**Table 12.** NE40E Series 50G Flexible Card Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054447	CR5DLPUF5070	Flexible Card Line Processing Unit(LPUF-50,four sub-slots)	●	●	●	●	●	●	Does not support E3, T3, and ATM.
03057436	CR5DLPUF5071	Flexible Card Line Processing Unit(LPUF-50,four sub-slots,4G Memory)	●	●	●	●	●	●	
03030KNE	CR5MoE8GFA30	8-Port 100/1000Base-X-SFP Flexible Card A(P10-A,Supporting 1588v2)	●	●	●	●	●	●	
03030NSK	CR5DoL2XFA70	2-Port 10GBase WAN/LAN-SFP+ Flexible Card A	●	●	●	●	●	●	Only supports slot 0 and slot 1
03030JUA	CR53-P10-8xPOS/STM1-SFP	8-Port OC-3c/STM-1c POS-SFP Flexible Card	●	●	●	●	●	●	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03030JTY	CR53-P10-4xPOS/STM1-SFP	4-Port OC-3c/STM-1c POS-SFP Flexible Card	•	•	•	•	•	•	
03031JYH	CR5DooP2CF70	2-Port OC-3c/STM-1c POS-SFP Flexible Card	•	•	•	•	•	•	
03030KHP	CR53-P10-24xE1/cT1-DB100	24-Port Channelized E1/T1-DB100 Flexible Card	•	•	•	•	•	•	V800R008 does not support T1.
03030KBB	CR53-P10-2xPOS/STM1-SFP	2-Port Channelized OC-3c/STM-1c POS-SFP Flexible Card	•	•	•	•	•	•	
03031JYK	CR5DooC2CF70	2-Port Channelized STM-1c POS-SFP Flexible Card(P50)	•	•	•	•	•	•	
03030PVG	CR5DooC4CF70	4-Port Channelized STM-1c POS-SFP Flexible Card(P50)	•	•	•	•	•	•	
03030PTB	CR5DooC8CF71	8-Port Channelized STM-1c POS-SFP Flexible Card(P50)	•	•	•	•	•	•	
03030JUB	CR53-P10-8xPOS/STM4-SFP	8-Port OC-12c/STM-4c POS-SFP Flexible Card	•	•	•	•	•	•	
03030HNJ	CR53-P10-2xPOS/STM16-SFP	2-Port OC-48c/STM-16c POS-SFP Flexible Card	•	•	•	•	•	•	
03030JCX	CR53-P10-4xPOS/STM16-SFP	4-Port OC-48c/STM-16c POS-SFP Flexible Card	•	•	•	•	•	•	
03030FSL	CR53-P10-1xPOS/STM64-XFP	1-Port OC-192c/STM-64c POS-XFP Flexible Card(Occupy two slots)	•	•	•	•	•	•	
03054483	CR5DLPUF517B	Flexible Card Line Processing Unit(LPUF-51,2 sub-slots) B	•	•	•	•	•	•	
03055189	CR5DLPUF517E	Flexible Card Line Processing Unit(LPUF-51,2 sub-slots) E	•	•	•	•	•	•	
03030PMC	CR5DoL5XFA70	5-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P51-A, Occupy two sub-slots)	•	•	•	•	•	•	



BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03031XPT	CR5DoL5XFE74	5-Port 10GBase LAN/WAN-SFP+ Flexible Card E(P52-E, Occupy two sub-slots)	•	•	•	•	•	•	
03031XQD	CR5DoL2XFE75	2-Port 10GBase LAN/WAN-SFP+ Flexible Card E(P52-E)	•	•	•	•	•	•	
03030PME	CR5DoL2XFA71	2-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P51-A)	•	•	•	•	•	•	
03030QKN	CR5DoEEGEA70	20-Port 10/100/1000Base-RJ45 Flexible Card A(P51-A)	•	•	•	•	•	•	
03031LUU	CR5DooP2XX72	2-Port OC-192c/STM-64c POS-XFP Flexible Card(P51-A)	•	•	•	•	•	•	It can be used only with the LPUF-51-E.
03030PMA	CR5DoEFGFA70	24-Port 100/1000Base-X-SFP Flexible Card A(P51-A)	•	•	•	•	•	•	
03031XQJ	CR5DoEFGFE71	24-Port 1000Base-X-SFP Flexible Card E(P52-E)	-	•	•	•	•	•	

**Table 13.** NE40E Series 50G Integrated Line Processing Units ("•" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054485	CR5DoL5XFA7B	5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-51-B)	•	•	•	•	•	•	
03054486	CR5DoL4XFA7B	4-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-51-B)	•	•	•	•	•	•	
03054488	CR5DoEMGFA7B	48-Port 100/1000Base-X-SFP Integrated Line Processing Unit B(LPUI-51-B)	•	•	•	•	•	•	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054489	CR5DL2XEFG7B	2-Port 10GBase LAN/WAN-SFP+ + 24-Port 100/1000Base-X-SFP Integrated Line Processing Unit B(LPUI-51-B)	•	•	•	•	•	•	
03055052	CR5DL2XEFG7J	2-Port 10GBase LAN/WAN-SFP+ + 24-Port 100/1000Base-X-SFP Integrated Line Processing Unit E(LPUI-51-E)	•	•	•	•	•	•	
03055051	CR5DoL5XFA7J	5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-51-E)	•	•	•	•	•	•	
03057085	CR5DoL5XFA7F	5-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-52-E,Enhanced HQos)	•	•	•	•	•	•	
03057086	CR5DL2XFFG7E	2-Port 10GBase LAN/WAN-SFP+ +24-Port 1000Base-X-SFP Integrated Line Processing Unit E(LPUI-52-E,Enhanced HQos)	-	•	•	•	•	•	
03055053	CR5DoEMGFA7J	48-Port 100/1000Base-X-SFP Integrated Line Processing Unit E(LPUI-51-E)	•	•	•	•	•	•	

