4 Rail Transit Access Points

About This Chapter

4.1 AP9130DN Product Description

4.1.1 Product Characteristics (AP9130DN)

Table 4-1 Product characteristics

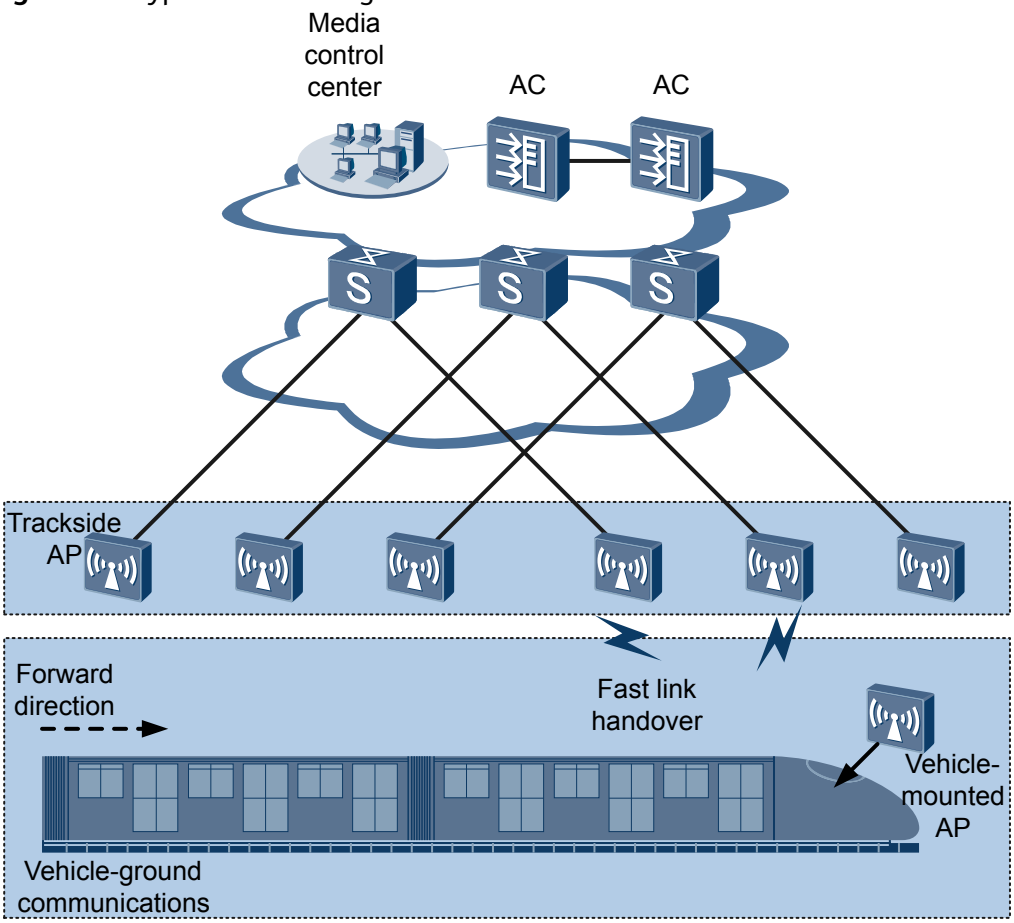
Product Model	Frequency Band	IEEE Standards Compliance	Positioning	Usage Scenario
AP9130DN	Dual bands: • 2.4 GHz • 5 GHz The AP9130DN can provide services simultaneously on the 2.4 GHz and 5 GHz frequency bands to support more access users.	IEEE 802.11a/b/g/n/ac	Huawei AP9130DN is the latest-generation 802.11ac vehicle-mounted dual-band AP that supports 3x3 MIMO. It uses industrial anti-vibration M12 sockets, complies with EN50155 vehicle-mounted electronic equipment standards, and supports 50 ms fast switchover, meeting train-to-ground backhaul network deployment requirements.	It is applicable to train-to-ground backhaul scenarios.

4.1.2 Usage Scenarios (AP9130DN)

The AP9130DN can work independently as a Fat AP, and is easy to deploy and commission in train-to-ground backhaul scenarios.

Typical networking modes are as follows:

Figure 4-1 Typical networking



In this networking, the AP9130DN works as a trackside AP in Fit mode and is managed uniformly on the AC. The vehicle-mounted AP9130DN works in Fat mode and supports fast link switchover within 50 ms, enabling a high-speed and stable train-to-ground backhaul network.

4.1.3 Hardware Information (AP9130DN)

Appearance

Figure 4-2 shows the appearance of the AP.

NOTE

The actual device appearance may slightly differ from the following device appearance, but these differences will not affect device functions.

