HUAWEI eKit

Huawei eKitEngine AR180 Series Enterprise-Grade Wireless Router Datasheet

3600 Mbps Dual-Band Wi-Fi 7
Enterprise-Grade Wireless Router
Make SME Network Easier and Smarter

HUAWEI

Product Overview

Huawei eKitEngine AR180 series routers are high-performance enterprise-grade wireless routers designed for small and micro networks. They feature a robust, refined exterior with premium build quality.

AR180

AR180 Plus

AR180 Pro

The AR180 series supports Wi-Fi 7 technology, delivering dual-band concurrent speeds of up to 3600 Mbps. This enables smooth video streaming and gaming across multiple endpoints simultaneously, significantly improving user experience.

In terms of port configuration, the AR180 and AR180 Plus come with one 2.5GE high-speed LAN/WAN interchangeable port, one fixed GE LAN port, and three GE LAN/WAN interchangeable ports. Including all the above ports, the AR180 Pro provides an additional 2.5GE high-speed LAN/WAN interchangeable port for enhanced scalability. In addition, all models provide a dedicated Turbo acceleration port that prioritizes traffic from connected devices, effectively reducing latency and ensuring stable performance for critical services.

The AR180 series also supports Smart Mesh networking technology for intelligent, high-speed interconnection between devices, eliminating coverage blind spots. Its built-in IPSec VPN capability secures branch communication, while Application control enables time- and IP-based application access control, helping enterprises build a more efficient workspace.

Product Highlights

- Support for Wi-Fi 7 technology, which is 20% faster than Wi-Fi 6
- One 2.5GE high-speed WAN port that provides ultra-gigabit bandwidth
- Coming with multiple WAN ports that enable flexible traffic steering and enhanced network efficiency and stability in diverse scenarios
- Dedicated Turbo acceleration port that prioritizes traffic for smooth video streaming and gaming
- Smart Mesh networking with up to eight devices and 20 m auto-discovery range, enabling easy deployment and full coverage
- Support for application control to accurately control network access as required
- The AR180/AR180 Plus features lossless foldable antennas with a compact and sleek design, easily fitted into compact spaces such as weak-current boxes and TV cabinets
- Support for various authentication modes, such as Facebook, X, Google, SMS, and Email, and Portal page customization
- Flexible installation options: desktop or wall-mounted to suit various environments
- The AR180/AR180 Plus supports for one-touch LED off switch for glare-free nighttime comfort

Main Product Features

Wi-Fi 7 with faster transmission and stronger performance

On the AR180 series, Wi-Fi 7 with Multi-Link Operation (MLO) aggregates bandwidth across two frequency bands, achieving faster speeds and more efficient transmission than Wi-Fi 6. Enhanced with 4096-QAM modulation and demodulation, the AR180 series offers a 20% increase in data throughput, significantly optimizing Internet access experience. In addition, the AR180 series can work with four external high-gain smart antennas that can dynamically adjust their angles based on environment conditions, enhancing network coverage.

Diverse ports

- The AR180 series provides a 2.5GE high-speed WAN port that supports broadband access at 2000 Mbit/s. This port can be flexibly configured as a LAN port for high-speed transmission between devices. By offering one fixed LAN port and three GE LAN/WAN interchangeable ports, the AR180 series enables multi-path Internet access, Equal-Cost Multi-Path (ECMP), and Unequal Cost Multi-Path (UCMP), ensuring smooth forwarding of up to 48 channels of 4K ultra-high-definition video without packet loss or stuttering.
- The AR180 series comes with a dedicated Turbo acceleration port. With no configuration required, traffic on this port is preferentially forwarded upon device connection, reducing latency and ensuring smooth gaming.

High-speed access

In terms of Wi-Fi access, the AR180 series supports 160 MHz frequency bandwidth, which increases the number of available data subcarriers and expands transmission channels. In addition, it adopts 4096-QAM and MIMO to achieve a rate of up to 0.69 Gbps on the 2.4 GHz band and 2.88 Gbps on the 5 GHz band, meaning up to 3.57 Gbps for the device.

Smart Mesh networking

The AR180 series can set up mesh networking for up to 8 devices, with automatic long-range discovery up to 20 meters. Devices can be installed before configuration, enabling rapid self-networking without manual intervention. Wired and wireless mesh links back up each other, switching intelligently to keep networks stable and uninterrupted. Gateways work together to select the fastest frequency bands, ensuring high-speed data transmission and eliminating signal blind spots. This delivers a truly "deploy once, full coverage everywhere" networking experience.

