Huawei NetEngine AR8700 Series Enterprise Router Data Sheet

NetEngine AR8700 series enterprise routers are fixed-form-factor routers developed by Huawei for enterprise headquarters and data centers (DCs) and are mainly applied in SD-WAN solutions to deliver high performance required by enterprise customers.

Overview

NetEngine AR8700 series routers — Huawei's next-generation routers — use the ARM multi-core processor and non-blocking switching architecture. The AR8700 series routers are mainly used in SD-WAN solutions to deliver high performance required by enterprise customers.

NetEngine AR8700-8

- Fixed WAN ports: 8 x GE combo, 8 x 10GE SFP+, 1 x 40GE QSFP+, (All WAN ports can be configured as LAN)
- Dimensions (H x W x D): 88.1 mm x 442 mm x 470.0 mm

Features and Highlights

Features and Highlights of NetEngine AR8700

Service Requirement	Features and Highlights
High performance	- ARM multi-core processor and non-blocking switching architecture - Industry-leading performance, providing low latency required by key services
High reliability	- Link backup for enterprise services, improving reliability - Fault detection and locating within milliseconds, reducing service downtime - Dual MPUs(main processing unit) , zero service interruption during service switchover
Easy O&M	- Multiple management modes such as management through iMaster NCE-WAN and SNMP, simplifying network deployment and reducing OPEX
SD-WAN	- Built-in SD-WAN solution, building cost-effective and business-friendly connections over the Internet - Application identification and link quality-based intelligent traffic steering, ensuring key application experience - Multi-link traffic steering and dual-hub flexible networking - End-to-end IPsec encryption, ensuring secure service transmission

Architecture Highlights of Huawei NetEngine AR8700

Highlight	Benefits
Multi-core processor	High-speed WAN connections and powerful routing and computing capabilities, improving L4-L7 service processing efficiency
Non-blocking switching architecture	The bus bandwidth of a single slot can reach up to 10 Gbps, eliminating service forwarding performance bottlenecks.

Product Specifications

Specifications	NetEngine AR8700-8
System parameters	
Processor	ARM64 (16-core)
SD-WAN service performance (IMIX)	20Gbps
Fixed WAN ports	8 x GE combo, 8 x 10GE SFP+, 1 x 40GE QSFP+, (All WAN ports can be configured as LAN)
SIC slots	8
WSIC slots (default/maximum[2])	0/4
Auxiliary or console port	1 x RJ45 console port
USB port	1 x USB
Memory（SPU）	16GB
Memory（MPU）	8 GB
Flash（MPU）	4 GB
Hot swapping	Only MPU Supported
Dimensions and Weight	
Dimensions without mounting brackets (H x W x D)	88.1 mm x 442 mm x 470.0 mm
Dimensions with mounting brackets (H x W x D)	205mm x 760 mm x 585mm
Rack	IEC
Occupied rack space	2U
Power specifications, power consumption, and heat dissipation	
High-Voltage DC input	240 V DC
AC input	110V AC/220 V AC, 50 Hz/60 Hz

Specifications	NetEngine AR8700-8
DC input	-48 V DC/-60 V DC
Typical power consumption(W)	221W
Maximum power consumption(W)	288W
Redundant power supply	Support double AC power supply (1+1 backup) Support double DC power supply (1+1 backup)
Fan modules	Built-in pluggable fan modules
Airflow	Left or front to rear
Maximum noise	72 dB
Environmental specifications	
Operating temperature	0°C to 45°C
Operating humidity	5% to 95% (non-condensing)
Operating altitude	< 5000 m
Storage temperature	–40°C to + 70°C
Storage altitude	< 5000 m