Figure 4-2 AP9130DN appearance

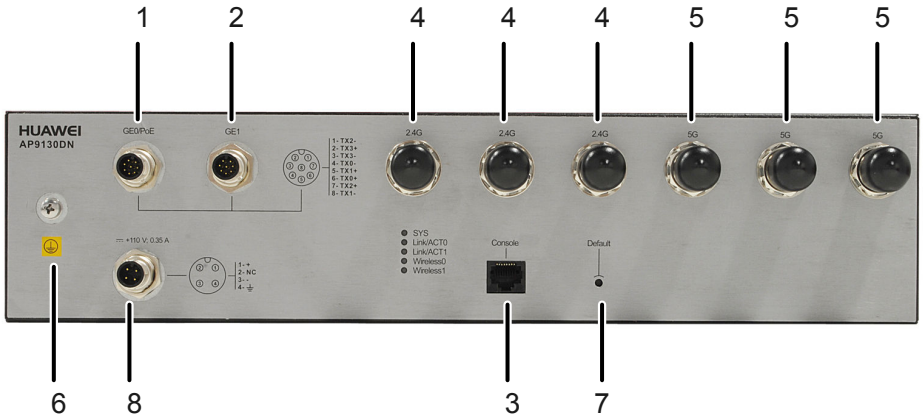
CAUTION

 There is a scald warning label attached on the device, warning you not to touch the device after the device has been operating for a long time.

Ports

The following figure shows interfaces on the AP.

Figure 4-3 Ports on the AP9130DN



1. GE0/PoE: 10/100/1000M port that connects to the wired Ethernet and supports PoE input.
2. GE1: 10/100/1000M port that connects to the wired Ethernet.
3. CONSOLE: Connects to a maintenance terminal for AP configuration and management.
4. 2.4G: Connects a 2.4G antenna to the AP to send and receive wireless signals. The port type is N-type female.
5. 5G: Connects a 5 GHz antenna to the AP to send and receive wireless signals. The port type is N-type female.
6. Device ground screw: Connects the device to a ground cable.

7. Default: Restores factory settings and restarts the device when you hold down the button more than 3 seconds.
8. DC: 110 V power port.

LED Indicators

The AP9130DN provides multiple indicators: SYS indicator, Link/ACT indicator, and Wireless indicator. The following table describes indicators on AP9130DN.

NOTE

Indicator colors may vary slightly at different temperature.

Indicators of the same type have the same state meanings.

Table 4-2 Descriptions about the SYS indicator

Type	Color	Status	Description
Default status after power-on	Green	Steady on	The AP is just powered on and the software is not started yet.
Software startup status	Green	Steady on after blinking once	After the system is reset and starts loading the software, the indicator blinks green once. Until the software is loaded and started, the indicator remains steady green.
Running status	Green	Blinking once every 2s (0.5 Hz)	• The system is running properly, the Ethernet connection is normal, and STAs are associated with the AP. • The system enters the Uboot CLI.
		Blinking once every 5s (0.2 Hz)	The system is running properly, the Ethernet connection is normal, and no STA is associated with the AP. The system is in low power consumption state.
Alarm	Green	Blinking once every 0.25s (4 Hz)	The software is being upgraded.
Fault	Red	Steady on	A fault that affects services has occurred, such as a DRAM detection failure or system software loading failure. The fault cannot be automatically rectified and must be rectified manually.

Table 4-3 Description about the Link/ACT indicators

Type	Color	Status	Description
LINK	Green	Steady on	The system is running properly, the Ethernet connection is normal, and no data is being transmitted.
ACT	Green	Blinking	The system is running properly, the Ethernet connection is normal, and the AP is transmitting data. The indicator blinks more quickly when more data is being transmitted.

Table 4-4 Description about the Wireless indicator in traffic volume mode

Color	Status	Description
Green/yellow	Off	Radios are disabled, and no STA is connected to the AP.
Green/yellow	Steady on	The AP has STAs connected to the 2.4 GHz radio or 5 GHz radio, but no data is being transmitted.
Green	Blinking	The AP has STAs connected to the 2.4 GHz radio and is transmitting data. The indicator blinks more quickly when more data is being transmitted.
Yellow	Blinking	The AP has STAs connected to the 5 GHz radio and is transmitting data. The indicator blinks more quickly when more data is being transmitted.
Green/yellow	Blinking alternatively	The AP has STAs connected to both the 2.4 GHz radio and 5 GHz radio. The indicator blinks more quickly when more data is being transmitted.

Basic Specifications

Table 4-5 Basic Specifications

Item		Description
Technical specifications	Dimensions (H x W x D)	86.1 mm x 375 mm x 260 mm
	Weight	4.5 kg

Item		Description
	System memory	• 256 MB DDR3 • 64 MB flash memory
Power specifications	Power input	• DC power supply: 110 V rated voltage; voltage range: 77 V to 137.5 V • PoE power: in compliance with IEEE 802.3at **NOTE** The AP does not support AC power supply. If AC power supply is required, use a PoE adapter. Ensure that the installation position of the PoE adapter meets requirements.
	Maximum power consumption	21.5 W (110 V DC) 20.1 W (PoE) **NOTE** The maximum power consumption depends on local laws.
Environment specifications	Operating temperature and altitude	-60 m to +1800 m: -40°C to +65°C +1800 m to +5000 m: The maximum emperature decreases by 1°C every time the altitude increases 300 m.
	Storage temperature	-40°C to +70°C
	Operating humidity	5% to 95% (non-condensing)
	IP rating	IP30
	Atmospheric pressure	53 kPa to 106 kPa

