

NE20E-S Series Main Processing Units



Product Overview

The main processing unit (MPU) integrates multiple functional units. By integrating the system control and management unit, clock unit, and system maintenance unit, the MPU provides the functions of the control plane and maintenance plane.

Figure 1. MPU



Product Features

The MPU is mainly responsible for processing routing protocols. In addition, the MPU broadcasts and filters routing packets, downloads routing policies from the policy server.

The MPU manages the NSPs and communicates with the NSPs. The MPU implements outband communication between boards. The MPU manages and carries out communication between the NSPs and slave MPU through the outband management bus.

The MPU is also responsible for data management. The system configuration data, booting file, upgrade software, and system logs are stored on the MPU. The eUSB card on the MPU functions as a mass storage device for saving data files including system files, configuration files, and logs, and is not hot-swappable.

The MPU manages and maintains the device. Through management interfaces such as serial interfaces and network interfaces on the MPU, you can manage and maintain the device.

The Huawei NE20E--S Series Routers can be equipped with a single MPU or double MPUs (in backup mode).

In the case of double MPUs, when the master MPU is working, the slave MPU is in the standby state. You can connect either the management network interface on the master MPU or that on the slave MPU to the device. The slave MPU exchanges information (heartbeat messages and backup data) with only the master MPU. Data consistency between the master and slave MPUs is ensured through high reliability mechanisms such as batch

backup and real-time backup. After a master/slave switchover, the slave MPU immediately becomes the master MPU. You can configure a default master MPU. During the start process, the MPU that you configure wins the competition and becomes the master MPU.

MPUs support two switchover modes: failover and manual switchover. The failover is triggered by serious faults or resetting of the master MPU. The manual switchover is triggered by commands run on the console interface or management interface.

MPUs monitor each other. If the master MPU fails, the slave MPU automatically becomes the master one.

Table 1. Features of MPU Components

Feature	Description
Support for Huawei VRPV8 Software	<ul style="list-style-type: none">• Multi-core or multi-process CPUs• Distributed applications• Virtualization for Virtual Routers (VSs)• NSx, including Non-Stop Service (NSS), Non-Stop Routing (NSR), Non-Stop Bridge (NSB), and Non-Stop Forwarding (NSF) and In-Service Software Upgrade (ISSU)• Netconf and two-phase configuration validation and configuration rollback
High availability	The Huawei NE20E Series Routers provides optional redundant-processor, working in 1:1 hot backup mode, improving system reliability.
System clock	The system clock unit of the MPU provides NSPs and PICs with reliable and synchronous SDH clock signals.
eUSB storage	Allows for easier manageability for code storage, boot, configurations, logs, etc.
Modularity	<p>MPUs are modularized MPU, which offers maximum investment protection and flexibility by allowing customers to upgrade to future MPU on NE20E Series Routers.</p> <p>NOTE</p> <p>NE20E-S2E and NE20E-S2F have an integrated MPU built into the chassis that is not pluggable.</p>

Product Compatibility

Table 2. MPU Compatible Chassis("●" indicates supported items, "-" indicates unsupported items) (1)

BOM	Order Name	Description	NE20E-S4	NE20E-S8	NE20E-S16	NE20E-S8A	NE20E-S16A
03030QCX	CR2D00MPUE10	Main Processing Unit E	●	●	●	-	-
03031EDQ	CR2D0MPUE110	Main Processing Unit E1	●	●	●	●	●
03032TUK	CR2D0MPUEA00	Main Processing Unit EA	●	●	●	-	-

Table 3. MPU Compatible Chassis("●" indicates supported items, "-" indicates unsupported items) (2)

BOM	Order Name	Description	NE20E-S2E	NE20E-S2F
03030QCX	CR2D00MPUE10	Main Processing Unit E	-	-
03031EDQ	CR2D0MPUE110	Main Processing Unit E1	-	-
03032TUK	CR2D0MPUEA00	Main Processing Unit EA	-	-

Product Specifications

Table 4. Main Processing Unit E Specifications

Item	Description
Order Name	CR2D00MPUE10
Silkscreen	NE-MPUE
Dimensions (H x W x D)	19.8 mm x 193.8 mm x 209.3 mm (0.78 in. x 7.63 in. x 8.24 in.)
Weight	0.6 kg (1.32 lb)
Typical power consumption	20.0 W

Item	Description
Typical heat dissipation	64.9 BTU/hour
Ambient temperature	Long terms: -40 °C to 65 °C (-40°F to 149°F)
SDRAM	2GB(9*2Gbit)
Reliability and availability	Support for hot swap and 1:1 backup mode.

Table 5. Main Processing Unit E1 Specifications

Item	Description
Order Name	CR2D0MPUE110
Silkscreen	NE-MPUE1
Dimensions (H x W x D)	19.8 mm x 193.8 mm x 209.3 mm (0.78 in. x 7.63 in. x 8.24 in.)
Weight	0.6 kg (1.32 lb)
Typical power consumption	35.0 W
Typical heat dissipation	119.5 BTU/hour
Ambient temperature	Long terms: -5 °C to 65 °C (23°F to 149°F)
SDRAM	8GB(18*4Gbit)
Reliability and availability	Support for hot swap and 1:1 backup mode.

Table 6. Main Processing Unit EA Specifications

Item	Description
Order Name	CR2D0MPUEA00
Silkscreen	NE-MPUEA
Dimensions (H x W x D)	19.8 mm x 193.8 mm x 209.3 mm (0.78 in. x 7.63 in. x 8.24 in.)
Weight	0.6 kg (1.32 lb)
Typical power consumption	20.0 W
Typical heat dissipation	64.9 BTU/hour
Ambient temperature	Long terms: -20 °C to 65 °C (-4°F to 149°F)
SDRAM	4GB(9*4Gbit)
Reliability and availability	Support for hot swap and 1:1 backup mode.

For More Information

For more information about the Huawei NE20E-S 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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