

# Huawei NetEngine AR600 Series Enterprise Routers

Huawei AR600 series enterprise routers are 1U fixed routers designed for use in small- and medium-sized business (SMBs) and small-sized enterprise branches. The AR600 integrates various service features such as SD-WAN, routing, switching, security, and WLAN, providing diversified services and high performance.

## **Product Overview**

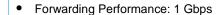
Huawei's next-generation NetEngine AR600 series enterprise routers use multi-core processors and a non-blocking switching structure, helping to deliver three times the industry average performance. The NetEngine AR600 also integrates functions such as SD-WAN, cloud management, routing, switching, VPN, WLAN, and security, ensuring diversified and cloud-based services are fully supported.

Huawei NetEngine AR600 series enterprise routers can be deployed at branches of SMBs and small-sized enterprises as required to provide enterprise network egress capabilities. The NetEngine AR600 series include two sub series, NetEngine AR650 series and NetEngine AR610 series.

NetEngine AR650 series consists of models such as the NetEngine AR651C, NetEngine AR651, NetEngine AR651W, NetEngine AR651W-8P, NetEngine AR657W. The NetEngine AR610 series consists of models such as the NetEngine AR611, NetEngine AR611W, NetEngine AR617VW, NetEngine AR617VW-LTE4EA, NetEngine AR617VW-LTE4. Huawei provides various models which can meet networking requirements of enterprises of different scales.



NetEngine AR651C



- Fixed WAN ports: 2\*GE SFP, 2\*GE RJ45
- Fixed LAN ports: 8\*GE RJ45(can be configured as WAN)
- Dimensions (H x W x D): 43.6 mm x 250.0 mm x 210.0 mm



NetEngine AR651

- Forwarding Performance: 1 Gbps
- Fixed WAN ports: 2\*GE Combo
- Fixed LAN ports: 8\*GE RJ45(can be configured as WAN)
- Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm



NetEngine AR651W

- Forwarding Performance: 1 Gbps
- Fixed WAN ports: 2\*GE Combo
- Fixed LAN ports: 8\*GE RJ45(can be configured as WAN)
- Wi-Fi: 802.11ac/b/g/n
- Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm



- Forwarding Performance: 1 Gbps
- Fixed WAN ports: 2\*GE Combo
- Fixed LAN ports: 8\*GE RJ45(can be configured as WAN)

| NetEngine AR651W-8P  | • Wi-Fi: 802.11ac/b/g/n  |
|----------------------|--|
|                      | PoE: compliance with IEEE 802.3af and 802.3at  |
|                      | • Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm  |
| NetEngine AR657W     | <ul> <li>Forwarding Performance: 1 Gbps</li> <li>Fixed WAN ports: 2*GE Combo, 1VDSL 35B</li> <li>Fixed LAN ports: 8*GE RJ45(can be configured as WAN)</li> <li>Wi-Fi: 802.11ac/b/g/n</li> </ul>  |
| Nettinglie Altos / W | Dimensions (H x W x D): 44.0 mm x 300.0 mm x 216.4 mm  |
| NetEngine AR611W     | <ul> <li>Forwarding Performance: 300Mbps</li> <li>Fixed WAN ports: 1*GE Combo</li> <li>Fixed LAN ports: 4*GE RJ45(can be configured as WAN)</li> <li>Wi-Fi: 802.11ac/b/g/n</li> <li>Dimensions (H x W x D): 38.0 mm x 240.0 mm x 161.5 mm</li> </ul>   |
| NetEngine AR611      | <ul> <li>Forwarding Performance: 300Mbps</li> <li>Fixed WAN ports: 1*GE Combo</li> <li>Fixed LAN ports: 4*GE RJ45(can be configured as WAN)</li> <li>Dimensions (H x W x D): 38.0 mm x 240.0 mm x 161.5 mm</li> </ul>  |
| NetEngine AR617VW    | <ul> <li>Forwarding Performance: 300Mbps</li> <li>Fixed WAN ports: 1*GE Combo, 1 * VDSL 35B</li> <li>Fixed LAN ports: 4*GE RJ45(can be configured as WAN)</li> <li>2 * FXS</li> <li>Wi-Fi: 802.11ac/b/g/n</li> <li>Dimensions (H x W x D): 38.0 mm x 240.0 mm x 161.5 mm</li> </ul>          |
|                      | <ul> <li>Forwarding Performance: 300Mbps</li> <li>Fixed WAN ports: 1*GE Combo, 1 * VDSL 35B, 1 * LTE</li> <li>Fixed LAN ports: 4*GE RJ45(can be configured as WAN)</li> <li>2 * FXS</li> <li>Wi-Fi: 802.11ac/b/g/n</li> <li>Dimensions (H x W x D): 38.0 mm x 240.0 mm x 161.5 mm</li> </ul> |



<sup>\*\*</sup> Note: NetEngine AR617VW-LTE4 is sold only in Latin America.