Radio Specifications

Table 4-6 Radio specifications

Item	Description
Antenna type	Outdoor external antenna

<table>
<tr><th>Item</th><th colspan="3">Description</th></tr>
<tr><td>Maximum number of users</td><td colspan="3">≤ 64</td></tr>
<tr><td>Maximum number of VAPs for each radio</td><td colspan="3">16</td></tr>
<tr><td>Maximum transmit power</td><td colspan="3">• 2.4 GHz: 28 dBm (combined power)
• 5 GHz: 26 dBm (combined power)
NOTE
The actual transmit power depends on local laws and regulations.</td></tr>
<tr><td>Maximum number of non-overlapping channels</td><td>2.4 GHz (2.412 GHz to 2.472 GHz)
• 802.11b/g
– 20 MHz: 3
• 802.11n
– 20 MHz: 3
– 40 MHz: 1</td><td>5 GHz (5.18 GHz to 5.825 GHz)
• 802.11a
– 20 MHz: 13
• 802.11n
– 20 MHz: 13
– 40 MHz: 6
• 802.11ac
– 20 MHz: 13
– 40 MHz: 6
– 80 MHz: 3</td><td>NOTE
The table uses the number of non-overlapping channels supported by China as an example. The number of non-overlapping channels varies in different countries. For details, see the Country Codes & Channels Compliance.
NOTICE
If the AP is delivered to the USA, pay attention to the following on channel and frequency band usage:
1. The country code of the AP is fixed.
2. High power radars working at frequencies in the range of 5.25 GHz to 5.35 GHz, 5.47 GHz to 5.6 GHz, and 5.65 GHz to 5.725 GHz can interfere with or even damage APs working at the same frequency.</td></tr>
<tr><td>Channel rate</td><td colspan="3">• 802.11b: 1, 2, 5.5, and 11 Mbit/s
• 802.11a/g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbit/s
• 802.11n: 6.5 to 450 Mbit/s
• 802.11ac: 6.5 to 1300 Mbit/s</td></tr>
</table>

4.1.4 Performance Specifications (AP9130DN)

For AP performance specifications, log in to **Huawei official website** and download the brochure of the corresponding AP model, or query the specifications using **Info-Finder**.

4.2 AP9131DN Product Description

4.2.1 Product Characteristics (AP9131DN)

Table 4-7 Product characteristics

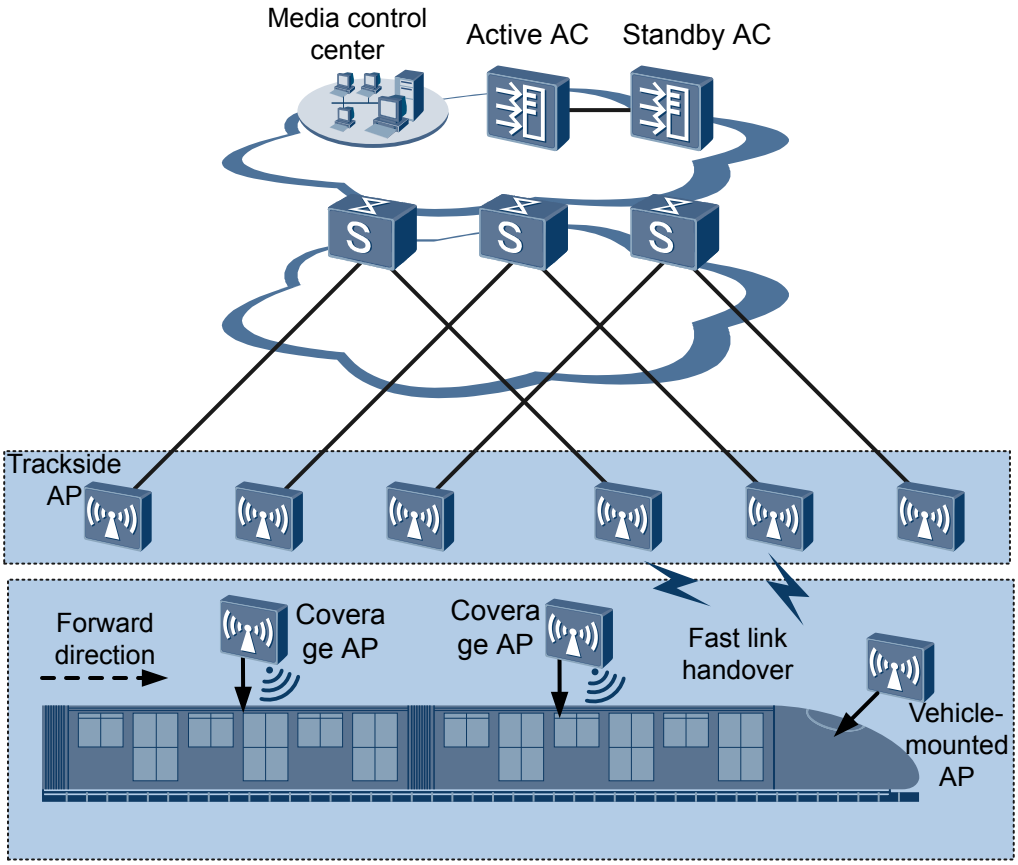
Product Model	Frequency Band	IEEE Standards Compliance	Positioning	Usage Scenario
AP9131DN	Dual band: • 2.4 GHz • 5 GHz The AP9131DN can provide services simultaneously on the 2.4 GHz and 5 GHz frequency bands to support more access users.	IEEE 802.11a/b/g/n/ac	Huawei AP9131DN is the latest-generation 802.11ac vehicle-mounted dual-band AP that supports 3x3 MIMO. It uses industrial anti-vibration M12 interfaces, complies with EN50155 vehicle-mounted electronic equipment standards, and supports 50 ms fast switchover, meeting train-ground backhaul network deployment and compartment coverage requirements.	Train-ground backhaul and compartment coverage scenarios

