



NetEngine40E-M2K-B Service Router Datasheet

Overview

The Huawei ® NetEngine40E-M2K-B Universal Service Router (NE40E-M2K-B) series is a router developed by Huawei for transportation, finance, energy, government, education, enterprise and internet service provider (ISP) networks. NE40E-M2K-B typically serve as aggregation nodes on wide area networks (WANs) or egress nodes on enterprise or campus networks.

Figure 1-1 NE40E-M2K-B Service Router



Product Features

Table 2-1 lists the Hardware specification of Huawei NE40E-M2K-B router.

Features	Description
Switching capacity (single direction)	910Gbps, Network Processor (NP) hardware forwarding.
Dimensions (H x W x D)	88.1 mm x 442 mm x 220 mm(2U)
Service Slot	2 slots, 200Gbps/Slot
Flash	128 MB
SDRAM	16 GB
Storage	4G NAND FLASH
Interface type	100GE/50GE/40GE/25GE/10GE/GE
Max Port density	100GE: 8; 50GE:4; 40GE: 8; 25GE: 8; 10GE: 30; GE:30
Fixed Ports	4*100GE + 10*10GE + 10*GE
IPv4FIB	4M
IPv6 FIB	1M
ACL4	32K
ACL6	16K
packet buffer time	30ms
packet buffer size	2288.81Mbyte
Netstream	Sampling rate: 1000:1; flow table: 1M original flow+512K aggregated flow
Feature	Segment Routing, EVPN, VxLAN, 1588v2, FlexE/Slicing, Macsec, IPSEC,L2/L3 VPN
BNG	Supported

Features	Description
IPv4 NAT	Session: 2M; Throughput: 4.8Gbps@512Bytes,9.6Gbps@1024Bytes
IPSec	Tunnel:10000; Throughput: 3.4Gbps@ AES-256,ESP,512Bytes 6.8Gbps@ AES-256,ESP,1024Bytes 9.5Gbps@AES-256,ESP,1400Bytes
Typical Power consumption	DC/AC: 271W/309W
Weight	DC/AC: 11KG/12.2KG
Operating temperature	-20°C ~ 65°C(-5°C start)
Storage temperature	-40°C ~ 70°C
Operating Humidity	5% RH to 95% RH, Non-condensing
Redundant fans	2+1
Redundant power supply	1+1, AC/DC/HVDC

Table 2-2 lists the features of Huawei NE40E-M2K-B router.

Features	Description
Interface types	100GE/50GE/40GE/25GE/10GE/GE
Ethernet Layer 2 protocol	G.8032, STP/RSTP, MSTP, L2 protocol transparent transmission, BPDU, LACP
Ethernet service	VLAN, Bridge domain, L2TPv3, QinQ
Routing	RIP, RIPng, OSPF, OSPFV3, IS-IS, IS-ISV6, BGP, BGPv6, Static routing, IPv4 Multicast, IPv6 Multicast, Multicast static, etc
IPv4	TCP/IP, for example, ICMP, IP, TCP, UDP, Socket (TCP/UDP/RAW IP), ARP Static DNS DNS Client FTP Server FTP Client TFTP Client DHCP Relay and DHCP Server Ping Tracert NQA IP policy-based routing Forwarding next hop based on traffic IP policy-based route load balancing

Features	Description
IPv6	IPv6(ND) Path MTU (PMTU) TCP6 Ping IPv6 Tracert IPv6 Socket IPv6 DHCPv6 Relay Static IPv6 DNS TFTP IPv6 Client IP policy-based routing IPv6 ND fast reply
L2VPN	PWE3/VLL、VPLS、EVPN、EVPN L3VPN、VxLAN
L3VPN	CE routers can access the L3VPN through L3 interfaces. Support static routes between CE and PE, BGP, RIP, OSPF and ISIS Inter-AS VPN, including RFC2547bis option A. Inter-AS VPN, including RFC2547bis option B Inter-AS VPN, including RFC2547bis option C NG-MVPN IPv6 VPN HoVPN Seamless MPLS BGP LSP entropy label Redirect to VPN L3VPN PIPE/Uniform mode L3VPN Statistics
SRv6	SRv6-BE、SRv6-TE Policy、SRv6 egress protection
Clock synchronization	SyncE and IEEE 1588v2
VAS	IPsec, NetStream, NAT
OAM	Y.1731, iFIT, IP FPM, MPLS OAM, 802.1ag, 802.3ah, TWAMP
QoS	QPPB , Differ-Serv , HQoS , Redirection