# **Features and Benefits**

## Features and Benefits

| Service Requirement | Features and Benefits   |
|---------------------|---|
| High performance    | <ul> <li>Multi-core processors and a non-blocking switching structure</li> <li>Three times the industry average performance, providing the lowest latency for key services</li> </ul>   |
| High reliability    | <ul> <li>Link backup for enterprise services, improving reliability</li> <li>Fault detection and determination in milliseconds, minimizing service interruption time</li> </ul>   |
| 5G Wireless access  | <ul> <li>AR600 series support RU-5G-101, provide high wireless bandwidth experience</li> <li>Support dual architecture, NSA/SA</li> <li>Support dual SIM card</li> <li>For more information about RU-5G-101, see the RU-5G-101 Datasheet.</li> </ul>  |
| Easy O&M            | Multiple management modes, including SD-WAN management, SNMP-based network management, web-based network management, and cloud-based management, simplifying network deployment and reducing OPEX   |
| Service convergence | Integration of functions such as routing, switching, VPN, security, and WLAN, meeting diversified enterprise service requirements, saving space, and reducing TCO   |
| Security            | Built-in firewall, IPS(AR651/AR651W/AR651W-8P/AR657W), URL filtering, and multiple VPN technologies, providing comprehensive security protection capabilities   |
| SD-WAN Ready        | <ul> <li>Built-in SD-WAN solution, building cost-effective and business-friendly connections over the Internet</li> <li>ZTP (email-, USB-, and DHCP-based deployment), minimizing skill requirements and provisioning devices in minutes</li> <li>First packet identification (FPI) for SaaS applications and service awareness for complex applications, identifying over 90% of applications</li> <li>Traffic steering based on bandwidth and link quality, ensuring experience of key applications and improving bandwidth utilization to up to 90%</li> </ul> |

## Architecture Highlights

| Architecture Feature         | Benefits  |
|------------------------------|---|
| Multi-core processor         | High-performance multi-core processors, supporting high-speed WAN connections, powerful route calculation capabilities, and enhanced L4-L7 service processing |
| Extensive network interfaces | Extensive flexible interface cards such as LAN, WAN, 3G/LTE, and WLAN   |

