Huawei NetEngine AR5710I-RU-NRGL Enterprise Router Data Sheet

Huawei NetEngine AR5710I-RU-NRGL is designed for network communication in challenging industrial environments with extreme temperature, humidity, and electromagnetic interference. With stand-out routing features, AR5710I-RU-NRGL best suits industrial routing scenarios.

Product Overview

Huawei NetEngine AR5710I-RU-NRGL is purpose-built for industrial gateway scenarios. By using ARM-based multi-core processors and a non-blocking switching architecture, the AR5710I-RU-NRGL integrates diverse functions such as routing, switching, VPN, 5G and security, meeting the high-performance requirements of network devices in enterprise industrial gateway scenarios.

- **Rich access capability**: Ethernet, LTE/5G, GPON/xGSPON
- **High-quality SD-WAN**: fast ZTP, all-scenario networking architecture, application quality-based intelligent traffic steering, and WAN optimization, helping deliver ultimate service experience
- **Superior performance**: 2.5G electrical ports and bandwidth acceleration on the live network; built-in 5G All-in-one gateway; built-in WAC capable of unified management of Wi-Fi 5/6/7 devices;
- **AI**: bandwidth planning, network orchestration, policy recommendation, in-band flow measurement, and automatic fault locating
- **Security protection**: integrates NGFW capabilities, offering multi-dimensional security policies, ASPF, application recognition and control, IPS, URL filtering, Antivirus and SSL-encrypted traffic detection, signature database and antivirus database update, and interconnection with third-party SSE security clouds.
- **Reliability**: carrier-class hardware reliability, network-level high reliability, and fast service fault recovery
- **Easy O&M and management**: single-site ZTP within 10 minutes, batch site replication, SD-Branch LAN/WAN converged management, switch RU plug-and-play, digital map, visualized application quality and bandwidth, rights- and domain-based management, diversified alarm and log management methods, and report generation

Appearance of AR5710I-RU-NRGL



NetEngine AR5710I-RU-NRGL

- Fixed ports: 1 x 2.5GE electrical, 1 x 10GE SFP+
- 2 x SIM cards (active/standby)
- Support for 5G, 4G
- Working temperature: -40°C to +65°C (No solar direct radiation)
- IP rating: IP65
- Power supply mode: PoE/ PoE Adapter

Features and Highlights

Features and Highlights of the AR5710I-RU-NRGL

Service Requirement	Features and Highlights
On-demand flexible configuration	• Independently deployed or used alongside a NetEngine AR series router(Co-deployment*) • Supports PoE power supply and PoE Adapter. • Supports 2.5GE /10 GE port, higher performance can be forwarded when 5G high-bandwidth back-haul is use
Full frequencies and dual architectures	• Supports 5G, compatible with 4G • Supports both standalone (SA) and not-standalone (NSA) architectures.
High performance	• Integrates the ARM multi-core processor, LSW switching chip, and hardware encryption/decryption engine, based on the self-developed SOC chip architecture. • Offers industry-leading performance, ensuring a low latency for mission-critical services.
High reliability	• Provides backup links for enterprise services, enhancing service access reliability. • Detects link faults and completes route convergence in milliseconds, greatly shortening the service interruption time.
Easy O&M	• Supports on-premises and cloud-based management by iMaster NCE-Campus using various protocols, such as NETCONF and SNMP, and high-performance data collection through telemetry. These help simplify network deployment, visualize O&M, and reduce OPEX.
SD-WAN	• Is ideal for the SD-WAN solution to build cost-effective and business-friendly connections over the Internet. • Supports application identification and link quality-based intelligent traffic steering, guaranteeing the experience of key applications. • Supports multi-link routing; end-to-end IPsec encryption plus reliable devices, ensuring secure service transmission.
Multi-core processor	• Comes equipped with a high-performance multi-core processor that supports high-speed WAN connections and powerful route computing, improving L4–L7 service processing efficiency.

*: Only AR routers can connect an AR5710I-RU-NRGL to provide 5G services in Co-deployment scenario. An AR router can be connected to a maximum of 4 AR5710I-RU-NRGLs.