Ordering Information

Basic Hardware Configurations

NE40E-M2K-B Basic Configurations

BOM Number	Order Name	Description	Remarks
02352DQU	CR5PM2KBAS92	NE40E-M2K-B Basic Configuration (Includes M2K Chassis, Fixed Interface(4*100GE+10*10GE+10*GE)/2*DC Power/Fan Box,without Software and Document)	
02352SPV	CR5PM2KBAS97	NE40E-M2K-B Basic Configuration (Includes M2K Chassis, Fixed Interface(4*100GE+10*10GE+10*GE)/2*AC Power/Fan Box,without Software and Document)	
02312FXF	CR5M0M2HBX71	NE40E-M2-C Fan Box	
02352DQV	CR5B0BKP0393	NE40E-M2K-B Integrated Chassis Components	
03033GDR	CR5D0E5XMF94	2-Port 50GBase/1-Port 100GBase-QSFP28 FlexE MACsec Physical Interface Card(PIC)	
03033GDS	CR5DE2NE4X14	2-Port 100GBase/50GBase-QSFP28 FlexE MACsec Interface Card(PIC)	
03033BLK	CR5D00E4XM25	4-Port 25GE(SFP28)/10GE(SFP+) MACsec Physical Interface Card (PIC)	
03033BLN	CR5D00LAXF91	10-Port 10GBase LAN/WAN-SFP+ MACsec Physical Interface Card(PIC)	
21137890	CR5X00DKBA01	fake front panel	

Software Configuration

Software

BOM Number	Order Name	Description	Remarks
88035FVK	CR5S03BS8191	NE40E-M2 Series Base SW,VRP8,V800R011	

License

BOM Number	Order Name	Description	Remarks
88035DVF	CR5S030FPM10	M2 Series IP Performance Measure License (IP FPM)	
88032UAA	CR5S03EF0000	NE40E-M2 Series Software Release Entitlement from Rn to R(n+1)	
88035DVH	CR5S030SEC10	M2 Series IPSEC Function License	
81400686	CR5S030SEC00	NE40E-M2 Series IPSEC Function License	
81401285	CR5S03MNAT00	M2 Series Multicast NAT Function License	
88035DSM	CR5S030NAT10	M2 Series NAT Function License	

BOM Number	Order Name	Description	Remarks
88035DXC	CR5S420N6410	NAT64 Function License	
81400737	CR5S03GMPL00	NE40E-M2 Series GMPLS UNI Function License	
88035DSN	CR5S031KSB10	M2 Series Subscribers Quantity(1k Subscribers)	
82400869	CR5S03EDSG01	NE40E-M2 Series OTT Service Boost Quantity License Annual Fee(per 1k OTT services)	
88035DSP	CR5S03VACS10	M2 Series Virtual Access Client License	
88035BJR	CR5S03CRAG10	M2 Series Aggregation Scenario License	
88035BJS	CR5S03PEER10	M2 Series Peering Scenario License	
88035BJT	CR5S03L3VP10	M2 Series L3VPN&EVPN Function License	
88035BJV	CR5S03TMSY10	M2 Series Time Synchronization Function License	
88035BJW	CR5S03VXLA10	M2 Series VxLAN Function License	
88035BJX	CR5S03NDEC10	M2 Series Network Detection Function License	
88035BJY	CR5S03VCLU10	M2 Series Virtual Cluster Function License	
88035BKA	CR5S03BNG010	M2 Series BNG Function License	
88035BKB	CR5S03HQOS10	M2 Series H-QoS Function License	
81401299	CR5S03BGLA10	Anti-theft Function License	
88035BKQ	CR5S03CRAG11	M2 Series Aggregation Scenario License Initial Bundle	
88035BKS	CR5S03CRAG12	M2 Series Aggregation Scenario License (Per 10*10GE)	
88035BKU	CR5S03CRAG13	M2 Series Aggregation Scenario License (Per 1*100GE)	
88035BLE	CR5S03L3VP11	M2 Series L3VPN&EVPN Port Function License Initial Bundle	
88035BLF	CR5S03L3VP12	M2 Series L3VPN&EVPN Port Function License(Per 10*10GE)	
88035BLH	CR5S03L3VP13	M2 Series L3VPN&EVPN Port Function License(Per 1*100GE)	

Documents

Documents for NE40E-M2K-B

BOM Number	Order Name	Description	Remarks
31180ARU	CR5I810DOC91	HUAWEI NE40E-M2 Series Universal Service Router Product Documentation	

Optical/Electrical Transceivers

1.25/9.953/10.3125Gbps SFP+ Optical Transceiver

BOM Number	Order Name	Description	Remarks
34061041	OSXD50N00	XFP SFP+Transceiver-SFP+-850nm-10G/1G--7.3dBm--1dBm--9.9dBm-LC-MM-0.3km	
34061042	OSX010N13	XFP SFP+ Transceiver-SFP+-1310nm-10G/1G--8.2dbm-0.5dbm-Single-mode-14.4dbm-LC-10km	
34061043	OSX040N12	XFP SFP+ Transceiver-SFP+-1550nm-10G/1G--4.7dbm-4dbm--15.8dbm--1dbm-SM-40km	