4.2.2 Usage Scenarios (AP9131DN)

The AP9131DN can work as a Fat AP or Fit AP and switch flexibly between the two working modes based on network planning.

Typical networking modes are as follows:

Figure 4-4 Typical networking



The AP9131DN can work as a trackside AP in Fit mode to communicate with the vehicle-mounted AP and be managed uniformly on the AC.

Deployed in the front and rear of a train, the AP9131DN can work as a vehicle-mounted AP in Fat mode. It supports vehicle-ground fast link handover technology and can implement link switchover within 50 ms, enabling a high-speed and stable train-ground backhaul network.

The AP9131DN can work as a compartment coverage AP in Fit mode to provide WLAN access for passengers. The AP can provide signal coverage on both 2.4 GHz and 5 GHz radios in compartments.

4.2.3 Hardware Information (AP9131DN)

Appearance

Figure 4-5 shows the appearance of the AP.

NOTE

The actual device appearance may slightly differ from the following device appearance, but these differences will not affect device functions.

Figure 4-5 AP9131DN appearance

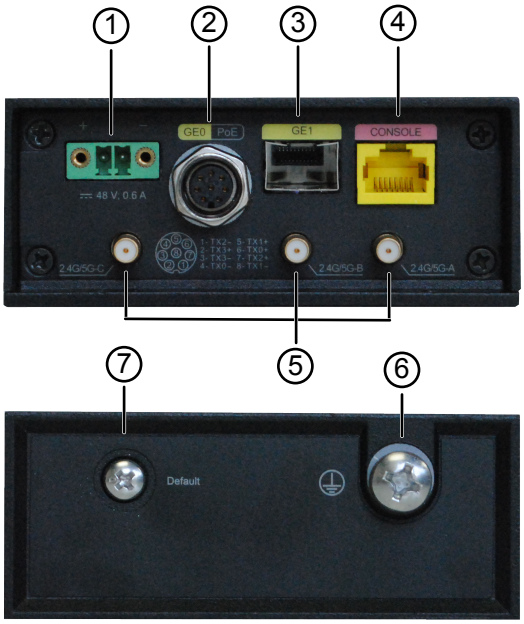
CAUTION

There is a scald warning label attached on the device, warning you not to touch the device after the device has been operating for a long time.

Interfaces

The following figure shows interfaces on the AP9131DN.

Figure 4-6 Interfaces on the AP9131DN



1. 48V: DC power interface.
2. GE0/PoE: 10/100/1000M Ethernet M12 electrical interface used to connect to the wired Ethernet. The interface supports PoE power supply.
3. GE1: 100/1000M Ethernet optical interface used to connect to the wired Ethernet. The interface must be installed with an optical fiber module.

   NOTE

   The GE1 interface of the AP can have a 1000 Mbit/s copper transceiver module installed. The module is purchased by customers.
4. CONSOLE: console interface.
5. 2.4G/5G: QMA female connector that connects to the combined 2.4 GHz and 5 GHz antennas.
6. Ground point: connects to a ground cable.
7. Default button: restores the factory settings if you hold down the button more than 3s from the hole.

LED Indicators

The AP9131DN provides multiple indicators: SYS indicator, Link/ACT indicator, and Wireless indicator. The following table describes indicators on AP9131DN.

NOTE

- Indicator colors may vary slightly at different temperature.
- Indicators of the same type have the same state meanings.

Table 4-8 Description about the SYS indicator

Type	Color	Status	Description
Default status after power-on	Green	Steady on	The AP is just powered on and the software is not started yet.
Software startup status	Green	Steady on after blinking once	After the system is reset and starts uploading the software, the indicator blinks green once. Until the software is uploaded and started, the indicator remains steady green.
Running status	Green	Blinking once every 2s (0.5 Hz)	• The system is running properly, the Ethernet connection is normal, and STAs are associated with the AP. • The system enters the Uboot CLI.
		Blinking once every 5s (0.2 Hz)	The system is running properly, the Ethernet connection is normal, and no STA is associated with the AP. The system is in low power consumption state.

Type	Color	Status	Description
Alarm	Green	Blinking once every 0.25s (4 Hz)	• The software is being upgraded. • After the software is uploaded and started, the AP working in Fit AP mode requests to go online on the AC and maintains this state until it goes online successfully on the AC (before the CAPWAP link is established). • The AP working in Fit AP mode fails to go online on the AC (the CAPWAP link disconnects).
Fault	Red	Steady on	A fault that affects services has occurred, such as a DRAM detection failure or system software loading failure. The fault cannot be automatically rectified and must be rectified manually.