Application control

The AR180 series offers Application control, capable of accurately identifying over 500 common applications. It supports three flexible management modes: application blocking, priority assurance, and bandwidth control. Policies can be defined by effective time and date, and applied to specific IP addresses to guarantee the experience of critical services. This enables efficient network management and control, contributing to higher efficiency.

IPSec VPN

The AR180 series supports the IPSec VPN function, enabling the establishment of secure, encrypted communication channels between branches. This secures data transmitted across branch networks, enabling safe and reliable interconnectivity.

Various management modes for easy O&M

The AR180 series supports multiple management platforms, including HUAWEI eKit app, cloud platform, and EasyWeb (only the AR180 Pro supports local management), allowing you to manage network devices anytime and anywhere. Its cloud-based management mode can enable PSK and Portal authentication without the need for dedicated WACs or authentication servers, greatly simplifying networking and reducing CAPEX. In addition, the AR180 series supports online network planning, deployment, inspection, and O&M on the Huawei SME Network cloud management platform.

Product Specifications

Item		AR180	AR180 Plus	AR180 Pro
Technical specifications	Dimensions (H x W x D)	35 mm x 195 mm x 130 mm (1.38 in. x 7.68 in. x 5.12 in.)	35 mm x 195 mm x 130 mm (1.38 in. x 7.68 in. x 5.12 in.)	43.6 mm x 250 mm x 180 mm (1.72 in. x 9.84 in. x 7.09 in.)
	Weight (including packaging materials)	0.99 kg (2.18 lb)	1.10 kg (2.43 lb)	2.16 kg (4.76 lb)
	Weight (excluding packaging materials)	0.63 kg (1.39 lb)	0.75 kg (1.65 lb)	1.46 kg (3.22 lb)
	Appearance & materials	Plastic, white	Metal (upper surface), black	Metal, white
	Port	GE electrical ports: GE1 is a dedicated LAN port. GE2, GE3, and GE4 are LAN ports by default and can be switched to WAN ports. 2.5GE electrical port: It is a WAN port by default and can be switched to a LAN port. **Note** If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category.	GE electrical ports: GE1 is a dedicated LAN port. GE2, GE3, and GE4 are LAN ports by default and can be switched to WAN ports. 2.5GE electrical port: It is a WAN port by default and can be switched to a LAN port. **Note** If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category.	GE electrical ports: GE1 is a dedicated LAN port. GE2, GE3, and GE4 are LAN ports by default and can be switched to WAN ports. 2.5GE electrical ports: 2.5GE1 is a LAN port by default and can be switched to a WAN port. 2.5GE2 is a WAN port by default and can be switched to a LAN port. **Note** If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category.

Item		AR180	AR180 Plus	AR180 Pro
	Turbo port	GE1 is a dedicated Turbo acceleration port for prioritized forwarding. In case of congestion, traffic on this port is preferentially forwarded.	GE1 is a dedicated Turbo acceleration port for prioritized forwarding. In case of congestion, traffic on this port is preferentially forwarded.	2.5GE1 is a dedicated Turbo acceleration port for prioritized forwarding. In case of congestion, traffic on this port is preferentially forwarded.
	LED indicator	It indicates the power-on, startup, running, alarm, and fault states of the system.	It indicates the power-on, startup, running, alarm, and fault states of the system.	It indicates the power-on, startup, running, alarm, and fault states of the system.
Network performance	Maximum number of connected devices	≤ 100 **Note** The actual number of users varies according to the environment.	≤ 100 **Note** The actual number of users varies according to the environment.	≤ 150 **Note** The actual number of users varies according to the environment.
	Maximum concurrent sessions	20480	20480	30720
	Maximum number of connected APs	8	8	8
	Number of managed devices	9	9	32
	Maximum number of IPSec tunnels	8	12	16
	VPN Forwarding performance	200 Mbps	200 Mbps	200 Mbps
	Egress bandwidth	2 Gbps **Note** This specification is obtained from the lab test result.	2 Gbps **Note** This specification is obtained from the lab test result.	2 Gbps **Note** This specification is obtained from the lab test result.
Power specifications	Rated input voltage	110 V AC–220 V AC; 50/60 Hz	110 V AC–220 V AC; 50/60 Hz	110 V AC–220 V AC; 50/60 Hz