# **Product Specifications**

NetEngine AR650 Series Technical Specifications

| Item   | NetEngine                                     | NetEngine                        | NetEngine                        | NetEngine   | NetEngine                        |
|--|---|----------------------------------|----------------------------------|---|----------------------------------|
|  | AR651C  | AR651                            | AR651W                           | AR651W-8P   | AR657W                           |
| System Parameters  |   |                                  |                                  |   |                                  |
| Forwarding Performance (LAN - > WAN + WAN - > LAN, NAT + ACL + QoS, IMIX, Default)       | 1 Gbps  | 1 Gbps                           | 1 Gbps                           | 1 Gbps  | 1 Gbps                           |
| Forwarding Performance (LAN - > WAN + WAN - > LAN, NAT + ACL + QoS, IMIX, Boost License) | 1.5 Gbps                                      | 2 Gbps                           | 2 Gbps                           | 2 Gbps  | 2 Gbps                           |
| IPsec performance (IMIX)   | 1 Gbps  | 2 Gbps                           | 2 Gbps                           | 2 Gbps  | 2 Gbps                           |
| IPsec performance<br>(1400 bytes)  | 2 Gbps  | 3.7 Gbps                         | 3.7 Gbps                         | 3.7 Gbps  | 3.7 Gbps                         |
| Fixed WAN ports  | 2 x GE SFP, 2 x<br>GE RJ45                    | 2 x GE combo                     | 2 x GE combo                     | 2 x GE combo  | 2*GE Combo,<br>1VDSL 35B         |
| Fixed LAN ports  | 8 x GE RJ45(can b                             | e configured as WA               | N)                               |   |                                  |
| Service extension slot   | -   | 1 x MIC                          | 1 x MIC                          | 1 x MIC   | 1 x MIC                          |
| Wi-Fi  | - Dual-band (2.4 GHz and 5 GHz), 802.11b/g/n/ |                                  | 1b/g/n/ac                        |   |                                  |
| PoE  | -   | -                                | -                                | support PoE   | -                                |
| PoE capability   | -   | -                                | -                                | GE0 to GE7<br>support PoE+ out,<br>Maximum output<br>power of 100 W | -                                |
| USB port   | 1 x USB                                       | 1 x USB                          | 1 x USB                          | 1 x USB   | 1 x USB                          |
| Auxiliary or console port  | 1 x RJ45 console p                            | ort                              |                                  |   |                                  |
| Memory   | 1 GB  | 2 GB                             | 2 GB                             | 2 GB  | 2 GB                             |
| Flash memory   | 1 GB  | 1 GB                             | 1 GB                             | 1 GB  | 1 GB                             |
| Dimensions and Weight  |   |                                  |                                  |   |                                  |
| Router dimensions,<br>With no mounting<br>bracket installed (H x<br>W x D)               | 43.6 mm x 250.0<br>mm x 210.0 mm              | 44.0 mm x 300.0<br>mm x 216.4 mm | 44.0 mm x 300.0<br>mm x 216.4 mm | 44.0 mm x 300.0<br>mm x 216.4 mm                                    | 44.0 mm x 300.0<br>mm x 216.4 mm |
| Packaging dimensions   |   |                                  | 455 455                          | 155 mm x 455  | 155 mm x 455                     |
| (H x W x D)  | 155 mm x 455<br>mm x 280 mm                   | 155 mm x 455<br>mm x 280 mm      | 155 mm x 455<br>mm x 280 mm      | mm x 280 mm   | mm x 280 mm                      |

| Item                               | NetEngine<br>AR651C   | NetEngine<br>AR651         | NetEngine<br>AR651W | NetEngine<br>AR651W-8P | NetEngine<br>AR657W |  |
|------------------------------------|---|----------------------------|---------------------|------------------------|---------------------|--|
| Rack                               | IEC   | IEC                        | IEC                 | IEC                    | IEC                 |  |
| Occupied rack space                | 1U  | 1U                         | 1U                  | 1U                     | 1U                  |  |
| Power Specifications,              | Power Consumptio  | n, and Heat Dissip         | ation               |                        |                     |  |
| Rated input voltage range (AC)     | 100 V to 240 V  | 100 V to 240 V             | 100 V to 240 V      | 100 V to 240 V         | 100 V to 240 V      |  |
| Rated input frequency (AC)         | 50 Hz/60 Hz   | 50 Hz/60 Hz                | 50 Hz/60 Hz         | 50 Hz/60 Hz            | 50 Hz/60 Hz         |  |
| Maximum input voltage range (AC)   | 90 V to 264 V   | 90 V to 264 V              | 90 V to 264 V       | 90 V to 264 V          | 90 V to 264 V       |  |
| Maximum input current (AC)         | 3 A   | 3 A                        | 5 A                 | 5 A                    | 5 A                 |  |
| Maximum output power (AC)          | 36 W  | 36 W                       | 60 W                | 60 W                   | 60 W                |  |
| Typical power consumption          | 22.1 W  | 24 W                       | 36 W                | 38 W                   | 36 W                |  |
| Maximum power consumption          | 25.2 W  | 28 W                       | 40 W                | 43 W                   | 40 W                |  |
| Fan module                         | Natural heat dissipation, without fans  | Built-in unpluggab         | le fan modules      |                        |                     |  |
| Airflow                            | N/A   | Left to right              | Left to right       | Left to right          | Left to right       |  |
| Noise level                        | N/A   | 47.4dB                     | 47.4dB              | 47.4dB                 | 47.4dB              |  |
| Environment Parameters             |   |                            |                     |                        |                     |  |
| Operating temperature              | 0 ° C to 45 ° C   |                            |                     |                        |                     |  |
| Operating humidity                 | 5% to 95% (non-co   | 5% to 95% (non-condensing) |                     |                        |                     |  |
| Operating altitude                 | < 5000 m (16404.2   | ft.)                       |                     |                        |                     |  |
| Storage temperature                | –40 ° C to +70 ° C  |                            |                     |                        |                     |  |
| Storage altitude                   | < 5000 m (16404.2   | ft.)                       |                     |                        |                     |  |
| Safety and Regulatory              | Safety and Regulatory Standards   |                            |                     |                        |                     |  |
| EMC standards compliance           | CISPR32 Class A EN 55032 Class A CISPR24 EN 55024 ETSI EN 300 386 ETSI EN 301 489-1 ETSI EN 301 489-17 ETSI EN 301 489-52 |                            |                     |                        |                     |  |
| Environmental standards compliance | RoHS<br>REACH<br>WEEE   |                            |                     |                        |                     |  |
| Safety standards                   | IEC 60950-1   |                            |                     |                        |                     |  |

