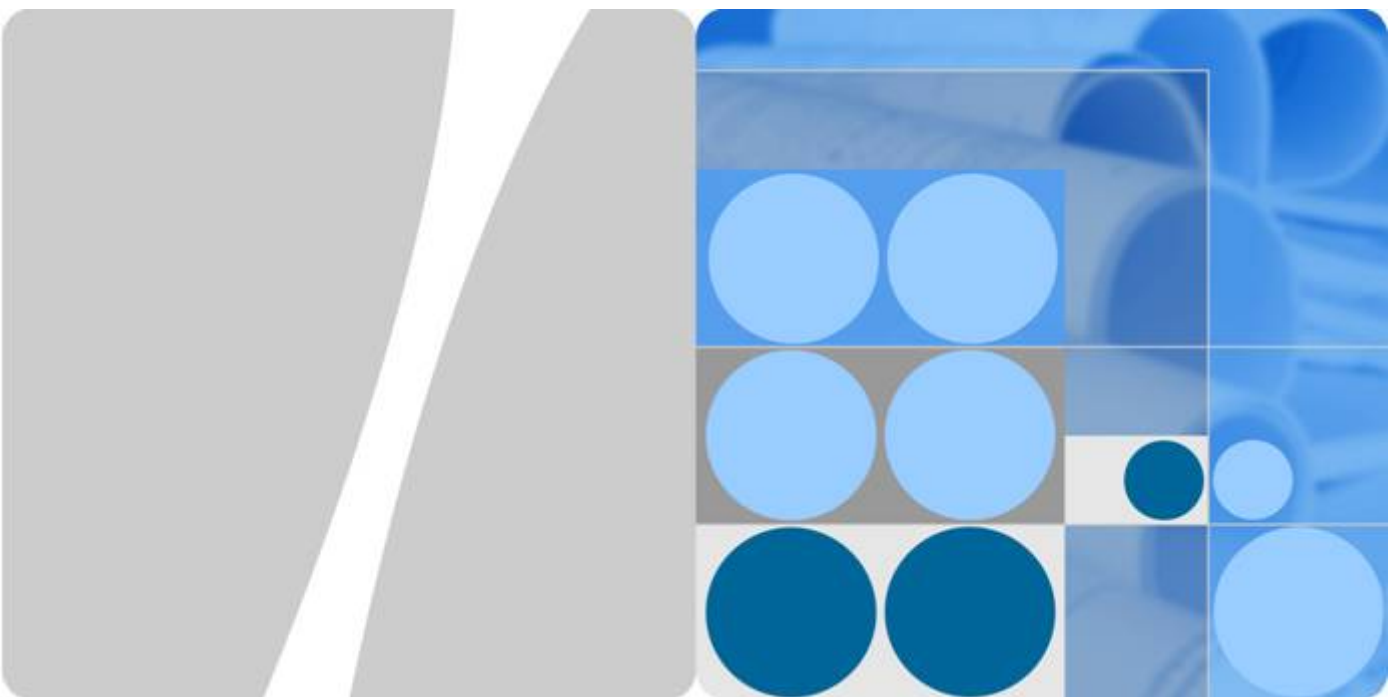




**eKitEngine AR180 and AR280**  
**V600R025C00**

## **Product Description**

**Issue**      **01**  
**Date**      **2025-09-30**

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# Contents

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**1 About This Document.....**

**1**

**2 Using the Specifications Query Tool to Query Product Specifications.....**

**3**

**3 AR180 Product Description.....**

**4**

3.1 Product Characteristics.....

4

3.2 Usage Scenarios.....

5

3.2.1 Typical AR180 Networking.....

5

**4 AR280 Product Description.....**

**7**

4.1 Product Characteristics.....

7

4.2 Application Scenarios.....

8

4.2.1 Typical AR280 Networking.....

8

# 1 About This Document

## Intended Audience

This document helps you understand the characteristics and features of eKitEngine AR routers. This document is intended for:

- Network planning engineers
- Hardware installation engineers
- Commissioning engineers
- Data configuration engineers
- On-site maintenance engineers
- Network monitoring engineers
- System maintenance engineers

## Symbol Conventions

The symbols that may be found in this document are defined as follows.