Item		AR180	AR180 Plus	AR180 Pro
	Input voltage range	90 V AC–264 V AC; 45 Hz–65 Hz	90 V AC–264 V AC; 45 Hz–65 Hz	90 V AC–264 V AC; 45 Hz–65 Hz
	Maximum power consumption	13 W	13 W	13.5 W
	Power supply mode	AC power adapter	AC power adapter	AC power adapter
Environment specifications	Operating temperature	0°C–40°C **Note** When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).	0°C–40°C **Note** When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).	0°C–40°C **Note** When the altitude is 1800–5000 m (5906–16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
	Storage temperature	–40°C to +70°C	–40°C to +70°C	–40°C to +70°C
	Operating humidity	5% RH to 95% RH, non-condensing	5% RH to 95% RH, non-condensing	5% RH to 95% RH, non-condensing
	Altitude	< 5000 m	< 5000 m	< 5000 m
	Atmospheric pressure	53 kPa to 106 kPa	53 kPa to 106 kPa	53 kPa to 106 kPa
Wi-Fi specifications	Antenna type	Four external smart antennas **Note** Wi-Fi antennas have been installed on Wi-Fi ports of a router before delivery and cannot be removed.	Four external smart antennas **Note** Wi-Fi antennas have been installed on Wi-Fi ports of a router before delivery and cannot be removed.	Four external smart antennas **Note** Wi-Fi antennas have been installed on Wi-Fi ports of a router before delivery and cannot be removed.
	Supported frequency band	2.4 GHz and 5 GHz	2.4 GHz and 5 GHz	2.4 GHz and 5 GHz
	Antenna gain	2.4 GHz: 3 dBi 5 GHz: 4 dBi **Note**	2.4 GHz: 3 dBi 5 GHz: 4 dBi **Note**	2.4 GHz: 3 dBi 5 GHz: 4 dBi **Note**

Item		AR180	AR180 Plus	AR180 Pro
		The preceding gains are the peak gains of a single antenna.	The preceding gains are the peak gains of a single antenna.	The preceding gains are the peak gains of a single antenna.
	Maximum transmit power	23 dBm **Note** The actual maximum transmit power varies according to local laws and regulations.	23 dBm **Note** The actual maximum transmit power varies according to local laws and regulations.	23 dBm **Note** The actual maximum transmit power varies according to local laws and regulations.
	MIMO spatial streams	Radio 0 (2.4 GHz): 2 x 2; Radio 1 (5 GHz): 2 x 2	Radio 0 (2.4 GHz): 2 x 2; Radio 1 (5 GHz): 2 x 2	Radio 0 (2.4 GHz): 2 x 2; Radio 1 (5 GHz): 2 x 2
	Wi-Fi standard	2.4 GHz: 802.11b/g/n/ax/be; 5 GHz: 802.11a/n/ac/ac wave2/ax/be	2.4 GHz: 802.11b/g/n/ax/be; 5 GHz: 802.11a/n/ac/ac wave2/ax/be	2.4 GHz: 802.11b/g/n/ax/be; 5 GHz: 802.11a/n/ac/ac wave2/ax/be

Product Software Features

Item	Description
Interface basics	VLAN Port Up/Down detection Port auto-negotiation VLANIF interface
Ethernet basics	256 VLANs Port types: access, trunk, and hybrid Port-based VLAN assignment Automatic MAC address learning Automatic MAC address aging Static MAC address entry
Network features	Policy-based routing (PBR) Terminal management Spanning Tree Protocol (STP)/Rapid Spanning Tree Protocol (RSTP) Address Resolution Protocol (ARP) ARP security (configurable only on the web system) DNS client, sending DNS resolution requests DNS Relay