Table 4-9 Description about the Link/ACT indicators

Type	Color	Status	Description
LINK	Green	Steady on	The system is running properly, the Ethernet connection is normal, and no data is being transmitted.
ACT	Green	Blinking	The system is running properly, the Ethernet connection is normal, and the AP is transmitting data. The indicator blinks more quickly when more data is being transmitted.

Table 4-10 Description about the Wireless indicator in traffic volume mode

Color	Status	Description
Green/yellow	Off	Radios are disabled, and no STA is connected to the AP.
Green/yellow	Steady on	The AP has STAs connected to the 2.4 GHz radio or 5 GHz radio, but no data is being transmitted.
Green	Blinking	The AP has STAs connected to the 2.4 GHz radio and is transmitting data. The indicator blinks more quickly when more data is being transmitted.

Color	Status	Description
Yellow	Blinking	The AP has STAs connected to the 5 GHz radio and is transmitting data. The indicator blinks more quickly when more data is being transmitted.
Green/yellow	Blinking alternatively	The AP has STAs connected to both the 2.4 GHz radio and 5 GHz radio. The indicator blinks more quickly when more data is being transmitted.

Table 4-11 Description about the Wireless indicator in signal strength mode

Color	Status	Description
Green/yellow	Off	The AP is not transmitting or receiving data or the signal strength is extremely low.
	Blinking once every 2s (0.5 Hz)	The AP is transmitting or receiving data normally, and the signal strength is low.
	Blinking once every 0.25 seconds (4 Hz)	The AP is transmitting or receiving data normally, and the signal strength is medium.
	Steady on	The AP is transmitting or receiving data normally, and the signal strength is high.

NOTE

When the WDS/Mesh function is enabled on an AP, the blinking frequency of its Wireless indicator indicates the receive signal strength on the WDS/Mesh connection by default. After you connect an AP to a WDS/Mesh network, you can run the **wifi-light** { **signal-strength** | **traffic** } command on the AC to specify whether the Wireless indicator blinking frequency indicates the receive signal strength or service traffic rate.**wifi-light signal-strength**:

- If the Mesh function is enabled on the AP, the blinking frequency of the Wireless indicator reflects the weakest signal strength of all neighboring APs.
- If WDS is enabled on an AP, the blinking frequency of the Wireless indicator reflects the strength of signals received from a WDS AP.
  - If the AP works in leaf mode, the blinking frequency of the Wireless indicator reflects the strength of signals received from a middle AP.
  - If the AP works in middle mode, the blinking frequency of the Wireless indicator reflects the strength of signals received from a root AP.
  - If the AP works in root mode, the blinking frequency of the Wireless indicator reflects the weakest signal strength of middle APs.

wifi-light traffic: allows the Wireless indicator to reflect the service traffic volume on the radio.

When an AP functions as a Fat AP, the Wireless indicator of the AP cannot reflect the signal strength.

Basic Specifications

Table 4-12 Basic specifications

Item		Description
Technical specifications	Dimensions (H x W x D)	40 mm x 180 mm x 100 mm (1.72 in. x 7.09 in. x 3.94 in.)
	Weight	1.2 kg
	System memory	• 256 MB DDR2 • 32 MB Flash
Power specifications	Power input	• DC: rated voltage 48 V; voltage range: 33.6 V to 60 V • PoE power supply: in compliance with IEEE 802.3at
	Maximum power consumption	• Compartment coverage scenarios: 17.5 W • Trackside single-5G scenarios: 12.5 W **NOTE** The actual maximum power consumption depends on local laws and regulations.

Item		Description
Environment specifications	Operating temperature	-60 m to +1800 m: • -40°C to +65°C (trackside 5G backhaul) • -40°C to +55°C (vehicle-mounted dual-band coverage) 1800 m to 5000 m: Temperature decreases by 1°C every time the altitude increases 300 m.
	Storage temperature	-40°C to +70°C
	Operating humidity	5% to 95% (non-condensing)
	IP rating	IP41
	Atmospheric pressure	70 kPa to 106 kPa

Radio Specifications

Table 4-13 Radio specifications

Item	Description
Antenna type	External dual-band combined antennas (QMA*3)
Maximum number of users	• Fit AP: ≤ 256 • Fat AP: ≤ 64
Maximum number of VAPs for each radio	16
Maximum transmit power	• 2.4 GHz: 25 dBm (combined power) • 5 GHz: 25 dBm (combined power) **NOTE** The actual transmit power depends on local laws and regulations.

Item	Description		
Maximum number of non-overlapping channels	2.4 GHz (2.412 GHz to 2.472 GHz) • 802.11b/g – 20 MHz: 3 • 802.11n – 20 MHz: 3 – 40 MHz: 1	5 GHz (5.18 GHz to 5.825 GHz) • 802.11a – 20 MHz: 13 • 802.11n – 20 MHz: 13 – 40 MHz: 6 • 802.11ac – 20 MHz: 13 – 40 MHz: 6 – 80 MHz: 3	**NOTE** The table uses the number of non-overlapping channels supported by China as an example. The number of non-overlapping channels varies in different countries. For details, see the *Country Codes & Channels Compliance*.
Channel rate	• 802.11b: 1, 2, 5.5, and 11 Mbit/s • 802.11a/g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbit/s • 802.11n: 6.5 to 450 Mbit/s • 802.11ac: 6.5 to 1300 Mbit/s		

4.2.4 Performance Specifications (AP9131DN)

For AP performance specifications, log in to **Huawei official website** and download the brochure of the corresponding AP model, or query the specifications using **Info-Finder**.