**Table 14.** NE40E Series 120G Flexible Card Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054679	CR5DLPUFB070	Flexible Card Line Processing Unit(LPUF-120)	●	●	●	●	●	●	The total bandwidth of flexible cards installed cannot exceed 120 Gbps. Otherwise, the flexible card installed later fails to register.
03054680	CR5DLPUFB07 B	Flexible Card Line Processing Unit(LPUF-120) B	●	●	●	●	●	●	
03030QDE	CR5DoL6XFA70	6-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P120-A)	●	●	●	●	●	●	
03030PYU	CR5DooE1NC75	1-Port 100GBase-CFP Flexible Card A(P120-A)	●	●	●	●	●	●	Only one can be installed in each LPUF-120 Series line processing unit.
03032GKY	CR5DooE1NC77	1-Port 100GBase-CFP2 Flexible Card A(P120-A)	●	●	●	●	●	●	
03032HGF	CR5DooE1ND70	1-Port 100GBase-QSFP28 Flexible Card A(P120-A)	●	●	●	●	●	●	
03030NVF	CR5DooLBXF72	12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P120-A)	●	●	●	●	●	●	Only one can be installed in each LPUF-120 Series line processing unit.
03030PMN	CR5DoEFGFA71	24-Port 100/1000Base-X-SFP Flexible Card A(P101-A)	●	●	●	●	●	●	
03030PMK	CR5DoL5XFA72	5-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P101-A)	●	●	●	●	●	●	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03031XPV	CR5DoL5XFE76	5-Port 10GBase LAN/WAN-SFP+ Flexible Card E(P120-E)	•	•	•	•	•	•	
03030PMQ	CR5DooE1MC70	1-Port 40GBase LAN-CFP Flexible Card A(P101-A)	•	•	•	•	•	•	
03030RXS	CR5DooP8UF70	8-Port OC-48c/STM-16c POS-SFP Flexible Card(P120)	•	•	•	•	•	•	Can used as 8 x 622Mbps.
03031LUU	CR5DooP2XX72	2-Port OC-192c/STM-64c POS-XFP Flexible Card(P51-A)	•	•	•	•	•	•	
03030QKN	CR5DoEEGEA70	20-Port 10/100/1000Base-RJ45 Flexible Card A(P51-A)	•	•	•	•	•	•	
03032MVX	CR5DE2VE1N70	2-Port 50GBase/1-Port 100GBase-QSFP28 FlexE Flexible Card (P120)	•	•	•	•	•	•	
03031XQJ	CR5DoEFGFE71	24-Port 1000Base-X-SFP Flexible Card E(P52-E)	-	•	•	•	•	•	
03032KGQ	CR5DoL6XFE70	6-Port 10GBase LAN/WAN-SFP+ Flexible Card E(P120-E)	•	•	•	•	•	•	

**Table 15.** NE40E Series 120G Integrated Line Processing Units ("•" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054681	CR5DoLBXFA70	12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit(LPUI-120)	•	•	•	•	•	•	
03054682	CR5DoE2MCA70	2-Port 40GBase LAN-CFP Integrated Line Processing Unit(LPUI-120)	•	•	•	•	•	•	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054683	CR5DooE1NC76	1-Port 100GBase-CFP Integrated Line Processing Unit (LPUI-120)	•	•	•	•	•	•	
03057445	CR5DooE1NC78	1-Port 100GBase-CFP2 Integrated Line Processing Unit (LPUI-120)	•	•	•	•	•	•	
03057482	CR5DooE1ND71	1-Port 100GBase-QSFP28 Integrated Line Processing Unit (LPUI-120)	•	•	•	•	•	•	
03054684	CR5DoLBXFA7B	12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-120-B)	•	•	•	•	•	•	
03054685	CR5DoE2MCA7B	2-Port 40GBase LAN-CFP Integrated Line Processing Unit B(LPUI-120-B)	•	•	•	•	•	•	
03054686	CR5DooE1NC7B	1-Port 100GBase-CFP Integrated Line Processing Unit B(LPUI-120-B)	•	•	•	•	•	•	
03057446	CR5DooE1NC7C	1-Port 100GBase-CFP2 Integrated Line Processing Unit B(LPUI-120-B)	•	•	•	•	•	•	
03057483	CR5DooE1ND72	1-Port 100GBase-QSFP28 Integrated Line Processing Unit B(LPUI-120-B)	•	•	•	•	•	•	
03057087	CR5DLAXFAJ7F	10-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit E(LPUI-120-E)	•	•	•	•	•	•	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03058052	CR5DL6XE8G70	6-Port 10GBase LAN/WAN-SFP+ + 8-Port 100/1000Base-X-SFP Integrated Line Processing Unit (LPUI-120)	●	●	●	●	●	●	

**Table 16.** NE40E Series 200G Flexible Card Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
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)	-	●	●	●	●	●	
03032GLA	CR5D00E1NC7A	1-Port 100GBase-CFP2 Flexible Card A(P240-A)	-	●	●	●	●	●	
03032HGG	CR5D00E1ND73	1-Port 100GBase-QSFP28 Flexible Card A(P240-A)	-	●	●	●	●	●	
03030TUL	CR5D00LAXF70	10-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	-	-	-	●	●	●	
03030QDD	CR5D00LBXF71	12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	-	●	●	●	●	●	

**Table 17.** NE40E Series 200G Integrated Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03056862	CR5DooE2NC76	2-Port 100GBase-CFP Integrated Line Processing Unit(LPUI-200)	-	-	-	●	●	●	
03056863	CR5DooLEXF76	20-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit(LPUI-200)	-	-	-	●	●	●	
03056864	CR5DE1NLAX76	1-Port 100GBase-CFP + 10-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit(LPUI-200)	-	-	-	●	●	●	

