NetEngine A813 E Series Routers

V800R022C00

Product Overview

The HUAWEI NetEngine A813 E series routers are intelligent cloud-network access products developed by Huawei for the cloud era. They feature easy deployment, easy O&M, high performance, and high reliability, and support unified management and control by Huawei iMaster NCE. Those series products provide rich features such as SRv6, IFIT, L3VPN, and meet enterprises' requirements for quick and high-quality cloud migration.



Appearance of the NetEngine A813 E

Product Features

Powerful Service Support

The device provides powerful service processing capabilities and support for a wide range of features.

- Powerful routing capabilities: The device provides Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Intermediate System-to-Intermediate System (IS-IS), and Border Gateway Protocol 4 (BGP-4). It also supports simple and ciphertext authentication, as well as fast route convergence. These features ensure network stability and security in complicated routing environments. The device supports IPv6 static routes and a variety of IPv6 routing protocols, including OSPFv3, IS-ISv6, and BGP4+. In addition, the device supports IPv6 FIB capability and supports IPv6 terminal access, IPv6 ACLs, and IPv6 policy-based routing. These features lay the foundation for smooth transition to IPv6. The device also supports IPv4/IPv6 dual stack to enhance network scalability.
- Strong service bearer capabilities: IP and SRv6 networking can be deployed depending on networking requirements, L3VPN services are supported. Because the device can provide access for both traditional and emerging services, it satisfies the needs of multiple service environments.

SRv6-Powered Intelligent Connection

SRv6 is a future-oriented, next-generation simplified protocol that inherently supports IPv6, allowing access of numerous terminals. Working with NCE, SRv6 enables network resource adjustment in accordance with changes on the cloud, one-hop access to the cloud, and service provisioning within minutes. SRv6 can identify applications and tenants to implement intelligent traffic steering based on latency and bandwidth, ensuring SLAs. In addition, SRv6 simplifies protocols and configurations.

Well-Designed QoS Mechanism

In addition to providing high-quality QoS and advanced queue scheduling algorithms and congestion control algorithms, thereby achieving accurate multi-level scheduling for data flows. This meets the SLA requirements of different users and different levels of services.

The device excels in network resource allocation and can provide a network-wide QoS solution to meet the SLA requirements of services with different priorities.

Full-Lifecycle Automation

NCE enables full-lifecycle automation and network-wide real-time visualization. Precise in-band flow measurement based on NCE and IFIT enables real-time visualization of service quality and fault locating within minutes.

All-Round Reliability Solution

The device provides reliability protection at different levels, including device, network, and service levels. It provides a network-wide reliability solution that fully meets the reliability requirements of different services, and lays the foundation for enterprise service reliability and interconnection with a system availability of 99.999%.

- Network-level reliability: The device ensures network-level reliability through various technologies, such as IP/VPN/hot-standby, TI-LFA, fast convergence of IGP and BGP, bidirectional forwarding detection (BFD), and routing protocol/port damping technologies.
- Service-level reliability: The device uses VPN FRR, ensuring stable, reliable, and uninterrupted services.

Energy-Conserving Design

The environmentally friendly design of the device conserves energy and reduces emissions.

- The device has a cooling and energy-conserving system adopting an advanced ventilation and heat dissipation design and intelligent fans. This allows the device to automatically detect and adjust the temperature, greatly improving power utilization.
- The device supports dynamic frequency modulation and intelligent fan speed adjustment, which greatly reduces power consumption and provides more obvious advantages in energy saving.

Product Specifications

Item	Description
Cabinet installation standards	ETSI (21-inch); IEC (19-inch); IMB (3U)
Dimensions without packaging (H x W x D) [mm(in.)]	43.6 mm x 320 mm x 220 mm (1.72 in. x 12.60 in. x 8.66 in.)
Chassis height [U]	1 U
Weight without packaging [kg(lb)]	2.3 kg (5.07 lb)
Typical power consumption (with configuration) [W]	32.7 W
Typical heat dissipation (with configuration) [BTU/hour]	106.1 BTU/hour
MTBF [year]	106.64 year
MTTR [hour]	2 hour