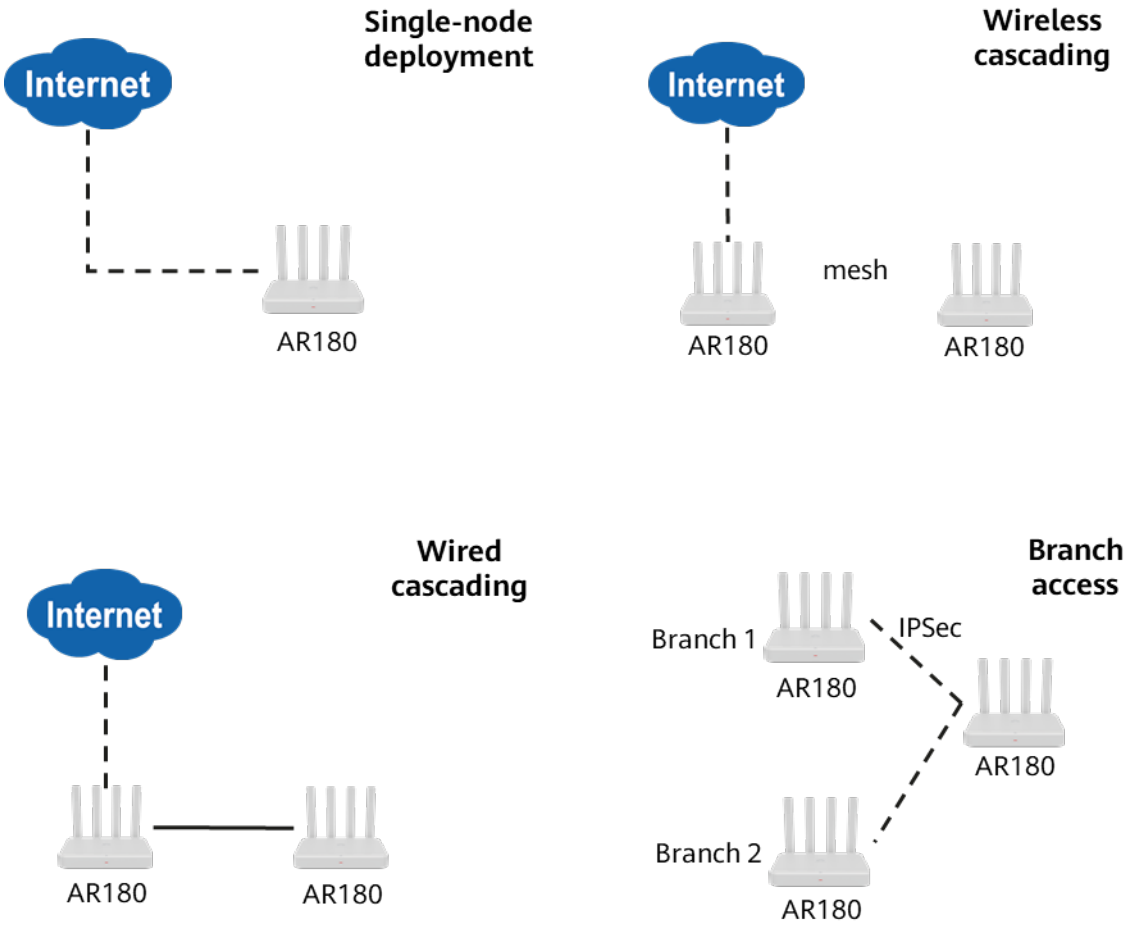
Item	Description
	DHCP client, obtaining IP addresses through DHCP DHCP server IPv4 access control list (ACL) Application control Network address translation (NAT) Mesh
VPN	IPSec VPN
System monitoring	NQA (configurable only on the web system) Telemetry-based data collection
WLAN features	WLAN AP management WLAN radio management WLAN user management WLAN security WLAN QoS
System management	ThingsPnP Network Configuration Protocol (NETCONF) HTTPS login to the device web system where administrators can manage and configure the device Network Time Protocol (NTP) Log center DHCP option-based deployment Smart upgrade through the Huawei Online Upgrade Repository (HOUP)
QoS features	Access control policies (packet filtering, traffic policing, redirection, re-marking, and traffic statistics collection)
Security features	Authentication, Authorization, and Accounting (AAA) Storm suppression CPU defense Public Key Infrastructure (PKI) Application Specific Packet Filter (ASPF) Application Level Gateway (ALG), which is a NAT traversal technology Service and management isolation Host CPU attack defense Diverse authentication modes, such as 802.1X authentication, MAC address authentication, and Portal authentication
NMS	HUAWEI eKit app and SNC platform (eKit public cloud) Web system, which provides a graphical user interface (GUI) for easy device management
IPv4 unicast routing	Static routing

Item	Description
WAN access	PPP protocol PPPoE client protocol Interface backup

Typical Applications

The AR180 series is designed for small and micro environments such as restaurants, offices, and retail stores with fewer than 150 connected devices. Featuring robust performance, it supports Smart Mesh self-networking and customizable Portal pages, enabling flexible and simplified network deployment while delivering a more efficient network experience for users.

Typical Networking



More Information

For more information about Huawei eKitEngine switches, visit https://ekit.huawei.com/ or contact Huawei's local sales office. Alternatively, you can contact us through one of the following methods:

- Global service hotline: http://e.huawei.com/en/service-hotline
- 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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