| Item                       | NetEngine<br>AR651C  | NetEngine<br>AR651   | NetEngine<br>AR651W  | NetEngine<br>AR651W-8P                 | NetEngine<br>AR657W |
|----------------------------|--|--|----------------------|--|---------------------|
| compliance                 | EN 60950-1   |  |                      |  |                     |
| Features and Protoco       | ls   |  |                      |  |                     |
| Basic function             | DHCP server/client   |  | er/client, PPPoA se  | rver/client, PPPoEoA                   | server/client, NAT, |
| LAN                        | IEEE 802.1P, IEEE management, STP  |  | .3, VLAN managem     | ent, VLAN aggregatio                   | on, MAC             |
| Voice                      | RTP, SIP, SIP AG, I support)   | P PBX/TDM PBX, \   | /oIP, SBC (AR617V    | W/AR617VW-LTE4E                        | A/AR617VW-LTE4      |
| 3G/LTE                     | -  | FDD LTE, TDD L   | TE, DC-HSPA+, HS     | SPA+, HSPA, and WC                     | DMA                 |
| WLAN (AC)                  | management, WLA  |  | ent (802.11a/b/g/n/a | agement), CAPWAP,<br>c), WLAN QoS (WMN |                     |
| WLAN (AP)                  | AP management, WLAN QoS (WMM), WLAN sec (WEP/WPA/WPA2/key management), WLAN radi management (802.11b/g/n/ac), and WLAN user management   |  | WLAN radio           |  |                     |
| IPv4 unicast routing       | Routing policies, st   | Routing policies, static routes, RIP, OSPF, IS-IS, BGP         |                      |  |                     |
| IPv6 unicast routing       | Static routes, routing   | Static routes, routing policies, RIPng, OSPFv3, IS-ISv6, BGP4+ |                      |  |                     |
| Basic IPv6 function        | IPv6 ND, IPv6 PM7  | IPv6 ND, IPv6 PMTU, IPv6 FIB, IPv6 ACL, ICMPv6, DNSv6, DHCPv6  |                      |  |                     |
| IPv6 tunneling             | Manual tunnel, aut   | omatic tunnel, GRE   | tunnel, IPv6 over II | Pv4 tunnel, 6 to 4 tunr                | nel, ISATAP         |
| Multicast                  | IGMP v1/v2/v3, PIN   | M-SM, PIM-DM, MS   | DP, MBGP, IPv6 P     | IM, MLD                                |                     |
| MPLS ***                   | -  | LDP, MPLS L3 VF<br>LDP FRR, TE FR                              |                      | tic LSP, dynamic LSP                   | , MPLS TE, IP FRR,  |
| VPN                        | IPsec VPN, GRE V   | 'PN, DSVPN, A2A \  | /PN, L2TP VPN, L2    | TPv3 VPN, VxLAN                        |                     |
| QoS                        | DiffServ mode, priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance, congestion management, MQC (traffic classifier, traffic behavior, and traffic policy), hierarchical QoS, WLAN QoS, FR QoS, Smart Application Control (SAC)   |  |                      |  |                     |
| WAN Optimization           | Multi-fed and Selec  | ctive receiving, per-  | oacket load balancii | ng                                     |                     |
| Security                   | ACL (v4/v6), domain-based stateful firewall, 802.1X authentication, MAC address authentication, portal authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, PKI, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, blacklist, attack source tracing, online behavior management, IPS(AR651/AR651W/AR651W-8P/AR657W), URL filtering |  |                      |  |                     |
| Management and maintenance | Upgrade management, device management, web-based network management, GTL, SNMP (v1/v2c/v3), RMON, NTP, CWMP, Auto-Config, URL-based/USB-based/DHCP deployment, NETCONF/YANG, CLI, Netstream, IP FPM, TCP FPM, TWAMP Light, IP accounting, NQA  |  |                      |  |                     |