4.3 AP9132DN Product Description

4.3.1 Product Characteristics (AP9132DN)

Table 4-14 Product characteristics

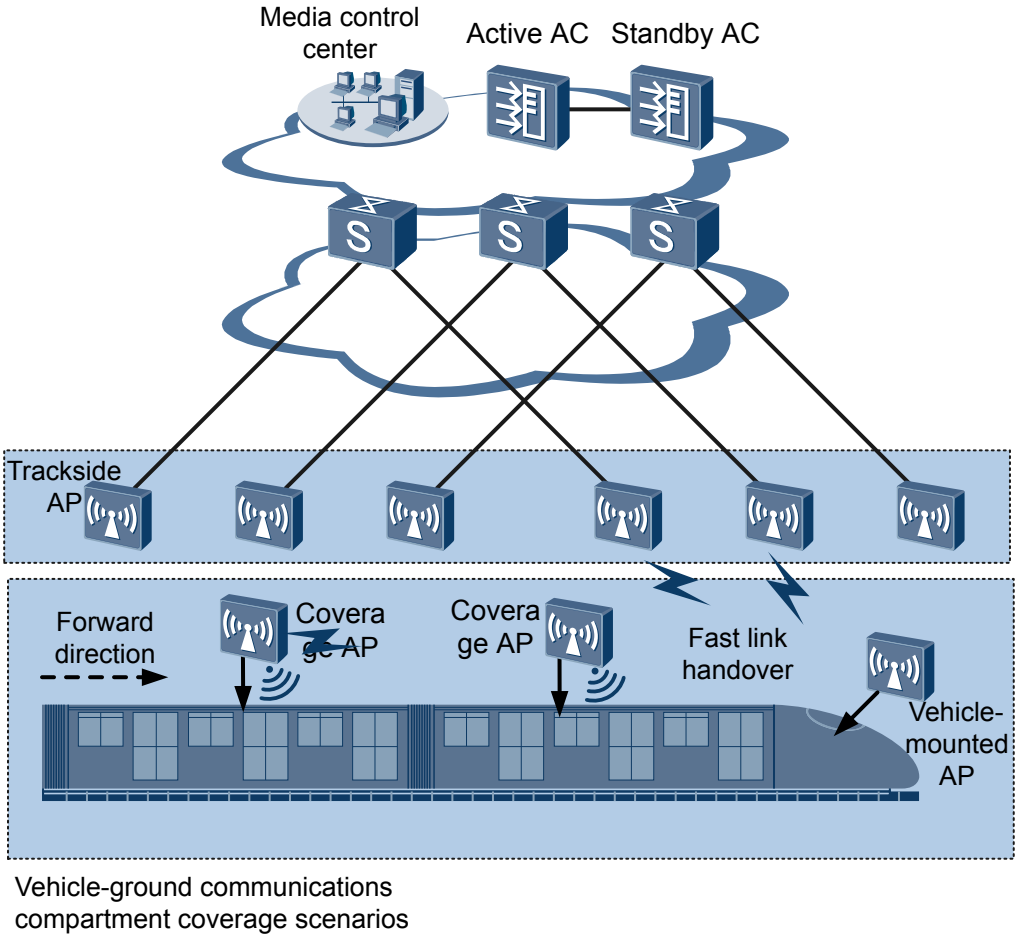
Product Model	Frequency Band	IEEE Standards Compliance	Positioning	Usage Scenario
AP9132DN	Dual band: • 2.4 GHz • 5 GHz The AP9132DN can provide services simultaneously on the 2.4 GHz and 5 GHz frequency bands to support more access users.	IEEE 802.11a/b/g/n/ac	Huawei AP9132DN is the latest-generation 802.11ac vehicle-mounted dual-band AP that supports 3x3 MIMO. It uses industrial anti-vibration M12 interfaces, complies with EN50155 vehicle-mounted electronic equipment standards, and supports 50 ms fast switchover, meeting train-ground backhaul network deployment and compartment coverage requirements.	Train-ground backhaul and compartment coverage scenarios

4.3.2 Usage Scenarios (AP9132DN)

The AP9132DN can work as a Fat AP or Fit AP and switch flexibly between the two working modes based on network planning.

Typical networking modes are as follows:

Figure 4-7 Typical networking



The AP9132DNs can work as trackside APs in Fit AP mode to communicate with the vehicle-mounted AP and be managed uniformly on the AC.

Deployed in the front and rear of a train, the AP9132DN can work as a vehicle-mounted AP in Fat AP mode. It supports vehicle-ground fast link handover technology and can implement link switchover within 50 ms, enabling a high-speed and stable train-ground backhaul network.