Product Specifications

Specifications of the AR5710I-RU-NRGL

Specifications	NetEngine AR5710I-RU-NRGL
Forwarding performance (NAT+ACL+QoS, IMIX)	1.5 Gbps
IPSec performance (IMIX)	800 Mbps
IPSec performance (512 bytes)	1 Gbps
SD-WAN IPsec performance* (IMIX)	1.2 Gbps
SD-WAN IPsec performance* (512 bytes)	1.7 Gbps
SD-WAN performance** (IMIX)	1 Gbps
SD-WAN performance** (512 bytes)	1.4 Gbps
SD-WAN typical performance***(IMIX)	720 Mbps
SD-WAN typical performance*** (512 bytes)	900 Mbps
Fixed ports****	1 x 2.5GE electrical, 1 x 10GE SFP+
Build-in LTE/5G	5G SA/NSA, 2 x SIM cards (active/standby)
5G RU	Supported
Switch RU	Supported
WAC (Number of managed APs,default/maximum*****)	16/64
PoE in	PoE power supply/PoE Adapter
Antennas	Built-in 5G/LTE antennas
Console port	USB 3.0 Type A
USB port	1 x USB 2.0
Memory	4 GB
NAND Flash	1 GB
Dimensions without packaging (H x W x D)	80.0 mm x 240.0 mm x 200.0 mm
Dimensions with packaging (H x W x D)	80.0 mm x 260.0 mm x 200.0 mm
Weight without packaging	2.21 kg
Installation mode	Installed on a pole, wall, or desktop
IP rating	IP65

Specifications	NetEngine AR5710I-RU-NRGL
Rated input voltage (V@AC)	PoE: -48 V DC AC adapter: 110 V to 220 V, 50 Hz/60 Hz
Input voltage range (V@AC)	PoE: –42.5 V DC to –57 V DC AC adapter: 90 V to 270 V, 45 Hz to 65 Hz
Maximum input current (A)	0.6 A
Maximum output power (W@DC)	35 W
Typical power consumption (W@DC)	10 W
Maximum power consumption (W@DC)	18.5 W
Power consumption (W@DC)	15 W
Fan modules	Natural heat dissipation, fanless design
Airflow	-
Noise	0 dB(A)
Operating temperature	–40°C to +65°C(No solar direct radiation)
Operating humidity	5% to 95% (non-condensing)
Operating altitude	< 5000 m
Storage temperature	–40°C to +85°C

*: Scenario where the SD-WAN performance specification applies: IPsec. This specification applies to the combined total of traffic in inbound and outbound directions. Manual switching to the routing mode is required.

**: Scenario where the SD-WAN performance specification applies: IPsec + QoS. This specification applies to the combined total of traffic in inbound and outbound directions. Manual switching to the routing mode is required.

***: Scenario where the typical SD-WAN performance specification applies: IPsec + QoS + SA + AppFlow. This specification applies to the combined total of traffic in inbound and outbound directions. Manual switching to the routing mode is require

****: All fixed ports are LAN ports by default and can be switched to WAN ports.

*****: By default, a maximum of 16 APs can be managed for free. If the number of APs exceeds 16, licenses must be purchased.

Frequency bands	
5G	•5G NR SA: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n75/n77/n78/n79/n80/n81/n82/n83/n84 •5G NR NSA: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n77/n78/n79 Supported Rates: •5G SA: Theoretical uplink peak of 500 Mbps, theoretical downlink peak of 5.4 Gbps •5G NSA: Theoretical uplink peak of 125 Mbps, theoretical downlink peak of 3.6 Gbps
LTE	•LTE FDD: B1/B3/B5/B7/B8/B18/B19/B20/B26/B28/B32 •LTE TDD: B34/B38/B39/B40/B41/B42/B43

Specifications	NetEngine AR5710I-RU-NRGL
DL MIMO	5G 4x4: n1/n3/n7/n38/n40/n41/n77/n78/n79 5G 2x2: n5/n8/n20/n28/n75 LTE 4x4: B1/B3/B7/B38/B39/B40/B41/B42/B43 LTE 2x2: B5/B8/B18/B19/B20/B26/B28/B32/B34
UL MIMO	5G 2x2: n1/n38/n40/n41/n77/n78/n79

