Huawei WLAN AP Antenna Brochure

General Instructions

Instructions on WLAN antennas:

Frequency Band of the Radio

The WLAN mainly works on three ISM frequency bands: 2.4 GHz, 5 GHz, and 6 GHz. There are five types of antennas based on the supported frequency bands: 2.4 GHz single-band antenna, 5 GHz single-band antenna, 6 GHz single-band antenna, 2.4 GHz and 5 GHz dual-band antenna, and 2.4 GHz, 5 GHz, and 6 GHz tri-band antenna.

Polarization Mode

The polarization modes of WLAN antennas include single polarization and dual polarization. Typically, a single-polarized antenna provides one RF port, and a dual-polarized antenna provides two or three RF ports.

Antenna Gain

Antenna gain is an important parameter for measuring the coverage capability of an antenna. An antenna with a higher gain provides a longer coverage distance and better coverage effect.

Radiation Direction

WLAN antennas can be classified into omnidirectional antennas and directional antennas. Omnidirectional antennas are usually used for indoor coverage, while directional antennas are usually used for outdoor coverage. Directional antennas can also be used for indoor coverage in special scenarios, such as large exhibition centers, conference centers, and airports or stations.

Beamwidth

The beamwidth of an antenna includes the horizontal beamwidth and vertical beamwidth, which indicate the opening angles of the radio wave radiation of the antenna in the horizontal and vertical directions. Typically, the beamwidth is the angle between the two directions where the power is 3 dB lower than that in the maximum radiation direction. The beamwidth is also called half-power angle.

Installation Mode

An antenna can be installed in AP direct connection, wall mounting, ceiling mounting, or pole mounting mode. Pole mounting is the mainstream installation mode.

Selection Policy

Before selecting an AP and antenna, you need to consider the basic principles and the port type of the AP and antenna.

Basic Principles

No.	Factor for Consideration	Description
1	Usage scenario and	Indoor scenarios: Typically, indoor APs and antennas are used to provide signal coverage.

	purpose	Outdoor scenarios: Typically, outdoor APs and antennas with a high IP rating and a certain surge protection capability are used to provide signal coverage and bridge backhaul. Rail transportation scenarios: • Train-ground communications: Typically, outdoor APs and antennas with a high IP rating and a certain anti-vibration capability are used to provide signal coverage. • Compartment coverage: Typically, indoor APs and antennas with a certain anti-vibration capability are used to provide signal coverage. • Station platform coverage: The same APs as those in common outdoor and indoor scenarios are used.
2	Local standards and regulations	The transmit power and maximum gain of antennas must strictly comply with local standards and regulations. For the rail transportation scenarios, the performance, environment adaptability, and anti-vibration capability of the antennas must also confirm to requirements of the related railway authorities.
3	Coverage or backhaul area and distance	Coverage: Directional antennas are recommended for long and narrow areas, while omnidirectional antennas are recommended for round and square areas. Backhaul: Directional antennas are usually used. If the backhaul distance is long, high-gain antennas should be used; if the backhaul target is concentrated, small-angle antennas should be used.
4	Transmission frequency for radio signals	Coverage: To implement 2.4 GHz, 5GHz, and 6 GHz signal coverage, use 2.4 GHz, 5 GHz, and 6 GHz antennas separately in the same area or use multi-band antennas. Backhaul: 2.4 GHz antennas are not used for backhaul. Instead, only 5 GHz antennas can be used for backhaul. Typically, small-angle directional antennas are used to implement long-distance backhaul.
5	Construction cost and simplicity	An external directional antenna usually has a large size and needs to be connected to an AP's RF ports through feeder cables. Compared to a built-in antenna and whip antenna directly installed on an AP, installing an external directional antenna requires higher construction costs and may affect indoor simplicity. To further simplify antenna layout (especially in coverage scenarios) without compromising signal quality, you are advised to use built-in or whip antennas directly installed on APs.

Interface Types of APs and Antennas

No.	Product Type	Product Model	Interface type	Benefits	Beamwidth
1	Wi-Fi 7 (802.11be) indoor AP	AirEngine 6776-X6ETH	6 x RP-SMA-K	N/A	N/A
2	Wi-Fi 7 (802.11be) outdoor AP	AirEngine 6776I-X6ETH	6x Type-N female	N/A	N/A
		AirEngine	6x Type-N female	N/A	N/A

No.	Product Type	Product Model	Interface type	Benefits	Beamwidth
		5776I-X6EH			
3	Wi-Fi 6 (802.11ax) indoor AP	AirEngine 6760-X1E	8 x RP-SMA-K/dual-band	N/A	N/A
	Wi-Fi 6 (802.11ax) indoor AP	AirEngine 6761-21E	4 x RP-SMA-K/dual-band	N/A	N/A
4	Wi-Fi 6 (802.11ax) outdoor AP	AirEngine 6760R-51E	4 x Type-N female/dual-band	N/A	N/A
		AirEngine 8760R-X1E	8 x Type-N female/dual-band	N/A	N/A
		AirEngine 5761R-11E	4 x Type-N female/dual-band	N/A	N/A
5	Indoor omnidirectional antenna	27015058	1 x RP-SMA-J/tri-band	3 dBi & 4 dBi & 4 dBi	360°/45° & 360°/45° & 360°/45°
		27012545	4 x RP-SMA-J/dual-band	4 dBi & 5 dBi	360°/110° & 360°/110°
6	Outdoor omnidirectional antenna	27010215	1 x Type-N female/single-band	11 dBi	360°/9°
		27013721	1 x Type-N male/dual-band	4 dBi & 7 dBi	360°/30° & 360°/15°
		27015057	1 x Type-N male/tri-band	4 dBi & 7 dBi & 7 dBi	360°/40° & 360°/20° & 360°/20°
7	Outdoor 2.4GHz directional antenna	27010812	2 x Type-N female/single-band	12 dBi	60°/30°
		27010904	2 x Type-N female/single-band	14 dBi	30°/30°
8	Outdoor 5 GHz directional antenna	27010906	2 x Type-N female/single-band	14 dBi	32°/32°
		27010889	2 x Type-N female/single-band	11 dBi	60°/30°
		27010890	2 x Type-N female/single-band	19 dBi	15°/15°
		27013413	2 x Type-N female/single-	15 dBi	45°/15°