<sup>\*\*\*</sup> Note: V300R019C11 and later versions, NetEngine AR651/AR651W/AR651W-8P/AR657W support MPLS features; V300R019C13 and later versions, NetEngine AR651/AR651C/AR651W/AR651W-8P/AR657W support WAN Optimization features.

| Item   | NetEngine AR611        | NetEngine AR611W      | NetEngine AR617VW             | NetEngine<br>AR617VW-LTE4EA<br>/ AR617VW-LTE4  |
|--|------------------------|-----------------------|-------------------------------|--|
| System Parameters  |                        |                       |                               |  |
| Forwarding Performance<br>(LAN - > WAN + WAN - ><br>LAN, NAT + ACL + QoS,<br>IMIX) | 300Mbps                | 300Mbps               | 300Mbps                       | 300Mbps  |
| IPsec performance (IMIX)   | 200Mbps                | 200Mbps               | 200Mbps                       | 200Mbps  |
| Fixed WAN ports  | 1 * GE combo           | 1 * GE combo          | 1 * GE combo, 1 *<br>VDSL 35B | 1 * GE combo, 1 *<br>VDSL 35B, 1 * LTE   |
| Standards compliance<br>and frequency bands<br>supported                           | -                      | -                     | -                             | AR617VW-LTE4EA: LTE FDD: Band 1/3/5/7/8/20 LTE TDD: Band 38/40/41 WCDMA: Band 1/5/8 GSM: 900/1800(MHz) AR617VW-LTE4: LTE FDD: Band 1/2/3/4/5/7/8/20 WCDMA: Band 1/2/5/8 GSM: 850/900/1800/1900 (MHz) |
| Fixed LAN ports  | 4 * GE RJ45 (can be co | onfigured as WAN)     | I                             |  |
| Voice  | -                      | -                     | 2 * FXS                       | 2 * FXS  |
| Wi-Fi  | -                      | Dual-band (2.4 GHz an | d 5 GHz), 2x2 MIMO, 802.      | 11b/g/n/ac   |
| Auxiliary or console port  | 1 x RJ45 console port  |                       |                               |  |
| USB port   | 1*USB2.0               | 1*USB2.0              | 1*USB2.0                      | 1*USB2.0   |
| Memory   | 1GB                    | 1GB                   | 1GB                           | 1GB  |
| Flash memory   | 1GB                    | 1GB                   | 1GB                           | 1GB  |
| Dimensions and Weight  |                        |                       |                               |  |
| Router dimensions, With no mounting bracket installed (H x W x D)                  | 38.0 mm x 240.0 mm x   | 161.5 mm              |                               |  |
| Packaging dimensions (H x W x D)   | 90 mm x 370 mm x 257mm |                       |                               |  |
| Weight   | 0.60kg                 |                       |                               |  |
| Form Factor/Height   | desktop                |                       |                               |  |