Software Features and Protocols

Item	NetEngine AR5710I-RU-NRGL
Basic function	DHCPv4 Server/Client/Relay, DHCPv6 Server/Client/Relay, PPPoE client, NAT, Interface management, DNS
LAN	IEEE 802.1p, IEEE 802.1Q, VLAN management, VLAN aggregation, Voice VLAN, MAC management, STP/RSTP, MSTP
IPv4 unicast routing	Routing policies, static routes, RIP, OSPF, IS-IS, BGP, IP FRR
IPv6 unicast routing	Static routing, routing policies, RIPng, OSPFv3, IS-ISv6, BGP4+
Basic IPv6 function	ND, Path MTU (PMTU), IPv6 FIB, IPv6 ACL, ICMPv6, DNSv6, DHCPv6, PPPoE client IPv6, IPv4 over IPv6, IPv6 over IPv4
VPN	GRE, GRE over IPsec, Ethernet over GRE, IPsec v4/v6, IKE(v1/v2), Segment Routing IPv6(SRv6), L2TP client, DSVPN, IPv4/IPv6 Dual-stack, SD-WAN EVPN
WAN optimization	A-FEC
Multicast	IGMP V1/V2/V3, PIM SM, PIM DM, MSDP, MBGP, IP multicast over SD-WAN
MPLS	MPLS LDP, MPLS L3VPN, Dynamic LSP, IP FRR, LDP FRR, MPLS 6VPE, MPLS 6PE
QoS	Priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance, congestion management, MQC (traffic classifier, traffic behavior, and traffic policy), level-3 traffic scheduling and shaping (HQoS), application identification, intelligent policy-based routing (SPR), and SaaS routing, Intelligent Traffic Policing(ITP)
Security	ACL/ACL6, firewall, AAA authentication, RADIUS, HWTACACS, NAC, PKI, Storm suppression, ARP security, ICMP security, attack defense, URPF, CPCAR, Attack defense, 802.1X authentication, MAC authentication, portal authentication, port security, integrates NGFW capabilities, offering security policy control based on IP address (groups)/regions/domain groups/users (groups)/applications/time ranges, ASPF, application recognition and control, IPS, URL filtering, Antivirus and SSL-encrypted traffic detection, signature database and antivirus database update, and interconnection with third-party SSE security clouds
System management	Upgrade management, device management, Telnet, SSH(v1/v2), WEB manager(HTTPS), File Transfer Protocols (SCP, SFTP, FTP, TFTP), OPS, SNMP (v1/v2c/v3), RMON, NTP, USB-, DHCP option-, and email-based deployment, deployment through the registration query center, NETCONF/YANG/telemetry, TCP FPM, NQA, IFIT, NetStream/NetStream v6, switch RU plug-and-play, web-based management, dying gasp, LLDP for an RU, Event Versus Action(EVA)

Item	NetEngine AR5710I-RU-NRGL
Reliability	BFD, BFD for IPv6, VRRP, VRRP6, HRP
WAC	•Management of Wi-Fi 5/6/7 Fit APs •CAPWAP protocol •WLAN user management •WLAN radio management •WLAN QoS •WLAN security •WLAN user roaming Supports 802.11k and 802.11v smart roaming, 802.11r fast roaming (≤ 50 ms) and AI roaming

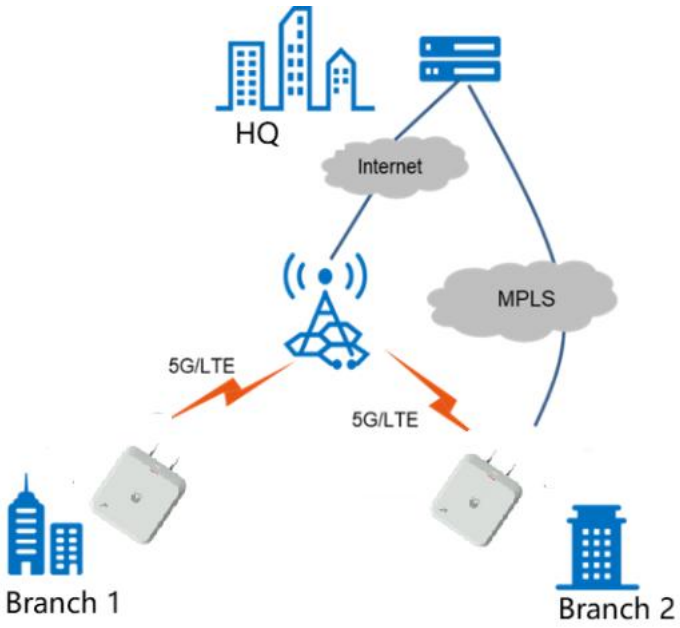
Safety and Regulatory Standards

Item	NetEngine AR5710I-RU-NRGL
EMC standards compliance	•CISPR32 •EN 55032 •CISPR24 •EN 55024 •ETSI EN 300 386 •AS/NZS CISPR32 •FCC Part 15 Subpart B •ICES 003 •IEC 61000-3-2 •EN 61000-3-2 •IEC 61000-3-3 •EN 61000-3-3 •GB 9254 •VCCI-CISPR32
Environmental standards compliance	•RoHS •REACH •WEEE
Security standards compliance	•IEC 60950-1 •EN 60950-1 •UL 60950-1