Software Features and Protocols

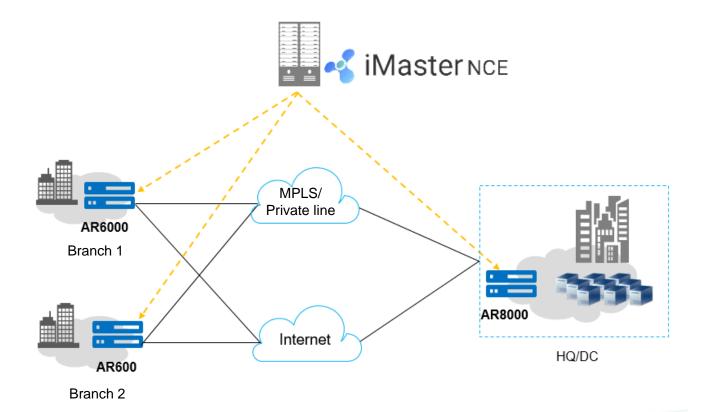| Item	NetEngine AR8700 Series
Basic function	DHCP server/client/relay, NAT, and sub-interface management
LAN	IEEE 802.1P, IEEE 802.1Q, IEEE 802.3, VLAN management, MAC management, STP/RSTP/MSTP
IPv4 unicast routing	Routing policies, static routes, RIP, OSPF, IS-IS, BGP, IP FRR
IPv6 unicast routing	Static routes, routing policies, RIPng, OSPFv3, IS-ISv6, BGP4+
Basic IPv6 function	IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, ICMPv6, DNSv6, DHCPv6
Tunneling	GRE tunnel, NAT STUN
VPN	GRE VPN,SD-WAN EVPN
QoS	Priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance, congestion management, MQC (traffic classifier, traffic behavior, and traffic policy), hierarchical QoS, Smart Application Control (SAC)
Security	ACL (v4/v6), domain-based stateful firewall, AAA authentication, RADIUS authentication, HWTACACS authentication, PKI, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, attack source tracing
Management and maintenance	Upgrade management, device management, GTL, SNMP (v1/v2c/v3), RMON, NTP, Auto-Config, USB-based/DHCP deployment, NETCONF/YANG, CLI, TCP FPM, NQA

Item	NetEngine AR8700 Series
EMC standards compliance	•CISPR32 Class A •EN 55032 Class A •CISPR24 •EN 55024 •ETSI EN 300 386 •AS/NZS CISPR32 Class A •FCC Part 15 Subpart B Class A •ICES 003 Class A •IEC 61000-3-2 •EN 61000-3-2 •IEC 61000-3-3 •EN 61000-3-3 •GB 9254 •VCCI-CISPR32 Class A
Environmental standards compliance	•RoHS •REACH •WEEE
Security standards compliance	•IEC 60950-1 •EN 60950-1 •UL 60950-1 •CSA C22.2 No 60950-1 •GB 4943.1

Application Scenarios

In the SD-WAN solution, the AR8700 functions as the gateway of the enterprise headquarters or DC and supports extensive physical links, such as MPLS and Internet links. iMaster NCE-WAN provides visualized management for the AR8700. The AR8700 integrates a wide range of SD-WAN features such as intelligent application identification and intelligent traffic steering, delivering better service experience to enterprises. For details about Huawei SD-WAN Solution, visit https://e.huawei.com/en/solutions/business-needs/enterprise-network/sd-wan.

Ordering Information

The configuration of the NetEngine AR8700 series includes host selection and software configuration.

- Host

  Select the device model according to the uplink interface type and service requirements.

- Software

  NetEngine AR8700 series routers use the SD-WAN N1 model.

Host	Ordering Information
NetEngine AR8700-8	AR8700-8,1*40GE QSFP+,8*10GE SFP+，8*GE Combo,1*USB,8*SIC
Power supply unit	**Ordering Information**
PDC1000S56-EB	POE1000W DC Module
PAC600S56-EB	600W AC & DC Module
PAC1000S56-EB	1000W AC & DC Module
License	**Ordering Information**
N1-SDWAN-F-AR8700	N1 SD-WAN Foundation,AR8700,Per Device
N1-SDWAN-F-AR8700-SNS	Subscription And Support,N1 SD-WAN Foundation,AR8700,Per Device(Annual fee validity period : 3 years from " PO signed plus 90 days ")
N1-SDWAN-A-AR8700	N1 SD-WAN Advance, AR8700,Per Device
N1-SDWAN-A-AR8700-SNS	Subscription And Support,N1 SD-WAN Advance,AR8700,Per Device(Annual fee validity period : 3 years from " PO signed plus 90 days ")

More Information

For more information, visit https://e.huawei.com/en/ or contact us in the following ways:

- Global service hotline: http://e.huawei.com/en/service-hotline
- Logging in to the Huawei Enterprise technical support website: http://support.huawei.com/enterprise/
- Sending an email to the customer service mailbox: support_e@huawei.com

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