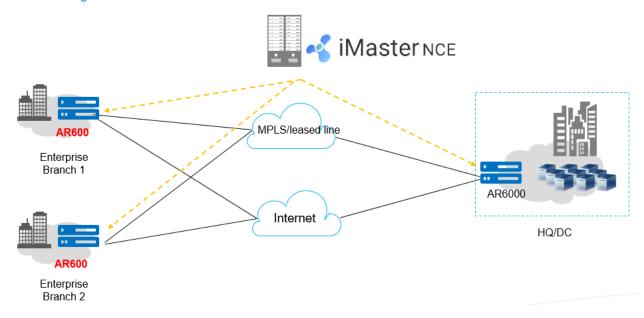
| Item                               | NetEngine AR611  | NetEngine AR611W | NetEngine AR617VW         | NetEngine<br>AR617VW-LTE4EA<br>/ AR617VW-LTE4 |  |
|------------------------------------|--|------------------|---------------------------|---|--|
| Power Specifications, Pow          | er Consumption, and H  | eat Dissipation  |                           |   |  |
| Rated input voltage range (AC)     | 100 V to 240 V   | 100 V to 240 V   | 100 V to 240 V            | 100 V to 240 V                                |  |
| Rated input frequency (AC)         | 50 Hz/60 Hz  | 50 Hz/60 Hz      | 50 Hz/60 Hz               | 50 Hz/60 Hz                                   |  |
| Maximum input voltage range (AC)   | 90 V to 264 V  | 90 V to 264 V    | 90 V to 264 V             | 90 V to 264 V                                 |  |
| Maximum output current (AC)        | 2A   | 2A               | 2A                        | 2A  |  |
| Maximum output power (AC)          | 24W  | 24W              | 24W                       | 24W   |  |
| Minimum power consumption          | 4W   | 7W               | 8W                        | 8W  |  |
| Maximum power consumption          | 5W   | 12W              | 15W                       | 17W   |  |
| Fan module                         | Natural heat dissipation   | ı, without fans  |                           |   |  |
| Airflow                            | N/A  |                  |                           |   |  |
| Noise level                        | N/A  |                  |                           |   |  |
| Environment Parameters             |  |                  |                           |   |  |
| Operating temperature              | 0 ° C to 45 ° C  |                  |                           |   |  |
| Operating humidity                 | 5% to 95% (non-condensing)   |                  |                           |   |  |
| Operating altitude                 | < 5000 m (16404.2 ft.)   |                  |                           |   |  |
| Storage temperature                | -40 ° C to +70 ° C   |                  |                           |   |  |
| Storage altitude                   | < 5000 m (16404.2 ft.)   |                  |                           |   |  |
| Safety and Regulatory Star         | ndards   |                  |                           |   |  |
| EMC standards compliance           | CISPR32 Class A<br>EN 55032 Class A<br>CISPR24<br>EN 55024<br>ETSI EN 300 386<br>ETSI EN 301 489-1<br>ETSI EN 301 489-17<br>ETSI EN 301 489-52 |                  |                           |   |  |
| Environmental standards compliance | RoHS<br>REACH<br>WEEE  |                  |                           |   |  |
| Safety standards compliance        | IEC 60950-1<br>EN 60950-1  |                  |                           |   |  |
| Features and Protocols             |  |                  |                           |   |  |
| Basic function                     | DHCP server/client/rela  | =                | PPPoA server/client, PPPo | EoA server/client,                            |  |

| Item                       | NetEngine AR611  | NetEngine AR611W   | NetEngine AR617VW      | NetEngine<br>AR617VW-LTE4EA<br>/ AR617VW-LTE4       |  |
|----------------------------|--|--|------------------------|---|--|
| LAN                        | IEEE 802.1P, IEEE 802<br>management, STP/RST   |  | nanagement, VLAN aggre | gation, MAC   |  |
| Voice                      | RTP, SIP, SIP AG, IP PE<br>LTE4 support)   | 3X/TDM PBX, VoIP, SBC  | (AR617VW/AR617VW-LTI   | E4EA/AR617VW-                                       |  |
| 3G/LTE                     | -  | -  | -                      | FDD LTE, DC-<br>HSPA+, HSPA+,<br>HSPA, and<br>WCDMA |  |
| WLAN (AC)                  | management, WLAN ra  | AP management (AC discovery, AP access, and AP management), CAPWAP, WLAN user management, WLAN radio management (802.11a/b/g/n/ac), WLAN QoS (WMM), and WLAN security (WEP, WPA, WPA2, key management) |                        |   |  |
| WLAN (AP)                  | AP management, WLAN QoS (WMM), WLAN security (WEP/WPA/WPA2/key management), WLAN radio management (802.11b/g/n/ac), and WLAN user management   |  |                        |   |  |
| IPv4 unicast routing       | Routing policies, static routes, RIP, OSPF, IS-IS, BGP   |  |                        |   |  |
| 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  |  |                        |   |  |
| IPv6 tunneling             | Manual tunnel, automatic tunnel, GRE tunnel, IPv6 over IPv4 tunnel, 6 to 4 tunnel, ISATAP  |  |                        |   |  |
| Multicast                  | IGMP v1/v2/v3, PIM-SM, PIM-DM, MSDP, MBGP, IPv6 PIM, MLD   |  |                        |   |  |
| VPN                        | IPsec VPN, GRE VPN, DSVPN, A2A VPN, L2TP VPN, L2TPv3 VPN, VxLAN  |  |                        |   |  |
| QoS                        | DiffServ mode, priority mapping, traffic policing (CAR), traffic shaping, congestion avoidance, congestion management, MQC (traffic classifier, traffic behavior, and traffic policy), hierarchical QoS, WLAN QoS, FR QoS, Smart Application Control (SAC)   |  |                        |   |  |
| Security                   | ACL (v4/v6), domain-based stateful firewall, 802.1X authentication, MAC address authentication, portal authentication, AAA authentication, RADIUS authentication, HWTACACS authentication, PKI, broadcast storm suppression, ARP security, ICMP attack defense, URPF, CPCAR, blacklist, attack source tracing, online behavior management, URL filtering |  |                        |   |  |
| Management and maintenance | Upgrade management, device management, web-based network management, GTL, SNMP (v1/v2c/v3), RMON, NTP, CWMP, Auto-Config, URL-based/USB-based/DHCP deployment, NETCONF/YANG, CLI, Netstream, IP FPM, TCP FPM, TWAMP Light, IP accounting, NQA  |  |                        |   |  |