**Table 18.** NE40E Series 240G Flexible Card Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054690	CR5DLPUFF070	Flexible Card Line Processing Unit(LPUF-240)	-	●	●	-	●	●	
03054698	CR5DLPUFF07B	Flexible Card Line Processing Unit(LPUF-240-B)	-	●	●	-	●	●	
03055720	CR5DLPUFF07E	Flexible Card Line Processing Unit(LPUF-240-E)	-	●	●	-	●	●	
03030QDF	CR5DooE1NC74	1-Port 100GBase-CFP Flexible Card A(P240-A)	-	●	●	●	●	●	
03032GLA	CR5DooE1NC7A	1-Port 100GBase-CFP2 Flexible Card A(P240-A)	-	●	●	●	●	●	
03032HGG	CR5DooE1ND73	1-Port 100GBase-QSFP28 Flexible Card A(P240-A)	-	●	●	●	●	●	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03030QDD	CR5DooLBXF71	12-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P240-A)	-	●	●	●	●	●	
03030TUQ	CR5DoLAXFE70	10-Port 10GBase LAN/WAN-SFP+ Flexible Card E(P240-E)	-	●	●	-	●	●	
03030WGT	CR5DoE3MFA70	3-Port 40GBase-QSFP+ Flexible Card(P240-A)	-	●	●	-	●	●	
03030PMN	CR5DoEFGFA71	24-Port 100/1000Base-X-SFP Flexible Card A(P101-A)	●	●	●	●	●	●	
03032MVX	CR5DE2VE1N70	2-Port 50GBase/1-Port 100GBase-QSFP28 FlexE Flexible Card (P120)	●	●	●	●	●	●	
03031XQJ	CR5DoEFGFE71	24-Port 1000Base-X-SFP Flexible Card E(P52-E)	-	●	●	●	●	●	

**Table 19.** NE40E Series 240G Integrated Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054691	CR5DooE2NC70	2-Port 100GBase-CFP Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03057447	CR5DooE2NC71	2-Port 100GBase-CFP2 Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03057484	CR5DooE2ND70	2-Port 100GBase-QSFP28 Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03054692	CR5DooLFXF70	24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	



BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054693	CR5DE2NLBX70	1-Port 100GBase-CFP + 12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03057448	CR5DE1NLBX70	1-Port 100GBase-CFP2 + 12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03057485	CR5DE1NLBX72	1-Port 100GBase-QSFP28 + 12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03056105	CR5DoE6MFA70	6-Port 40GBase-QSFP+ Integrated Line Processing Unit (LPUI-240)	-	●	●	-	●	●	
03054694	CR5DooE2NC73	2-Port 100GBase LAN-CFP Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	
03057449	CR5DooE2NC74	2-Port 100GBase-CFP2 Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	
03057486	CR5DooE2ND71	2-Port 100GBase-QSFP28 Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	
03054695	CR5DooLFXF73	24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	
03054696	CR5DE2NLBX73	1-Port 100GBase-CFP + 12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03057450	CR5DE1NLBX71	1-Port 100GBase-CFP2 + 12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	
03057487	CR5DE1NLBX73	1-Port 100GBase-QSFP28 + 12-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-240-B)	-	●	●	-	●	●	
03056106	CR5DoE6MFA71	6-Port 40GBase-QSFP+ Integrated Line Processing Unit (LPUI-240-B)	-	●	●	-	●	●	

**Table 20.** NE40E Series 480G Flexible Card Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03057313	CR5DLPUFME70	Flexible Card Line Processing Unit E(LPUF-480-E)	-	-	-	-	●	●	
03055820	CR5DLPUFM070	Flexible Card Line Processing Unit(LPUF-480)	-	-	-	-	●	●	
03057035	CR5DLPUFM07B	Flexible Card Line Processing Unit B(LPUF-480-B)	-	-	-	-	●	●	
03057842	CR5DLPUFME71	Flexible Card Line Processing Unit E(LPUF-480-E)	-	-	-	-	●	●	
03057844	CR5DLPUFM071	Flexible Card Line Processing Unit(LPUF-480)	-	-	-	-	●	●	
03057845	CR5DLPUFM17B	Flexible Card Line Processing Unit B(LPUF-480-B)	-	-	-	-	●	●	
03030SWH	CR5DooE2NC72	2-Port 100GBase-CFP2 Flexible Card A(P480-A)	-	-	-	-	●	●	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03032TGO	CR5DooE2NC77	2-Port 100GBase-CFP2 Flexible Card A(P480-A)	-	-	-	-	●	●	
03032KKL	CR5DooE2NF70	2-Port 100GBase-QSFP28 Flexible Card A(P480-A)	-	-	-	-	●	●	
03030SWL	CR5DooLFX74	24-Port 10GBase LAN/WAN-SFP+ Flexible Card A(P480-A)	-	-	-	-	●	●	
03032DJE	CR5DoE2NCE70	2-Port 100GBase-CFP2 Flexible Card E(P480-E)	-	-	-	-	●	●	
03032LCN	CR5DoE2NFE70	2-Port 100GBase-QSFP28 Flexible Card E(P480-E)	-	-	-	-	●	●	
03032DJH	CR5DoLEXFE70	20-Port 10GBase LAN/WAN-SFP+ Flexible Card E(P480-E)	-	-	-	-	●	●	