| Symbol                                                                              | Description                                                                                                    |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|  | Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.    |
|  | Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury. |
|  | Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.   |

| Symbol                                                                            | Description                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.</p> <p><b>NOTICE</b> is used to address practices not related to personal injury.</p> |
|  | <p>Supplements the important information in the main text.</p> <p><b>NOTE</b> is used to address information not related to personal injury, equipment damage, and environment deterioration.</p>                                                             |

## Notice

- The contents (including web pages, command formats, and command outputs) of this document are based on device information obtained under lab conditions. It provides instructions for common scenarios, but does not cover all use cases of all product models. The examples given may differ from your use case due to differences in software versions, models, and configuration files. When configuring your device, alter the configuration depending on your use case.
- The specifications provided in this document are tested in a lab environment (for example, cards of a certain type have been installed on the tested device or only one protocol is run on the device). Results may differ from the listed specifications when you attempt to obtain the maximum values due to factors such as differences in hardware configurations and carried services.
- In this document, public IP addresses may be used in feature introduction and configuration examples and are for reference only unless otherwise specified.

# 2 Using the Specifications Query Tool to Query Product Specifications

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**Info-Finder** is a tool platform that allows you to search for key product information (such as software specifications, hardware specifications, and lifecycle) by product series and model. Using Info-Finder, you can:

- Query the features and specifications supported by a product.
- Compare the features and specifications supported by different products.
- Export the features and specifications supported by a product.

# 3 AR180 Product Description

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## [3.1 Product Characteristics](#)

## [3.2 Usage Scenarios](#)

### 3.1 Product Characteristics

Huawei eKitEngine AR180 series routers are high-performance enterprise-class wireless routers designed for small and micro networks. The eKitEngine AR180 series routers are available in three models: eKitEngine AR180, eKitEngine AR180Plus, and eKitEngine AR180Pro.

#### Wi-Fi 7 with Faster Transmission and Stronger Performance

- Wi-Fi 7 uses Multi-Link Operation (MLO) to aggregate bandwidth across two frequency bands, achieving faster speeds and more efficient transmission than Wi-Fi 6.
- Enhanced with quadrature amplitude modulation (QAM), the router delivers better Internet access experience.
- In addition, the router 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 router provides a 2.5GE high-speed WAN port, which can be flexibly switched to a LAN port for high-speed transmission between devices.
- By offering one fixed LAN port and three GE LAN/WAN interchangeable ports, the router enables multi-path Internet access, Equal-Cost Multi-Path (ECMP), and Unequal Cost Multi-Path (UCMP) based on the interface bandwidth, ensuring smooth forwarding of ultra-HD video streams without packet loss or stuttering.
- It comes with a dedicated Turbo acceleration port. With no configuration required, traffic of devices connected to this port is prioritized, significantly reducing forwarding delay.

## High-Speed Access

- In terms of Wi-Fi access, the router provides larger frequency bandwidth, increasing the number of available data subcarriers and expanding transmission channels.
- Leveraging QAM and multiple-input multiple-output (MIMO), the router enables faster access.

## Smart Mesh Networking

The router can automatically discover nearby devices and establishes a mesh network with them. These devices can be installed before configuration, enabling rapid, automatic network setup without manual intervention. Wired and wireless mesh links back up each other, switching intelligently to keep network services stable and uninterrupted. Multiple gateways can intelligently negotiate and select high-speed frequency bands. This ensures fast data transmission, eliminates signal blind spots in traditional networking, and delivers better network experience.

## Online Behavior Management

The router offers online behavior management, capable of accurately identifying common applications. It supports three flexible control 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.

## Various Management Modes for Easy O&M

The router supports multiple management platforms, including HUAWEI eKit app, cloud platform, and EasyWeb, giving you full device management anytime, anywhere. Its cloud-based management enables PSK and Portal authentication without the need for dedicated WACs or authentication servers, greatly simplifying networking. In addition, the router supports online network planning, deployment, inspection, and O&M on Huawei eKit SME Network Center.