# **Networking and Application**

#### SD-WAN Using Hybrid Links

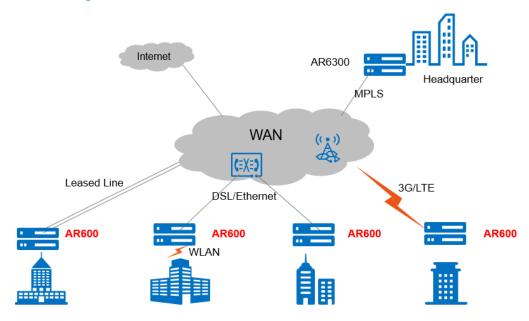
In the SD-WAN Solution, the NetEngine AR600 functions as the gateway of SMBs and small-sized enterprise branches and supports hybrid access using multiple physical links, such as Internet links, and LTE links. The solution also leverages Huawei's next-generation controller, the Agile Controller, which implements centralized and visualized management. The NetEngine AR600 provides extensive SD-WAN features and delivers optimal service experience for enterprises through intelligent application identification, intelligent traffic steering, and intelligent acceleration. For details about Huawei SD-WAN Solution, visit <a href="https://e.huawei.com/en/solutions/business-needs/enterprise-network/sd-wan">https://e.huawei.com/en/solutions/business-needs/enterprise-network/sd-wan</a>.



#### WAN Interconnection Scenario

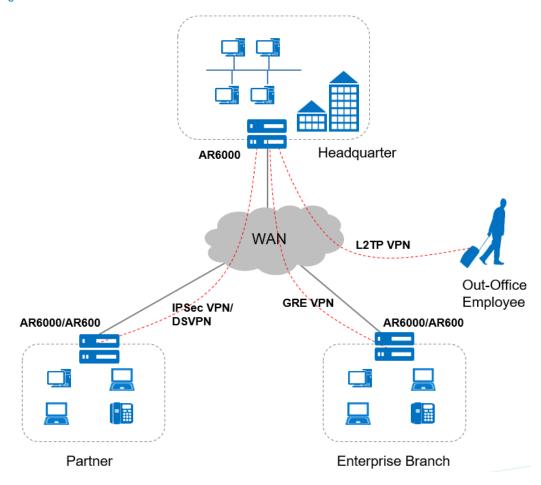
In this scenario, the NetEngine AR600 series routers are used as enterprise branch egresses and provide flexible WAN access methods to support remote network connections. A single NetEngine AR600 router can satisfy different access requirements, for example, for the private line, Ethernet, 3G, LTE, and WLAN access, helping the customer reduce deployment and maintenance costs while helping them extract much value.

#### WAN interconnection networking



#### Building Different Types of VPNs by Leveraging Internet Resources

The NetEngine AR600 provides various secure access functions for communication between enterprise branches and between branches and headquarters. These functions also allow an enterprise's partners to access its resources. Secure tunnels such as GRE VPN, IPSec VPN, DSVPN, L2TP VPN, and EVPN tunnels can be set up between the headquarters and branches for secure data access and transmission. The NetEngine AR600 supports quick tunnel deployment and authentication for branches. Furthermore, partners authenticated and authorized by the AR600 can remotely access the enterprise resources over these tunnels.



# **Ordering Information**

The NetEngine AR600 series routers are configured by selecting and installing the appropriate configuration module. The configuration module ordering information and descriptions are shown in the following tables.