The AP9132DN can work as a compartment coverage AP in Fit AP mode to provide WLAN access for passengers. The AP can provide signal coverage on both 2.4 GHz and 5 GHz radios in compartments or use the 2.4 GHz radio for signal coverage and the 5 GHz radio for AP bridging between compartments. You can flexibly select the working mode of the AP according to service requirements.

4.3.3 Hardware Information (AP9132DN)

Appearance

Figure 4-8 shows the appearance of the AP.

NOTE

The actual device appearance may be different from the following device appearance, but these differences will not affect device functions.

Figure 4-8 AP9132DN appearance

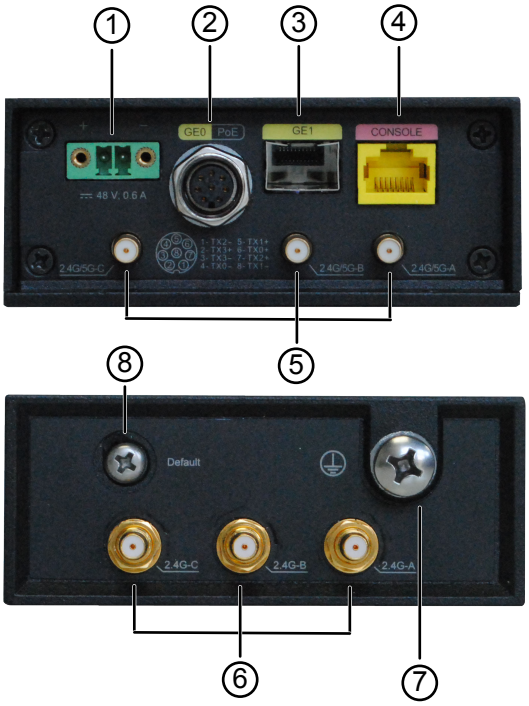
CAUTION

 There is a scald warning label attached on the device, warning you not to touch the device after the device has been operating for a long time.

Interfaces

The following figure shows interfaces on the AP9132DN.

Figure 4-9 Interfaces on the AP9132DN



1. 48V: DC power interface.
2. GE0/PoE: 10/100/1000M Ethernet M12 electrical interface used to connect to the wired Ethernet. The interface supports PoE power supply.
3. GE1: 100/1000M Ethernet optical interface used to connect to the wired Ethernet. The interface must be installed with an optical fiber module.

   NOTE

   The GE1 interface of the AP can have a 1000 Mbit/s copper transceiver module installed. The module is purchased by customers.
4. CONSOLE: console interface.
5. 2.4G/5G: QMA female connector that connects to 5 GHz antennas or dual-band combined antennas.
6. 2.4G: QMA female connector that connects to 2.4 GHz antennas.
7. Ground point: connects to a ground cable.
8. Default button: restores the factory settings if you hold down the button more than 3s from the hole.

LED Indicators

The AP9132DN provides multiple indicators: SYS indicator, Link/ACT indicator, and Wireless indicator. The following table describes indicators on AP9132DN.

NOTE

- Indicator colors may vary slightly at different temperature.
- Indicators of the same type have the same state meanings.

Table 4-15 Descriptions about the SYS indicator

Type	Color	Status	Description
Default status after power-on	Green	Steady on	The AP is just powered on and the software is not started yet.
Software startup status	Green	Steady on after blinking once	After the system is reset and starts uploading the software, the indicator blinks green once. Until the software is uploaded and started, the indicator remains steady green.
Running status	Green	Blinking once every 2s (0.5 Hz)	• The system is running properly, the Ethernet connection is normal, and STAs are associated with the AP. • The system enters the Uboot CLI.
		Blinking once every 5s (0.2 Hz)	The system is running properly, the Ethernet connection is normal, and no STA is associated with the AP. The system is in low power consumption state.
Alarm	Green	Blinking once every 0.25s (4 Hz)	• The software is being upgraded. • After the software is uploaded and started, the AP working in Fit AP mode requests to go online on the AC and maintains this state until it goes online successfully on the AC (before the CAPWAP link is established). • The AP working in Fit AP mode fails to go online on the AC (the CAPWAP link disconnects).
Fault	Red	Steady on	A fault that affects services has occurred, such as a DRAM detection failure or system software loading failure. The fault cannot be automatically rectified and must be rectified manually.
		Blinking once every 0.25s (4 Hz)	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention. (The fault may be an Ethernet port error, such as PHY detection failure or RF port error, such as PCI-e port detection failure or baseband chip detection failure.)

Table 4-16 Description about the Link/ACT indicators

Type	Color	Status	Description
LINK	Green	Steady on	The system is running properly, the Ethernet connection is normal, and no data is being transmitted.
ACT	Green	Blinking	The system is running properly, the Ethernet connection is normal, and the AP is transmitting data. The indicator blinks more quickly when more data is being transmitted.

Table 4-17 Description about the Wireless indicator in traffic volume mode

Color	Status	Description
Green/yellow	Off	Radios are disabled, and no STA is connected to the AP.
Green/yellow	Steady on	The AP has STAs connected to the 2.4 GHz radio or 5 GHz radio, but no data is being transmitted.
Green	Blinking	The AP has STAs connected to the 2.4 GHz radio and is transmitting data. The indicator blinks more quickly when more data is being transmitted.
Yellow	Blinking	The AP has STAs connected to the 5 GHz radio and is transmitting data. The indicator blinks more quickly when more data is being transmitted.
Green/yellow	Blinking alternatively	The AP has STAs connected to both the 2.4 GHz radio and 5 GHz radio. The indicator blinks more quickly when more data is being transmitted.