## IPsec VPN

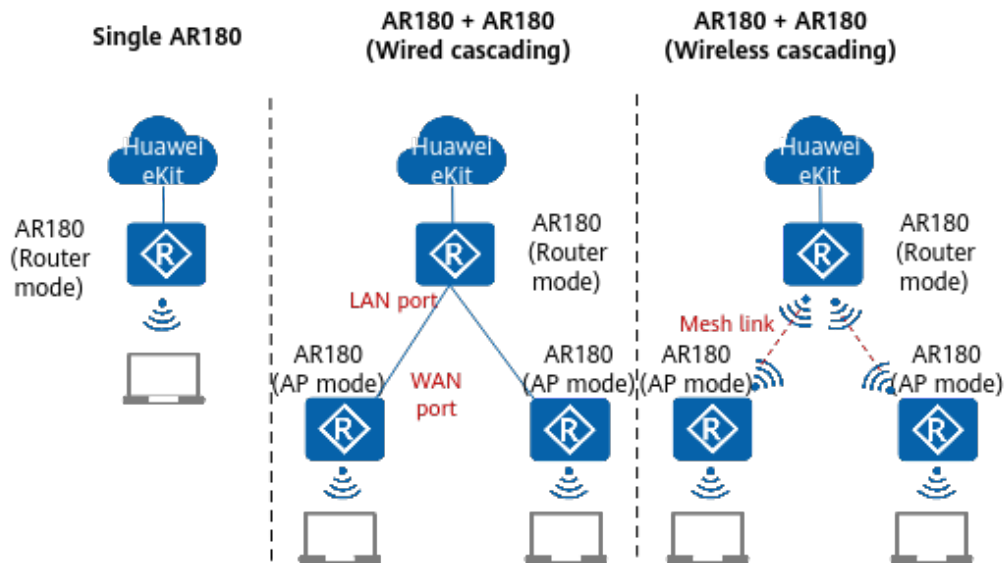
The router supports the IPsec VPN function, enabling the establishment of secure, encrypted communication channels between branches. This secures data transmitted across branch networks, enabling safe and reliable interconnectivity.

# 3.2 Usage Scenarios

## 3.2.1 Typical AR180 Networking

The AR180 series is designed for small and micro environments such as restaurants, offices, and retail stores with fewer than 150 end users. It supports Smart Mesh self-networking. Typical AR180 networking scenarios include single-device deployment, wired cascading, and wireless cascading, as shown in [Figure 3-1](#).

Figure 3-1 Typical AR180 networking scenarios



# 4 AR280 Product Description

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## [4.1 Product Characteristics](#)

## [4.2 Application Scenarios](#)

### 4.1 Product Characteristics

The Huawei eKitEngine AR280 is a high-performance enterprise-class 2.5G multi-service router designed for small and medium-sized enterprises (SMEs).

#### Comprehensive Functions in a Single Device

- The router supports LLDP power negotiation for enhanced PD compatibility, supplying power to over 100 non-standard terminals. This eliminates compatibility concerns and lowers total networking costs, offering superior value for enterprises.
- By integrating static routing, switching, WAC, PoE, load balancing, IPsec VPN, and online behavior management functions, the router makes the network simpler and easier to manage.

#### Diverse Ports

- The router provides a 2.5GE high-speed WAN port which can be flexibly configured as a LAN port for high-speed transmission between devices.
- It also comes with one fixed GE LAN port and three GE LAN/WAN interchangeable ports, presenting higher scalability.

#### Innovative Rotating Mounting Bracket Design

The router features Huawei's proprietary left-right adaptive rotating mounting brackets, secured with wave bead-positioning screws. This design prevents misalignment during installation. It facilitates cable connections, promotes organized layout within low-voltage cabinets, and significantly improves installation and maintenance efficiency.

#### Online Behavior Management

The router offers online behavior management, capable of accurately identifying common applications. It supports three flexible control 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.

## Various Management Modes for Easy O&M

The router supports multiple management platforms, including HUAWEI eKit app, cloud platform, and EasyWeb, giving you full device management anytime, anywhere. Its cloud-based management enables PSK and Portal authentication without the need for dedicated WACs or authentication servers, greatly simplifying networking. In addition, the router supports online network planning, deployment, inspection, and O&M on Huawei eKit SME Network Center.

## IPsec VPN

The router 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.

# 4.2 Application Scenarios

## 4.2.1 Typical AR280 Networking

The AR280 provides four GE downlink ports, meeting network construction requirements in different service scenarios. It can be deployed for access to small-scale networks, or deployed at micro sites (such as small studios) to provide diversified desktop access functions and facilitate fast construction of a cost-effective network providing gigabit to the desktop. [Figure 4-1](#) shows typical AR280 networking scenarios.

**Figure 4-1** Typical AR280 networking scenarios