Item	NetEngine AR5710I-RU-NRGL
	•CSA C22.2 No 60950-1 •GB 4943.1

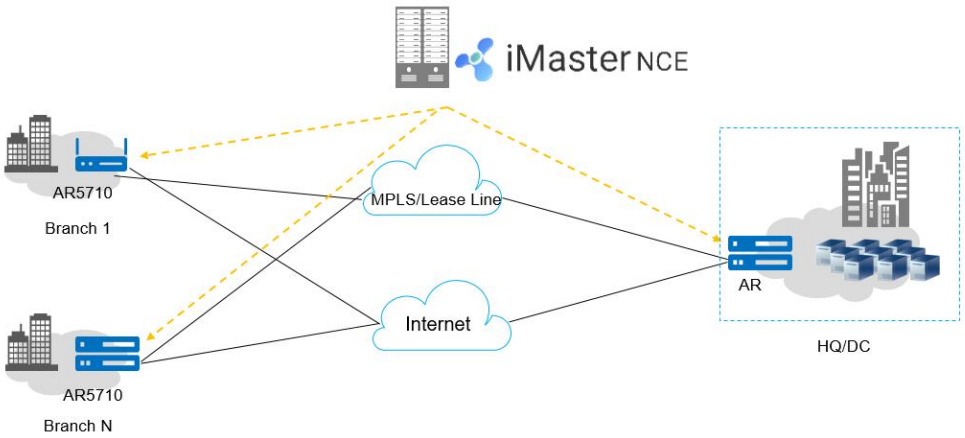
Application Scenarios

Networking diagram for branch 5G/LTE wireless access



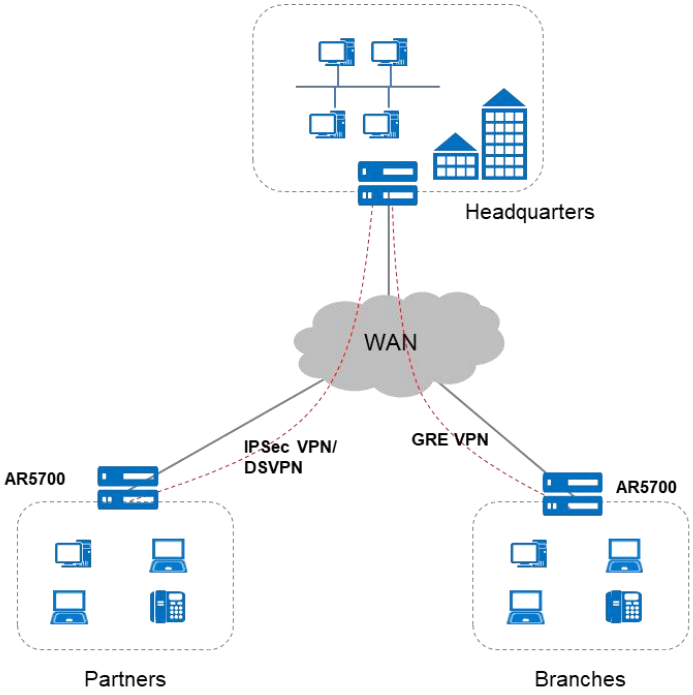
Huawei NetEngine AR5710I-RU-NRGL routers feature 5G/LTE functionality, enabling wireless interconnection between enterprise branches and between the headquarters and branches. 5G/LTE interfaces can function as the active link or as a backup for wired links, enhancing network stability while reducing network construction cost.

SD-WAN networking



In the SD-WAN Solution, Huawei NetEngine AR5710I-RU-NRGL routers can serve as gateways for small and medium-sized enterprise branches and support multiple physical links such as MPLS private lines and Internet links. Additionally, they can be managed and visualized on iMaster NCE in a unified manner. The AR5710I-RU-NRGL provides extensive SD-WAN features such as intelligent application identification and intelligent traffic steering to deliver better service experience to enterprises. For details about Huawei SD-WAN Solution, visit https://e.huawei.com/en/solutions/enterprise-network/campus-network/branch-campus-network.

Networking diagram in the VPN scenario



Build different types of VPNs through the Internet

Huawei NetEngine AR5710I-RU-NRGL series routers offer a range of secure access features that enable communication between enterprise branches and headquarters, as well as allowing partners to access enterprise resources. Secure tunnels such as GRE VPN, IPsec VPN, DSVPN, and L2TP VPN tunnels can be set up between the headquarters and branches for secure data access and transmission. The AR5710I-RU-NRGL supports quick tunnel deployment and authentication for branches. Furthermore, authenticated and authorized partners can remotely access the enterprise resources over these tunnels.