Item	Description
Availability	0.99999
CPU	4-core 1400 MHz
SDRAM	4 GB
Flash memory	16 MB
Storage	2 GB
Power supply mode	AC
Rated input voltage [V]	110 V/220 V
Input voltage range [V]	100 V to 240 V
Maximum input current [A]	1.2 A
Maximum input cable size [mm^2]	Standard C13 cable
Front-end circuit breaker/fuse [A]	> 2 A
Heat dissipation mode	Air cooling
Airflow direction	From left to right
Noise at normal temperature (acoustic power) [dB(A)]	50 dB(A)
Switching capacity	28 Gbit/s (Bidirectional). The maximum allowed error is 0.01%. To be specific, 99.99% of the line rate is guaranteed.
Redundant power supply	N/A
Redundant fans	If a single fan fails, the system can still work for a short period of time at an ambient temperature of 40°C (104°F).
Long-term operating temperature [°C(°F)]	–5°C to +55°C (23.0°F to 131.0°F)
Restriction on the operating temperature variation rate [°C(°F)]	≤ 30°C/hour (54°F/hour)
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158 °F)
Long-term operating relative humidity [RH]	5% to 95% RH, non-condensing
Storage relative humidity [RH]	5% to 100% RH, non-condensing

Item	Description
Long-term operating altitude [m(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 device must decrease by 1°C [1.8°F] for every 220 m [721.78 ft.].)
Storage altitude [m(ft.)]	< 5000 m (16404 ft.)
Remarks	Default: 6*GE/FE(o)+8*GE/FE(e)

Ports Description

Port	Connector Type	Description	Available Components
MGMT-ETH	RJ45	10M/100M auto-sensing Ethernet NM interface NOTE: If a service port can be connected to an NMS, you are advised to use the service port as the network management port.	ETH management cable
CONSOLE	RJ45	Console interface: connects to the console for on-site system configuration. The default baud rate is 9600 bit/s.	Console management cable
USB	USB TYPE A	USB port (reserved)	-
GE/FE (0–7)	RJ45	Interface for inputting and outputting FE/GE electrical signals	Ethernet cable
GE/FE (8–13)	SFP	Interface for inputting and outputting FE/GE optical signals	1Gbps Electrical Module 1.25Gbps eSFP Optical Module 1.25Gbps eSFP BIDI Optical Module 155Mbps eSFP Optical Module

Power Distribution Module（PDC120S12-CN)

The HUAWEI NetEngine A813 E series routers support AC power supply be default, if the power supply is DC, power distribution module (PDC120S12-CN) is required.



Appearance of the PDC120S12-CN

Technical Specifications of the PDC120S12-CN

Item	Description
Dimensions without packaging (H x W x D) [mm(in.)]	40 mm x 50 mm × 165 mm (1.57 in. x 1.97 in. x 6.50 in.)
Weight without packaging [kg(lb)]	0.5 kg (1.10 lb)
Installation type	Installing to the CPE power adapter bracket
Rated input voltage [V]	1. –48 V/–60 V 2. +24 V 3. +48 V **NOTE:** Do not connect the positive and negative power systems at the same time.
Input voltage range [V]	1. –72 V to –38.4 V 2. +19 V to +30 V 3. +38.4 V to +72 V
Rated output voltage [V]	12 V
Output voltage range [V]	11.64 V DC to 12.36 V DC
Maximum input current [A]	4 A
Maximum output current [A]	1. –72 V to –38.4 V: 10 A 2. +19 V to +30 V: 5 A 3. +38.4 V to +72 V: 10 A

Item	Description
Number of inputs	2
Number of outputs	1
Front-end circuit breaker/fuse [A]	6 A
Input terminal	4-pin phoenix terminal
Output terminal	3-pin common connector
Long-term operating temperature [°C(°F)]	-40°C to 65°C (-40°F to 149°F)
Storage temperature [°C(°F)]	–40°C to +70°C (–40°F to +158°F)
Long-term operating relative humidity [RH]	5% to 95% (non-condensing)
Storage relative humidity [RH]	5% to 95% (non-condensing)
Long-term operating altitude [m(ft.)]	-60 m to 5000 m (When the altitude ranges from 1800 m to 5000 m, the operating temperature decreases by 1°C for each additional 200 m.)

For More Information

For more information about the NetEngine A813 E, visit http://e.huawei.comor 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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