100Gbps CFP2 Optical Transceiver

BOM Number	Order Name	Description	Remarks
02310WUR	OSN010N09	High Speed Transceiver,CFP2,4*25Gb/s(1310nm Band),103.125Gb/s,-2.5dBm,4.5dBm,-8.6dBm,LC straight,SMF,10km	
02311FAP	OSN040N03	High Speed Transceiver,CFP2,1310nm Band,103.125Gb/s,-2.9dBm,2.9dBm,-21.4dBm,Straight LC,SMF,40km,OMA OPTICAL POWER,100GBASE-ER4	
02312AXE	CFP2-100G-1310nm-80km-SM	High Speed Transceiver,CFP2,1310nm,103.125Gb/s,3dBm,6.5dBm,-30dBm,Stright LC,SMF,80km	

100Gbps QSFP28 Optical Transceiver

BOM Number	Order Name	Description	Remarks
02312BSS	OSN010N24	High Speed Transceiver,QSFP28,1310nm,100G,-4.3dBm,4.5dBm,-8.6dBm,LC,SMF,10km	
02312AUE	OSN030N05	High Speed Transceiver,QSFP28,1310nm,100G,-2.5dBm,2.9dBm,-21.4dBm,LC,SMF,30km	

50Gbps QSFP28 Optical Transceiver

BOM Number	Order Name	Description	Remarks
02312EVV	QSFP28-50G-BIDI-10km-SM-1	BiDi Transceiver,QSFP28,1331nm(TX)/1271nm(RX),50G,-4.5dBm,4.2dBm,-8.9dBm,LC,10km	

BOM Number	Order Name	Description	Remarks
02312EVW	QSFP28-50G-BIDI-10km-SM-2	BiDi Transceiver, QSFP28, 1271nm(TX)/1331nm(RX), 50G, -4.5dBm, 4.2dBm, -8.9dBm, LC, 10km	
02312EVX	QSFP28-50G-BIDI-40km-SM-2	BiDi Transceiver, QSFP28, 1295nm(TX)/1309nm(RX), 50G, 1.5dBm, 8dBm, -13.5dBm, LC, 40km	
02312EVY	QSFP28-50G-BIDI-40km-SM-1	BiDi Transceiver, QSFP28, 1309nm(TX)/1295nm(RX), 50G, 1.5dBm, 8dBm, -13.5dBm, LC, SMF, 40km	
02311YNR	OSL010N01	High Speed Transceiver, QSFP28, 50G, 1311nm, two-fiber bidirectional, 10km, PAM4	
02312AXF	QSFP28-50G-1311nm-40km-SM	High Speed Transceiver, QSFP28, 50G, 1311nm, two-fiber bidirectional, 40km, PAM4	

25Gbps SFP28 Optical Transceiver

BOM Number	Order Name	Description	Remarks
02312PDL	SFP28-25G-1310nm-10km-SM	High Speed Transceiver, SFP28, 1310nm, 25G, -7dBm, 2dBm, -11.3dBm, LC, SMF, 10km	
34061631		High Speed Transceiver, SFP28, 850 nm, 25G, -8.4dBm, 2.4dBm, -10.3dBm, LC, MMF, 0.1km	

40Gbps CFP Optical Transceiver

BOM Number	Order Name	Description	Remarks
S4017471	OSM010C02	High Speed Transceiver, CFP, 1271~1331nm CWDM-41.25Gb/s--1dBm-3dBm--11.5dBm-LC-SM-10km	
02311BLM	OSM040C01	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	
02311AYS	OSX080N05	High Speed Transceiver, CFP, 4*10Gb/s(1550 NM BAND), 41.25Gb/s, -0dBm, 4.5dBm, -22dBm, straight LC, SMF, 80km	

40Gbps QSFP+ Optical Transceiver

BOM Number	Order Name	Description	Remarks
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BOM Number	Order Name	Description	Remarks
02310WUU	OMXD30010	Optical Transceiver,QSFP+,850nm,41.25Gbps,-7.6dBm,-1dBm,-9.5dBm,MPO,MMF,0.15km	
02310WUT	OMXD30009	Optical Transceiver,QSFP+,1310nm,41.25Gbps,-7dBm,2.3dBm,-11.5dBm,LC,SMF,10km	