The NetEngine AR650 sub series routers require 3 types of configuration modules:

- Basic software configuration
- Software license configuration
- Performance license configuration

The basic software configuration modules provide functions such as routing, switching, voice, and security.

The software license configuration modules provide additional functions such as SRP, DSVPN.

The NetEngine AR610 sub series routers don't need to configure the license.

### License function and description

| License Name                 | Description  |
|------------------------------|--|
| Value-Added Data Package     | Smart Policy Routing (SPR) is included   |
| Value-Added Security Package | Efficient VPN (EVPN), DSVPN, Smart Application Control (SAC), Any to Any VPN, IPS and URL filtering are included.     IPS supports online update service, and update service needs extra license |
| IPS Service Subscribe 1 Year | IPS Service Subscribe 1 Year   |

## Ordering components

| Chassis Configuration                | Description  |
|--------------------------------------|--|
| NetEngine AR651C                     | AR651C AC host, 10*GE RJ45,2*GE SFP, 1*USB 3.0, with the AC/DC adapter   |
| NetEngine AR651                      | AR651,2*GE combo WAN,8*GE LAN,1*USB2.0,1*MIC slot  |
| NetEngine AR651W                     | AR651W,2*GE combo WAN,8*GE LAN,1*USB2.0,802.11b/g/n/ac,2*2MIMO,1*MIC slot  |
| NetEngine AR651W-8P                  | AR651W-8P,2*GE combo WAN,8*GE LAN (PoE+),1*USB2.0,802.11b/g/n/ac,2*2MIMO,1*MIC slot  |
| NetEngine AR657W                     | AR657W,2*GE combo WAN,1*VDSL 35B WAN,8*GE LAN,1*USB2.0,802.11b/g/n/ac,2*2 MIMO,1*MIC slot  |
| NetEngine AR611                      | AR611, 1*GE COMBO WAN, 4*GE LAN, 1*USB 2.0   |
| NetEngine AR611W                     | AR611W, 1*GE COMBO WAN, 4*GE LAN, 1*USB 2.0, Wi-Fi 2.4G+5G   |
| NetEngine AR617VW                    | AR617VW, 1*GE COMBO WAN, 1*VDSL, 4*GE LAN, 1*USB 2.0, Wi-Fi 2.4G+5G  |
| NetEngine AR617VW-<br>LTE4EA         | AR617VW-LTE4EA, 1*GE COMBO WAN, 1*VDSL, 1*LTE, 4*GE LAN, 1*USB 2.0, Wi-Fi 2.4G+5G  |
| NetEngine AR617VW-<br>LTE4           | AR617VW-LTE4, 1*GE COMBO WAN, 1*VDSL, 1*LTE, 4*GE LAN, 1*USB 2.0, Wi-Fi 2.4G+5G  |
| MIC Card                             | Description  |
| MIC-1ELTE6-EA                        | Function module, AR, MIC-1ELTE6-EA, WCDMA/LTE FDD/LTE TDD CAT6 interface card  |
| MIC-1LTE6-EA                         | Function module, AR, MIC-1LTE6-EA, FDD/TDD/HSPA+/WCDMA CAT6 interface card   |
| MIC-1LTE4-EA                         | Function Module, AR, MIC-1LTE4-EA, FDD/WCDMA/HSPA+ Interface Card  |
| Accessories of Chassis (LTE antenna) | Description  |
| ASMAM0006                            | Omni-directional Antenna, 698MHz-960MHz/1710MHz-2690MHz,1.0dBi(698MHz-960MHz)&3dBi(1710MHz-2690MHz),10W,SMA-J  |
| ASMAM0008                            | Isotropic Antenna, 698MHz~960MHz/1420MHz~2690MHz,2.1dBi(max)(698-960/2110-2170MHz)/4.6dBi(max)(1710-1990/2500-2690MHz),vertical,Omni,5W,SMA-J,No Bracket |
| License                              | Description  |
| LAR0DATAE08                          | AR600 Value-Added Data Package   |
| LAR0SECE08                           | AR600 Value-Added Security Package   |
| LAR0TP10                             | AR600/AR700/AR6100 Threat Protection Service Subscribe 1 Year  |
| LAR0IPS08                            | AR600 IPS Service Subscribe 1 Year   |
| LAR0PERFE08                          | AR650 Performance license  |

# **More Information**

For more information about Huawei next-generation AR enterprise routers, visit <a href="http://e.huawei.com">http://e.huawei.com</a> 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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