**Table 21.** NE40E Series 480G Integrated Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03055821	CR5DooLMXF70	48-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-480)	-	-	-	-	●	●	
03055838	CR5DE2NLFX70	2-Port 100GBase-CFP2 + 24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-480)	-	-	-	-	●	●	
03057599	CR5DE2NLFX71	2-Port 100GBase-QSFP28 + 24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-480)	-	-	-	-	●	●	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03056318	CR5DooE4NC70	4-Port 100GBase-CFP2 Integrated Line Processing Unit (LPUI-480)	-	-	-	-	•	•	
03057894	CR5DooE4NB70	4-Port 100GBase-QSFP28 Integrated Line Processing Unit (LPUI-480)	-	-	-	-	•	•	
03057846	CR5DooLMXF71	48-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-480)	-	-	-	-	•	•	
03057847	CR5DE2NLFX74	2-Port 100GBase-CFP2 + 24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit (LPUI-480)	-	-	-	-	•	•	
03057848	CR5DooE4NC71	4-Port 100GBase-CFP2 Integrated Line Processing Unit (LPUI-480)	-	-	-	-	•	•	
03057036	CR5DooLMXF7 B	48-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	•	•	
03057037	CR5DE2NLFX7 B	2-Port 100GBase-CFP2 + 24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	•	•	
03057600	CR5DE2NLFX72	2-Port 100GBase-QSFP28 + 24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	•	•	
03057039	CR5DooE4NC7 B	4-Port 100GBase-CFP2 Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	•	•	

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03057895	CR5DooE4NB7 B	4-Port 100GBase-QSFP28 Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	●	●	
03057849	CR5Do1LMXF7 B	48-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	●	●	
03057850	CR5DE2NLFX75	2-Port 100GBase-CFP2 + 24-Port 10GBase LAN/WAN-SFP+ Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	●	●	
03057851	CR5Do1E4NC7B	4-Port 100GBase-CFP2 Integrated Line Processing Unit B(LPUI-480-B)	-	-	-	-	●	●	

**Table 22.** NE40E Series 1T Integrated Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03056088	CR5DooE8NC70	8-Port 100GBase-CFP2 Integrated Line Processing Unit (LPUI-1T)	-	-	-	-	●	●	
03056888	CR5DooE8NC7 B	8-Port 100GBase-CFP2 Integrated Line Processing Unit B(LPUI-1T-B)	-	-	-	-	●	●	
03057043	CR5DooE8NC7 C	8-Port 100GBase-CFP2 Integrated Line Processing Unit L(LPUI-1T-L)	-	-	-	-	●	●	

**Table 23.** NE40E Series 2T Integrated Line Processing Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03057878	CR5D00EENB70	20-Port 100GBase-QSFP28 Integrated Line Processing Unit (LPUI-2T)	-	-	-	-	-	●	
03057953	CR5D00EENB7B	20-Port 100GBase-QSFP28 Integrated Line Processing Unit B(LPUI-2T-B)	-	-	-	-	-	●	
03057954	CR5D00EENB7P	20-Port 100GBase-QSFP28 Integrated Line Processing Unit CM(LPUI-2T-CM)	-	-	-	-	-	●	

## Versatile Service Boards

**Table 24.** NE40E Series Service Process Units ("●" indicates "support", and "-" indicates "not support")

BOM	Order Name	Description	-X3	-X8	-X16	-X3A	-X8A	-X16A	Remarks
03054421	CR5DVSUFD010	Flexible Card Versatile Service Unit 160(VSUF-160)	-	●	●	-	●	●	
03030PTF	CR5D00SPD010	Versatile Service Flexible Card(SP160)	-	●	●	-	●	●	
03054425	CR5DVSUF8010	Flexible Card Versatile Service Unit 80(VSUF-80)	●	●	●	●	●	●	
03030PLN	CR5D00SP8010	Versatile Service Flexible Card(SP80)	●	●	●	●	●	●	

## Software Configuration

**Table 25.** Software License

BOM Number	Order Name	Description	Remarks
88033VUG	CR5S40BS8900	NetEngine40E Base SW,VRP8,V800R009	
88034LQJ	CR5S40BS8A00	NetEngine40E Base SW,VRP8,V800R010	
88034FGA	CR5P40SWF890	NetEngine40 VRP8 V800R009 Software Bundle	
82401041	CR5S45NBSLoP	NetEngine40E Solar5.0 100G Port Basic License(per 100G)	
88034LXW	CR5P00LICS2P	NetEngine40E 20-Port 100GBase-QSFP28 Integrated Line Processing Unit CM License Setup bundle(Including 5*Solar5.0 100G Port Basic License)	
02311XXR	CR5P00HALL70	NetEngine40E 8-Port 100G ETH/DWDM-CFP2 Integrated Line Processing Unit CM bundle(Including LPUI-1T-CM, 4*100G Port Basic License)	
02311XXS	CR5P00HALL71	NetEngine40E 8-Port 100G ETH/DWDM-CFP2 Integrated Line Processing Unit CM bundle(Including LPUI-1T-CM, 8*100G Port Basic License)	
02311XXT	CR5P00HALL72	NetEngine40E 8-Port 100G ETH/DWDM-CFP2 Integrated Line Processing Unit CM bundle(Including LPUI-1T-CM, 4*100G Port Basic License, 4*100G L3VPN Port License)	