10Gbps SFP+ Optical Transceiver

BOM Number	Order Name	Description	Remarks
S4017482	OSX040N03	Optical Transceiver(SFP+,850nm,10Gb/s,-7.3--1dBm,-11.1dBm,LC, MM,0.3km)	
S4017483	OSX001002	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)	
02310PVU	OSX080N04	Optical Transceiver(SFP+,1550nm,9.953~10.3125Gb/s,0~4dBm,-24dBm,LC,SM,80km)	

1Gbps Electrical Transceiver

BOM Number	Order Name	Description	Remarks
02310RAV	OEGD01N01	Optical Functional Module,1000BASE-T-SFP Module,RJ45 Electrical Module,Auto Negotiate,Longest Transimission Distance 100m	

1.25Gbps eSFP Optical Transceiver

BOM Number	Order Name	Description	Remarks
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	OSG010N05	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-	Optical Transceiver,eSFP,1550nm,1.25Gb/s,0~5dBm,-	

BOM Number	Order Name	Description	Remarks
	ZX100-SM1550	30dBm,LC,SM,100km	

1.25Gbps CSFP BIDI Optical Transceiver

BOM Number	Order Name	Description	Remarks
34060894	OSG040008	BiDi Transceiver,CSFP,Tx1490/Rx1310nm,1.25G,-5dBm,0dBm,-25dBm,LC(-40~85),SM,40km	
34061329	OSG010007	BiDi Transceiver,CSFP,1310(Tx)/1490(Rx)nm,1.25Gb/s,-9dBm,-3dBm,-24dBm,LC,SMF,10km	

125M~1.25Gbps CSFP BIDI Optical Transceiver

BOM Number	Order Name	Description	Remarks
34060803	OSG010005	BiDi Transceiver,CSFP,Tx1490/Rx1310nm,125M~1.25Gbps,-9dBm,-3dBm,-24dBm,LC,SM,10km,-40~85degC	

155Mbps eSFP BIDI Optical Transceiver

BOM Number	Order Name	Description	Remarks
02310QNG	OSC015B01	Optical transceiver,eSFP,Tx 1310nm/Rx 1550nm,155M,-8dBm,-15dBm,-32dBm,LC/PC,SM,15km	
02310QNH	OSC015B02	Optical transceiver,eSFP,Tx 1550nm/Rx 1310nm,STM1,-8dBm,-15dBm,-32dBm,LC/PC,SM,15km	

1.25Gbps eSFP BIDI Optical Transceiver

BOM Number	Order Name	Description	Remarks
34060639	eSFP-1550/1310-L1.1-BIDI	Optical Transceiver,eSFP,Tx1550/Rx1310,0.1~1.25Gb/s,-3~-2dBm,-25dBm,LC,SM,40km	
34060638	eSFP-1310/1550-L1.1-BIDI	Optical Transceiver,eSFP,Tx1310/Rx1550,0.1~1.25Gb/s,-3~-2dBm,-25dBm,LC,SM,40km	
34060470	SFP-GE-LX-SM1310-BIDI	Optical Transceiver,ESFP,Tx1310/Rx1490,1.25Gb/s,-3dBm,-9dBm,-19.5dBm,LC,Single Mode,10km	
34060475	SFP-GE-LX-	Optical Transceiver,ESFP,Tx1490/Rx1310,1.25Gb/s,-	

BOM Number	Order Name	Description	Remarks
	SM1490-BIDI	3dBm,-9dBm,-19.5dBm,LC,Single Mode,10km	
34060539	OGEBIDI41	Optical Transceiver,eSFP,1310nm(Tx)/1490nm(Rx),1.25 Gb/s,-2dBm,3dBm,-23dBm,LC,SM,40km	
34060540	OGEBIDI40	Optical Transceiver,eSFP,1490nm(Tx)/1310nm(Rx),1.25 Gb/s,-2dBm,3dBm,-23dBm,LC,SM,40km	
34060595	OGEBIDI80	BiDi Transceiver,eSFP,1570nm(Tx)/1490nm(Rx),1.25 Gbps,-2dBm,4dBm,-26dBm,LC,SM,80km	
34060596	OGEBIDI81	BiDi Transceiver,eSFP,1490nm(Tx)/1570nm(Rx),1.25 Gbps,-2dBm,4dBm,-26dBm,LC,SM,80km	

10Gbps SFP+ BIDI Optical Transceiver

BOM Number	Order Name	Description	Remarks
34060544-002	OSX010B10	BiDi Transceiver,SFP+,1270nm(Tx)/1330nm(Rx),2.5 ~11.3Gb/s,-8.2dBm,0.5dBm,-14.4dBm,LC,SM,10km	
34060546-002	OSX010B11	BiDi Transceiver,SFP+,1330nm(Tx)/1270nm(Rx),2.5 ~11.3Gb/s,-8.2dBm,0.5dBm,-14.4dBm,LC,SM,10km	

Software Upgrade Paths

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

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

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