Ordering Information

The configuration of the NetEngine AR5710I-RU-NRGL includes device model selection and software configuration.

- Device model

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

- Software

The NetEngine AR5710I-RU-NRGL software consists of the basic software and licensed software. The basic software provides basic features such as routing, switching, and security, while the licensed software provides additional functions, such as security protection.

Host	Ordering Information
AR5710I-RU-NRGL*	AR5710I-RU-NRGL,1*2.5GE Copper, 1*10GE SFP+,5G (NR/LTE), PoE PD, IP65

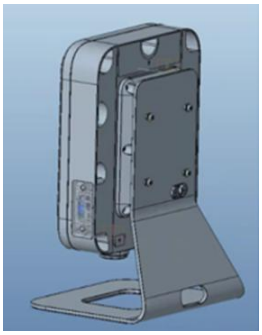
*: When the AR5710I-RU-NRGL is in Co-deployment mode, no licenses can be configured.

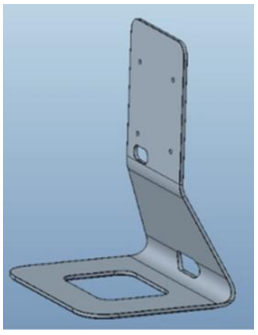
Installation Scenario	Auxiliary Material Package	Ordering Information
Indoor Scenario	Indoor desktop Scenario	For indoor desktop scenarios
Outdoor Scenario	Basic Scenario	For standard outdoor installation
	Anti-vibration Enhanced Scenario	For outdoor installations requiring wind resistance, shock-proofing, and corrosion resistance

Software sales model	License	Ordering Information
Threat protection service	LAR0TP1401 LAR0TP1402 LAR0TP1403 LAR0TP1404 LAR0TP1405	Threat Protection Service Subscribe x Year (applicable to the AR5700) (corresponding model: LAR0TP140x), including: • IPS signature database update • URL remote query for URL filtering • Antivirus signature database update
Value-added package	AR57-LIC-Basic-IFIT	AR5700 Value-added Basic IFIT Package
	AR57-LIC-Enhance-IFIT	AR5700 Value-added Enhanced IFIT Package
	AR57-LIC-NETCONN	AR5700 Value-added Network Connection Package, including: • DSVPN
N1 Model	N1-AR57-B	N1 AR5700 CloudCampus Basic Software (exclude SD-WAN), Per Device
	N1-AR57-F	N1 AR5700 CloudCampus Foundation (include SD-WAN), Per Device
	N1-AR57-A	N1 AR5700 CloudCampus Advanced (include SD-WAN), Per Device

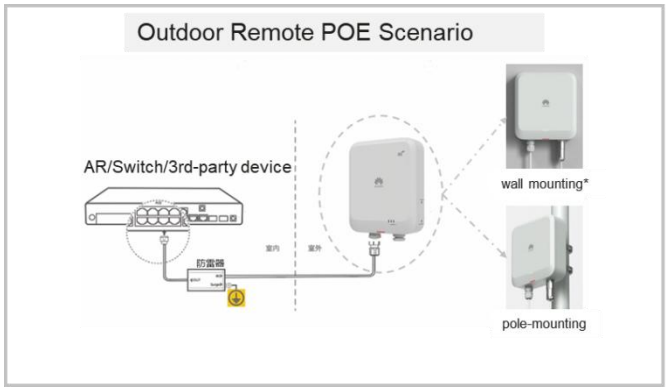
Equipment Installation

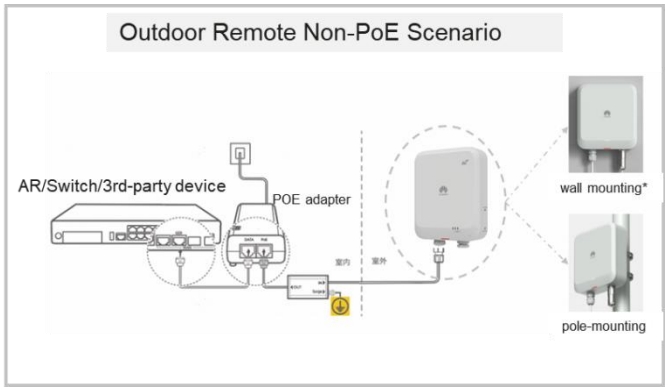
- Desktop Installation-Bracket Installation





- Outdoor remote deployment





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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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang Shenzhen 518129
People's Republic of China

Website: www.huawei.com