BOM Number	Order Name	Description	Remarks
02311XXU	CR5P00HALL73	NetEngine40E 8-Port 100G ETH/DWDM-CFP2 Integrated Line Processing Unit CM bundle(Including LPUI-1T-CM, 8*100G Port Basic License, 8*100G L3VPN Port License)	
02312AJK	CR5P02LICB3P	NetEngine40E 20-Port 100GBase-QSFP28 Integrated Line Processing Unit CM L2 License bundle(Including LPUI-2T-CM, 20*Solar5.0 100G Port Basic License)	
02312AJL	CR5P02LICB4P	NetEngine40E 20-Port 100GBase-QSFP28 Integrated Line Processing Unit CM L3 License bundle(Including LPUI-2T-CM, 20*Solar5.0 100G Port Basic License, 20*100G L3VPN Port License)	
82401062	CR5S40VFLEoP	NetEngine40E 50G FlexE Port License(per 50G)	
81400475	CR5S400EPT00	NetEngine40E&80E Ethernet Performance Test License	
82400313	CR5S40L3VNo1	NetEngine40E&80E L3VPN Function License for LPUF-51-B	
82400314	CR5S40L3VNo2	NetEngine40E&80E L3VPN Function License for LPUI-51-B	
82400378	CR5S40L3VNo7	NetEngine40E L3VPN Function License for LPUI-120-B	
82400379	CR5S40L3VNo8	NetEngine40E L3VPN Function License for LPUF-120-B	
82400380	CR5S40L3VNo5	NetEngine40E L3VPN Function License for LPUI-240-B	
82400381	CR5S40L3VNo6	NetEngine40E L3VPN Function License for LPUF-240-B	
82400798	CR5S40L3VNoA	NetEngine40E L3VPN Function License for LPUI-480-B	
82400799	CR5S40L3VNoB	NetEngine40E L3VPN Function License for LPUF-480-B	
82400766	CR5S40L3VNo9	NetEngine40E L3VPN Function License for LPUI-1T-B	
82400959	CR5S40L3VNoC	NetEngine40E L3VPN Function License for LPUF-200-B	
82401046	CR5S40L3VNoD	NetEngine40E L3VPN Function License for LPUI-2T-B	
82400900	CR5S40PL3V01	NetEngine40E L3VPN Function License for LPUI-1T-L(per 100G port)	
82400901	CR5S40PL2V01	NetEngine40E L2VPN Function License for LPUI-1T-L(per 100G port)	
81400189	CR5S40CLCK00	NetEngine40E&80E 1588v2 Function License	
81400474	CR5S400FPM00	NetEngine40E&80E IP Performance Measure License(IP FPM)	
81400537	CR5S4000VS00	NetEngine40E Virtual System Function License	
81400640	CR5S4000VA00	NetEngine40E Virtual Access License	
82400647	CR5S40VA1C00	NetEngine40E Virtual Access Host License for 1 Client	
82400648	CR5S40VA5C00	NetEngine40E Virtual Access Host License for 5 Client	
82400649	CR5S40VAEC00	NetEngine40E Virtual Access Host License for 20 Client	
88030BUW	CR5S40EF0000	NetEngine40E&80E Software Release Entitlement from Rn to R(n+1)	
82400852	CR5S4IPSEC00	NetEngine40E IPsec Function License for VSU Series Units	
82400802	CR5S40IPTQ00	NetEngine40E IPsec Tunnels Quantity(500)	
81400370	CR5S40BRAS02	NetEngine40E PPPoE/IPoE Function License	
82400206	CR5S40QS0100	NetEngine40E Subscribers Quantity(1k Subscribers)	
81400554	CR5SRADPXY00	NetEngine40E Radius-proxy Function License	
81400210	CR5S40L2TP00	NetEngine40E&80E L2TP Function License	
82400383	CR5S400PCP01	NetEngine40E PCP license for VSU Series Units	
81400709	CR5S40XLAN00	NetEngine40E VxLAN Function License	
81400712	CR5S40GMLS00	NetEngine40E GMPLS UNI Function License	
81400279	CR5S400DAA00	NetEngine40E&80E DAA Function License	

BOM Number	Order Name	Description	Remarks
82400332	CR5SDSLITE01	NetEngine40E&80E DS-Lite Function License for VSU Series Units	
82400382	CR5SoNAT6401	NetEngine40E NAT64 License for VSU Series Units	
81400671	CR5S40EDSG00	NetEngine40E EDSG Function License	
81400208	CR5S40MHAG00	NetEngine40E&80E Cross-chassis HAG Function License	
81400881	CR5S40IPHP08	NetEngine40E IP Hard Pipe Function Management License	

## Documents

**Table 26.** Documents for NE40E

BOM Number	Order Name	Description	Remarks
31189908	CR5I8ADOCE00	HUAWEI NetEngine40E Universal Service Router Product Documentation	V800R010C00

## Optical/Electrical Transceivers

**Table 27.** 100G Optical Transceiver

BOM Number	Order Name	Description	Remarks
02310WUR	OSNo10N09	High Speed Transceiver,CFP2,4*25Gb/s(1310nm Band),103.125Gb/s,-2.5dBm,4.5dBm,-8.6dBm,LC straight,SMF,10km	
02311LYG	OMND10N12	High Speed Transceiver,CFP2,850nm,10*10Gb,103.125Gb/s,-7.6dBm,1dBm,-9.5dBm,MPO,MM,0.1km	
S4017456	OSNo10No4	High Speed Transceiver,CFP,1295/1300/1304/1309nm,103.125Gbps,-4.3dBm,4.5dBm,-8.6dBm,LC,SMF,10km	
02310WUS	OSNo40No2	High Speed Transceiver,CFP,1310nm Band,103.125Gb/s,-2.9dBm,2.9dBm,-21.4dBm,Straight LC,SMF,40km,OMA OPTICAL POWER,100GBASE-ER4	
45030021	SS-OP-ATN-LC-5	Fixed Optical Attenuator,1260nm~1620nm-5dB-LC/PC-45dB	
45030022	SS-OP-ATN-LC-10	Fixed Optical Attenuator,1260nm~1620nm-10dB-LC/PC-45dB	
S4017457	OSNo10003	Optical Transceiver,CFP,850nm,10*10.3125Gb/s,-7.6dBm,2.4dBm,-5.4dBm,mpo,MM,0.1km	
02311JNT	OSNo80N10	High Speed Transceiver,CFP,1310nm,103.125Gb/s,2.0dBm,7.0dBm,-30.0dBm,Stright LC,SMF,80km	
02311NTY	OMND10N13	High Speed Transceiver,QSFP28,850nm,100G,-8.4dBm,2.4dBm,-10.3dBm,MPO,MM,0.1km,OM4	
02311QDH	OSNo20N15	High Speed Transceiver,QSFP28,1310nm,4*25GBase,-6.5dBm,2.5dBm,-9.8dBm,LC/PC,2km (100GBASE-CWDM4)	
02311NTX	OSNo10N23	High Speed Transceiver,QSFP28,1310nm,100G,-4.3dBm,4.5dBm,-8.6dBm,LC,10km	