Table 4-18 Description about the Wireless indicator in signal strength mode

Color	Status	Description
Green/yellow	Off	The AP is not transmitting or receiving data or the signal strength is extremely low.
	Blinking once every 2s (0.5 Hz)	The AP is transmitting or receiving data normally, and the signal strength is low.

Color	Status	Description
	Blinking once every 0.25 seconds (4 Hz)	The AP is transmitting or receiving data normally, and the signal strength is medium.
	Steady on	The AP is transmitting or receiving data normally, and the signal strength is high.

NOTE

When the WDS/Mesh function is enabled on an AP, the blinking frequency of its Wireless indicator indicates the receive signal strength on the WDS/Mesh connection by default. After you connect an AP to a WDS/Mesh network, you can run the **wifi-light** { **signal-strength** | **traffic** } command on the AC to specify whether the Wireless indicator blinking frequency indicates the receive signal strength or service traffic rate.**wifi-light signal-strength**:

- If the Mesh function is enabled on the AP, the blinking frequency of the Wireless indicator reflects the weakest signal strength of all neighboring APs.
- If WDS is enabled on an AP, the blinking frequency of the Wireless indicator reflects the strength of signals received from a WDS AP.
  - If the AP works in leaf mode, the blinking frequency of the Wireless indicator reflects the strength of signals received from a middle AP.
  - If the AP works in middle mode, the blinking frequency of the Wireless indicator reflects the strength of signals received from a root AP.
  - If the AP works in root mode, the blinking frequency of the Wireless indicator reflects the weakest signal strength of middle APs.

wifi-light traffic: allows the Wireless indicator to reflect the service traffic volume on the radio.

When an AP functions as a Fat AP, the Wireless indicator of the AP cannot reflect the signal strength.

Basic Specifications

Table 4-19 Basic specifications

Item		Description
Technical specifications	Dimensions (H x W x D)	40 mm x 180 mm x 100 mm (1.72 in. x 7.09 in. x 3.94 in.)
	Weight	1.2 kg
	System memory	• 256 MB DDR2 • 32 MB Flash
Power specifications	Power input	• DC: rated voltage 48 V; voltage range: 33.6 V to 60 V • PoE power supply: in compliance with IEEE 802.3at

Item		Description
	Maximum power consumption	• Compartment coverage scenarios: 17.5 W • Trackside single-5G scenarios: 12.5 W **NOTE** The actual maximum power consumption depends on local laws and regulations.
Environment specifications	Operating temperature	-60 m to +1800 m: • -40°C to +65°C (trackside 5G backhaul) • -40°C to +55°C (vehicle-mounted dual-band coverage) 1800 m to 5000 m: Temperature decreases by 1°C every time the altitude increases 300 m.
	Storage temperature	-40°C to +70°C
	Operating humidity	5% to 95% (non-condensing)
	IP rating	IP41
	Atmospheric pressure	70 kPa to 106 kPa

Radio Specifications

Table 4-20 Radio specifications

Item	Description
Antenna type	External antenna: • Split mode: 2.4 GHz antenna (QMA*3), 5 GHz antenna (QMA*3). • Combined mode: dual-band combined antennas (QMA*3).
Maximum number of users	• Fit AP mode: ≤ 256 • Fat AP mode: ≤ 64
Maximum number of VAPs for each radio	16

<table>
<tr><th>Item</th><th colspan="3">Description</th></tr>
<tr><td>Maximum transmit power</td><td colspan="3">• 2.4 GHz: 26 dBm (combined power)
• 5 GHz: 25 dBm (combined power)
NOTE
The actual transmit power depends on local laws and regulations.</td></tr>
<tr><td>Maximum number of non-overlapping channels</td><td>2.4 GHz (2.412 GHz to 2.472 GHz)
• 802.11b/g
– 20 MHz: 3
• 802.11n
– 20 MHz: 3
– 40 MHz: 1</td><td>5 GHz (5.18 GHz to 5.825 GHz)
• 802.11a
– 20 MHz: 13
• 802.11n
– 20 MHz: 13
– 40 MHz: 6
• 802.11ac
– 20 MHz: 13
– 40 MHz: 6
– 80 MHz: 3</td><td>NOTE
The table uses the number of non-overlapping channels supported by China as an example. The number of non-overlapping channels varies in different countries. For details, see the Country Codes & Channels Compliance.</td></tr>
<tr><td>Channel rate</td><td colspan="3">• 802.11b: 1, 2, 5.5, and 11 Mbit/s
• 802.11a/g: 6, 9, 12, 18, 24, 36, 48, and 54 Mbit/s
• 802.11n: 6.5 to 450 Mbit/s
• 802.11ac: 6.5 to 1300 Mbit/s</td></tr>
</table>

4.3.4 Performance Specifications (AP9132DN)

For AP performance specifications, log in to **Huawei official website** and download the brochure of the corresponding AP model, or query the specifications using **Info-Finder**.

