Product Overview

The SFU is an important component of the NE9000 series routers. The SFU switches cells between LPUs, communicates with MPUs using Ethernet, is subject to centralized control and management of MPUs, and monitors the temperature and voltage of various boards.

Product Characteristics

The NE9000 series switch fabric unit (SFU) implements distributed scheduling to provide good scalability and scheduling precision. The fine-grained scheduling unit resides on the fabric interface chip (FIC) on a link subcard.

The level-1 switching chip on an LPU is fully connected to the level-2 switching chips on SFUs. The level-2 switching chips on the SFUs are also fully connected to the level-3 switching chip on another LPU. In addition, the level-2 crossbar switching chips work in load balancing mode on multiple switching planes. The entire switching plane implements a non-blocking switching structure. The process of data packets passing through an SFU is as follows:

Step 1

Data packets enter an LPU through physical interfaces and are fragmented into cells of a fixed length. Then, the cells are sent to the level-1 switching chips. After being buffered and scheduled, the cells enter the crossbar switching chips on the SFU. Because the level-1 switching chip on the LPU is connected to all intermediate switching planes, cells can be evenly distributed to switching planes, which implements the load balancing of switching planes and facilitates fault-tolerant processing.

Step 2

After the cells reach the switching chip on the SFU, the switching chip schedules the packets to the outbound interface connected to the destination and sends the packets to the third-level switching chip of the LPU. This step implements the switching of cells on the intermediate switching chip.

Step 3

After the cells arrive at the shared memory switching chip of an LPU, the LPU searches for a destination port, reassembles the cells, and sends the cells through the destination physical port. This step completes the switching of data packets within the router.

Product Specifications

NE9000-20 Switch Fabric Unit G for Single Chassis(SFU4T-G) Specifications

NE9000-20 Switch Fabric Unit G for Single Chassis(SFU4T-G) Specifications

Item	Description
Order Name	CR9D0SFUTG80
Silkscreen	NE9000 SFU4T-G
Dimensions (H x W x D)	42.7 mm x 467.2 mm x 533.4 mm (1.68 in. x 18.39 in. x 21.0 in.)
Weight	8.3 kg (18.26 lb)
Typical power consumption	260.0 W
Typical heat dissipation	843.55 BTU/hour
Ambient temperature	Long terms: 0 °C to 40 °C (32°F to 104°F) ; Short terms: -5 °C to 50 °C (23°F to 122°F)
Reliability and availability	This board is responsible for cell transmission between LPUs and implements Ethernet communications with the MPU for centralized system control and management of the MPU. In addition, this board supports board temperature and voltage monitoring. The seven SFUs work in 7+1 backup mode and load-balance services at the same time. When one SFU is faulty or replaced, the other seven SFUs automatically take over its services to prevent service interruptions.

NE9000-8 Switch Fabric Unit H for Single Chassis(SFU4T-H) Specifications

NE9000-8 Switch Fabric Unit H for Single Chassis(SFU4T-H) Specifications

Item	Description
Order Name	CR9D0SFUTH80
Silkscreen	NE9000 SFU4T-H
Dimensions (H x W x D)	45.2 mm x 215.1 mm x 533.4 mm (1.78 in. x 8.47 in. x 21.0 in.)
Weight	3.7 kg (8.14 lb)
Typical power consumption	150.0 W
Typical heat dissipation	486.66 BTU/hour
Ambient temperature	Long terms: 0 °C to 40 °C (32°F to 104°F) ; Short terms: -5 °C to 50 °C (23°F to 122°F)
Reliability and availability	This board is responsible for cell transmission between LPUs and implements Ethernet communications with the MPU for centralized system control and management of the MPU. In addition, this board supports board temperature and voltage monitoring. The seven SFUs work in 7+1 backup mode and load-balance services at the same time. When one SFU is faulty or replaced, the other seven SFUs automatically take over its services to prevent service interruptions.

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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