**Table 28.** 50G Optical Transceiver

BOM Number	Order Name	Description	Remarks
02311YNR	OSL010No1	High Speed Transceiver,QSFP28,1311nm,50Gb/s,-4dBm,4.2dBm,-8.8dBm,LC,SMF,10km	

**Table 29.** 40G Optical Transceiver

BOM Number	Order Name	Description	Remarks
02310WUT	OMXD30009	Optical Transceiver,QSFP+,1310nm,41.25Gbps,-7dBm,2.3dBm,-11.5dBm,LC,SMF,10km	
02310WUU	OMXD30010	High Speed Transceiver,QSFP+,850nm,41.25Gbps,-7.6dBm,0.5dBm,-9.5dBm,MPO,MMF,0.15km	
02311AYS	OSX080No5	High Speed Transceiver,CFP,4*10Gb/s(1550 NM BAND),41.25Gb/s,-0dBm,4.5dBm,-22dBm,straight LC,SMF,80km	
S4017471	OSM010Co2	High Speed Transceiver,CFP,1271~1331nm CWDM-41.25Gb/s--1dBm-3dBm--11.5dBm-LC-SM-10km	
02311BLM	OSM040Co1	High Speed Transceiver,CFP,4*10Gb/s(1310 NM BAND),41.25Gb/s,-1.1dBm,3.8dBm,-18dBm,straight LC,SMF,40km,OMA OPTICAL POWER,40GBASE-ER4	

**Table 30.** FE/GE/10GE Optical Transceiver

BOM Number	Order Name	Description	Remarks
02310RAV	OEGD01No1	Optical Functional Module,1000BASE-T-SFP Module,RJ45 Electrical Module,Auto Negotiate,Longest Transimission Distance 100m	
34060286	eSFP-850nm-1000Base-Sx/FC200 MM	Optical Transceiver,eSFP,850nm,2.125Gb/s(Multi rate) ,-9.5~-2.5dBm,-17dBm,LC,MM,0.5km	
S4016067	OSG010No5	Optical transceiver,eSFP,1310nm,1.25Gb/s,-9~-3dBm,-20dBm,LC, Single Mode,10km	
S4016954	OSG040002	Optical Transceiver(eSFP,1310nm,1.25Gb/s,-5~-0dBm,-23dBm,LC,SM,40km)	
34060360	eSFP-1550nm-1000Base-Zx/FC100	Optical Transceiver,eSFP,1550nm,1.25Gb/s,-2~-5dBm,-23dBm,LC,SM,80km	
34060295	eSFP-GE-ZX100-SM1550	Optical Transceiver,eSFP,1550nm,1.25Gb/s,0~-5dBm,-30dBm,LC,SM,100km	
34060484	eSFP-1310nm-155M-2.5G-LC-SM-2km	Optical Transceiver,eSFP,1310nm,155M-2.67G,-10~-3dBm,-18dBm,LC,SM,2km	
34060485	eSFP-SM1310-155M-2.5G-15km	Optical Transceiver,eSFP,1310nm,155M-2.67G,-5~-0dBm,-21dBm,LC,SM,15km	
34060289	eSFP-1310nm-L-16.1	Optical Transceiver,eSFP,1310nm,STM16,-2~-3dBm,-29dBm,LC,SM,40km	
34060488	eSFP-1550nm-L-16.2	Optical Transceiver,eSFP,1550nm,STM16,-2~-3dBm,-30dBm,LC,SM,80km	

BOM Number	Order Name	Description	Remarks
S4017482	OSXo4oNo3	Optical Transceiver(SFP+,850nm,10Gb/s,-7.3~-1dBm,-11.1dBm,LC,MM,o.3km)	
S4017483	OSXo01002	Optical Transceiver(SFP+,1310nm,10Gb/s,-8.2~-0.5dBm,-12.6dBm,LC,SM,10km)	
S4017484	OMXD30002	Optical Transceiver(SFP+,1550nm,9.95~11.1Gb/s,-4.7~-4dBm,-14.1dBm,LC,SM,40km)	
02311YEB	OSXo4oN14	Optical Transceiver(SFP+,1310nm,10Gb/s,-2dBm~-4dBm,-20dBm,LC,SM,40km)	
02310PVU	OSXo8oNo4	Optical Transceiver(SFP+,1550nm,9.953~10.3125Gb/s,0~-4dBm,-24dBm,LC,SM,80km)	
34061041	OSXD5oNoo	XFP SFP+ Transceiver-SFP+-850nm-10G/1G--7.3dBm--1dBm--9.9dBm-LC-MM-o.3km	
34061042	OSXo1oN13	XFP SFP+ Transceiver-SFP+-1310nm-10G/1G--8.2dbm-0.5dbm-Single-mode-14.4dbm-LC-10km	
34061043	OSXo4oN12	XFP SFP+ Transceiver-SFP+-1550nm-10G/1G--4.7dbm-4dbm--15.8dbm--1dbm-SM-40km	
S4015798	XFP-850-FC10G/10GbE-o.3km	Optical Transceiver(XFP,850nm,10.3Gb/s,-7.3dBm~-1.3dBm,-7.5dBm,LC,Multimode,o.3Km)	
S4015772	OSXo1oNo8	Optical Transceiver(XFP,1310nm,9.95~10.71Gb/s,-6dBm~-1dBm,-14.4dBm,Singlemode,LC,10km)	
S4015776	OSXo4oNo9	Optical Transceiver(XFP,1550nm,9.95Gb/s to 11.1Gb/s,-1dBm~-2dBm,-15dBm,LC,Singlemode,40km)	
S4015794	OSXo8oNo6	Optical transceiver(XFP,1550nm,9.95Gb/s to 11.1Gb/s,0~-4dBm,-24dBm,LC,Singlemode,80km)	

Table 31. 622M SFP/eSFP Optical Transceiver

BOM Number	Order Name	Description	Remarks
S4015760	OSHo15No5	Optical Transceiver(eSFP,1310nm,STM4,-15dBm~-8dBm,-30dBm,Singlemode,LC,15Km)	
34060280	eSFP-1310nm-L-4.1	Optical Transceiver,eSFP,1310nm,STM4,-3~-2dBm,-30dBm,LC,SM,40km	
34060284	eSFP-1550nm-L-4.2	Optical Transceiver,eSFP,1550nm,STM4,-3~-2dBm,-30dBm,LC,SM,80km	

Table 32. 155M SFP/eSFP Optical Transceiver

BOM Number	Order Name	Description	Remarks
S4015731	SFP-FE-SX-MM1310	Optical Transceiver(SFP,1310nm,STM1,-19dBm~-14dBm,-30dBm,Multimode,LC,2km)	
S4015755	eSFP-FE-LX-SM1310	Optical Transceiver(eSFP,1310nm,STM1,-15dBm~-8dBm,-31dBm,Singlemode,LC,15Km)	

BOM Number	Order Name	Description	Remarks
S4015715	eSFP-FE-LH40-SM1310	Optical Transceiver(eSFP,1310nm,STM1,-5dBm~0dBm,-37dBm,Singlemode,LC,40Km)	
34060282	eSFP-FE-LH80-SM1550	Optical Transceiver,eSFP,1550nm,STM1,-5~0dBm,-37dBm,LC,SM,80km	

**Table 33.** GE CWDM Optical Transceiver

BOM Number	Order Name	Description	Remarks
34060483	eSFP-LH80-SM1471	Optical Transceiver,eSFP,1471nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060481	eSFP-LH80-SM1491	Optical Transceiver,eSFP,1491nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060479	eSFP-LH80-SM1511	Optical Transceiver,eSFP,1511nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060482	eSFP-LH80-SM1531	Optical Transceiver,eSFP,1531nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060478	eSFP-LH80-SM1551	Optical Transceiver,eSFP,1551nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060476	eSFP-LH80-SM1571	Optical Transceiver,eSFP,1571nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060477	eSFP-LH80-SM1591	Optical Transceiver,eSFP,1591nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060480	eSFP-LH80-SM1611	Optical Transceiver,eSFP,1611nm,100M~2.67Gbps,5dBm,0dBm,-28dBm,LC,80Km	
34060366	eSFP-LH120-SM192.10	Optical Transceiver,eSFP,1560.61nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060372	eSFP-LH120-SM192.20	Optical Transceiver,eSFP,1559.79nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060373	eSFP-LH120-SM192.30	Optical Transceiver,eSFP,1558.98nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060374	eSFP-LH120-SM192.40	Optical Transceiver,eSFP,1558.17nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060375	eSFP-LH120-SM192.50	Optical Transceiver,eSFP,1557.36nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060376	eSFP-LH120-SM192.60	Optical Transceiver,eSFP,1556.55nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060377	eSFP-LH120-SM192.70	Optical Transceiver,eSFP,1555.75nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060378	eSFP-LH120-SM192.80	Optical Transceiver,eSFP,1554.94nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060379	eSFP-LH120-SM192.90	Optical Transceiver,eSFP,1554.13nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	

BOM Number	Order Name	Description	Remarks
34060380	eSFP-LH120-SM193.00	Optical Transceiver,eSFP,1553.33nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060381	eSFP-LH120-SM193.10	Optical Transceiver,eSFP,1552.52nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060382	eSFP-LH120-SM193.20	Optical Transceiver,eSFP,1551.72nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060383	eSFP-LH120-SM193.30	Optical Transceiver,eSFP,1550.92nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060384	eSFP-LH120-SM193.40	Optical Transceiver,eSFP,1550.12nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060385	eSFP-LH120-SM193.50	Optical Transceiver,eSFP,1549.32nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060386	eSFP-LH120-SM193.60	Optical Transceiver,eSFP,1548.51nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,SM,120km	
34060387	eSFP-LH120-SM193.70	Optical Transceiver,eSFP,1547.72nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060388	eSFP-LH120-SM193.80	Optical Transceiver,eSFP,1546.92nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060389	eSFP-LH120-SM193.90	Optical Transceiver,eSFP,1546.12nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060390	eSFP-LH120-SM194.00	Optical Transceiver,eSFP,1545.32nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060391	eSFP-LH120-SM194.10	Optical Transceiver,eSFP,1544.53nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060392	eSFP-LH120-SM194.20	Optical Transceiver,eSFP,1543.73nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060393	eSFP-LH120-SM194.30	Optical Transceiver,eSFP,1542.94nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060394	eSFP-LH120-SM194.40	Optical Transceiver,eSFP,1542.14nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060395	eSFP-LH120-SM194.50	Optical Transceiver,eSFP,1541.35nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060396	eSFP-LH120-SM194.60	Optical Transceiver,eSFP,1540.56nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060397	eSFP-LH120-SM194.70	Optical Transceiver,eSFP,1539.77nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060398	eSFP-LH120-SM194.80	Optical Transceiver,eSFP,1538.98nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060399	eSFP-LH120-SM194.90	Optical Transceiver,eSFP,1538.19nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	
34060400	eSFP-LH120-SM195.00	Optical Transceiver,eSFP,1537.40nm,125M~2.67Gbps,0~4.odBm,-28.odBm,LC,120km	

BOM Number	Order Name	Description	Remarks
34060401	eSFP-LH120-SM195.10	Optical Transceiver,eSFP,1536.61nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060402	eSFP-LH120-SM195.20	Optical Transceiver,eSFP,1535.82nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060403	eSFP-LH120-SM195.30	Optical Transceiver,eSFP,1535.04nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060404	eSFP-LH120-SM195.40	Optical Transceiver,eSFP,1534.25nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060405	eSFP-LH120-SM195.50	Optical Transceiver,eSFP,1533.47nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060406	eSFP-LH120-SM195.60	Optical Transceiver,eSFP,1532.68nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060407	eSFP-LH120-SM195.70	Optical Transceiver,eSFP,1531.90nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060408	eSFP-LH120-SM195.80	Optical Transceiver,eSFP,1531.12nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060409	eSFP-LH120-SM195.90	Optical Transceiver,eSFP,1530.33nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	
34060410	eSFP-LH120-SM196.00	Optical Transceiver,eSFP,1529.55nm,125M~2.67Gbps,0~4.0dBm,-28.0dBm,LC,120km	

Table 34. 10GE CWDM Optical Transceiver

BOM Number	Order Name	Description	Remarks
34060687	OSX070002	Optical Transceiver-SFP+-1471nm-9.95~11.1Gb/s-odBm-4dBm--23dBm-LC-SM-70km	
34060688	OSX070003	Optical Transceiver-SFP+-1491nm-9.95~11.1Gb/s-odBm-4dBm--23dBm-LC-SM-70km	
34060686	OSX070001	Optical Transceiver-SFP+-1511nm-9.95~11.1Gb/s-odBm-4dBm--23dBm-LC-SM-70km	
34060689	OSX070004	Optical Transceiver-SFP+-1531nm-9.95~11.1Gb/s-odBm-4dBm--23dBm-LC-SM-70km	
34060690	OSX070005	Optical Transceiver-SFP+-1551nm-9.95~11.1Gb/s-odBm-4dBm--23dBm-LC-SM-70km	
34060691	OSX070006	Optical Transceiver-SFP+-1571nm-9.95~11.1Gb/s-odBm-4dBm--22dBm-LC-SM-70km	
34060692	OSX070007	Optical Transceiver-SFP+-1591nm-9.95~11.1Gb/s-odBm-3dBm--21dBm-LC-SM-70km	
34060693	OSX070008	Optical Transceiver-SFP+-1611nm-9.95~11.1Gb/s-odBm-3dBm--21dBm-LC-SM-70km	

## Power Distribution Boxes

**Table 35.** High-power distribution boxes

BOM Number	Order Name	Description	Remarks
02120641	CR5MDPD30000	DPD300-4-12 Power Distribution Box, Dual-Two Inputs	
02122145	CR5MDPD12500	DPD125-12-24 DC Power Distribution Box	
02351RRJ	CR5PPWRBXA70	DACS Power Distribution Box Basic Configuration(Include DACS Chassis,12*AC/AC Switch Module,1*DMU Monitor Module)	
02122045	CR5MPWRBXA70	APD63-4-12 DACS Distribution Box	
02311WJG	CR5MooDSBX70	DACS Switch Module	
02311WMQ	CR5MooDDMU70	DACS Monitor Module	

## Breakout

**Table 36.** 100G QSFP28 Breakout Boxes

BOM Number	Order Name	Description	Remarks
02311NUA	OSM010N11	High Speed Transceiver,QSFP+,1310,41.25Gbps,-8.2dBm,0.5dBm,-12.6dBm,MPO,SM,10km	
14134759	MPO12-MPO12-SM-10	Optical Cable Parts,MPO/APC,MPO/APC,Single mode,10m,8 cores,GJFH-8G.657A2,3.5mm,LSZH,43mm Short MPO,Bending insensitive	
02082890	ODBS10040	10-Port MPO-12-40-Port LC Breakout Box (single-mode)	
14132538	MPO12-4DLC-SM-15	Optical Cable Assembly,MPO/APC,4*DLC/PC,Singlemode,GJFH 8G.657A2(LSZH),15m,3.5mm,8 Cores,om/1m,2mm	
02310WUU	OMXD30010	High Speed Transceiver,QSFP+,850nm,41.25Gbps,-7.6dBm,0.5dBm,-9.5dBm,MPO,MMF,0.15km	
14132537	SS-OP-MPO12-4*DL C-M-5	Optical Cable Parts,MPO/PC,4DLC/PC,Multi-mode,5m,8 cores,0/1m,GJFH-8A1a.2(OM3),3.5mm,2mm,LSZH,43mm Short MPO,Bending insensitive	
14132537	SS-OP-MPO12-4*DL C-M-15B	Optical Cable Parts,MPO/PC,4DLC/PC,Multi-mode,15m,8 cores,0/1m,GJFH-8A1a.2(OM3),3.5mm,2mm,LSZH,43mm Short MPO,Bending insensitive	
14132537	SS-OP-MPO12-4*DL C-M-30	Optical Cable Parts,MPO/PC,4DLC/PC,MULTI-MODE,30m,8 CORES,0/1m,GJFH-8A1a.2(OM3),3.5MM,2mm,LSZH,43MM SHORT MPO,BENDING INSENSITIVE	
14132537	SS-OP-MPO12-4*DL C-M-100	Optical Cable Parts,MPO/PC,4DLC/PC,Multi-mode,100m,8 cores,0/1m,GJFH-8A1a.2(OM3),3.5mm,2mm,LSZH,43mm Short MPO,Bending insensitive	

## Telescopic Slides

**Table 37.** Telescopic Sides

BOM Number	Order Name	Description	Remarks
21242246	EooTSLDoo	Chassis General Accessories-Telescopic slide-Square hole range-500mm-850mm	

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BOM Number	Order Name	Description	Remarks
21242247	E00TSLD01	Chassis General Accessories-Telescopic slide-Square hole range-370mm~585mm	

## Software Upgrade Paths

Visit [Software Upgrade Paths](#) to get VRP software release version or patches.

## 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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