No.	Product Type	Product Model	Interface type	Benefits	Beamwidth
			band		
		27013921	2 x Type-N female/single-band	15 dBi	45°/15°
		27013955	4 x Type-N female/single-band	16 dBi	25°/25°
		27013956	4 x Type-N female/single-band	16 dBi	25°/25°
9	Outdoor 6 GHz directional antenna	27015111	4 x Type-N female/single-band	11 dBi	25°/45°
10	Outdoor dual-band directional antenna	27013718	4 x Type-N female/dual-band	13 dBi & 16 dBi	33°/33° & 18°/18°
		27013719	4 x Type-N female/dual-band	13 dBi &13 dBi	33°/33° & 30°/30°
		27013720	4 x Type-N female/dual-band	8 dBi & 8 dBi	70°/70° & 70°/70°
		27012565	4 x Type-N female/dual-band	12 dBi & 11 dBi	35°/26° & 35°/26°

Indoor Omnidirectional Antenna

27015058 Indoor 2.4 GHz & 5 GHz & 6 GHz Single-Polarized Omnidirectional Antenna (H360 V45 G3 & H360 V45 G4 & H360 V45 G4)

The 27015058 omnidirectional antenna is named ANTTG030404A1SV and applicable to indoor scenarios.

Antenna Appearance

Appearance of the 27015058 antenna

Technical Specifications

Technical specifications of the 27015058 antenna

Item	Value (2.4 GHz)	Value (5 GHz)	Value (6 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850	5925–7125
Gain (dBi)	3	4	4
Coverage distance (m)	40	20	18
Horizontal lobe width (degrees)	360	360	360
Standing wave ratio (SWR)	≤ 2	≤ 2	≤ 2
Polarization mode	Vertical polarization		
Connector	RP-SMA-J		
Dimensions (H x W x D)	14 mm x 168.8 mm x 20.2 mm		
Weight (g)	33		
Installation mode	Directly install on the device		

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

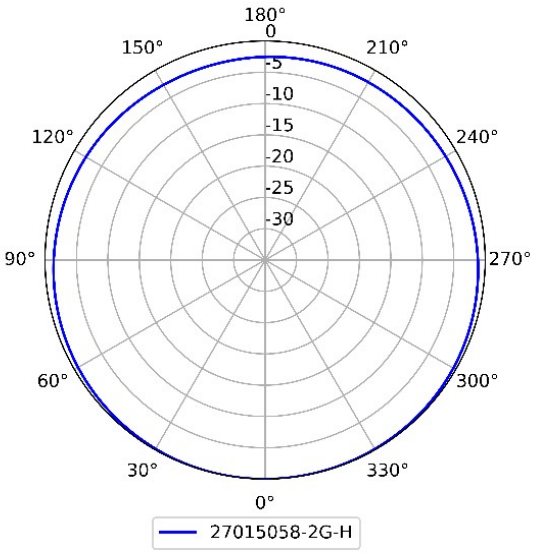
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.
- 6 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

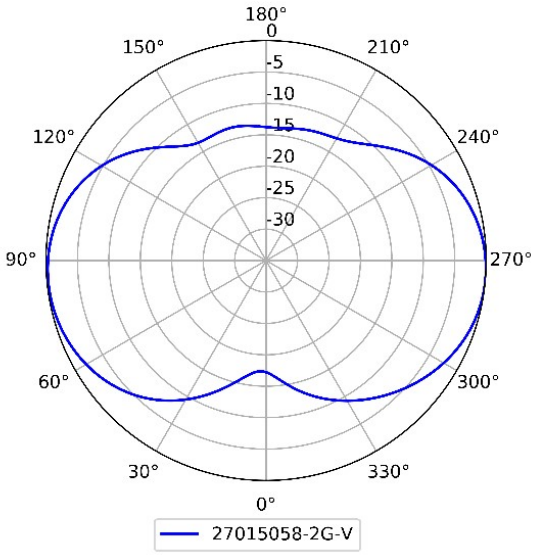
For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

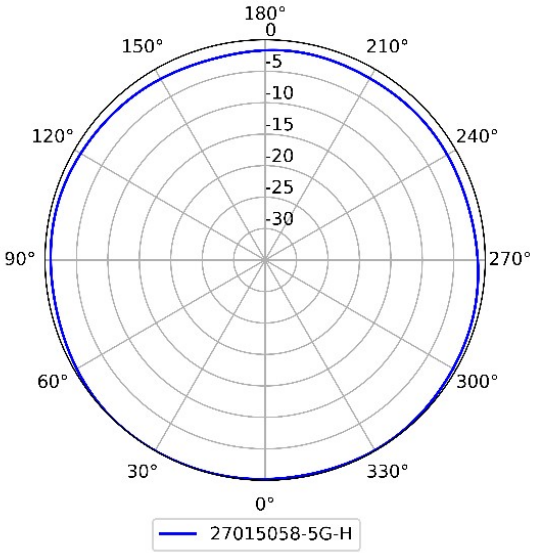
The following figures show the radiation patterns of the 27015058 antenna in the horizontal and vertical directions on the 2.4 GHz, 5 GHz, and 6 GHz frequency bands.

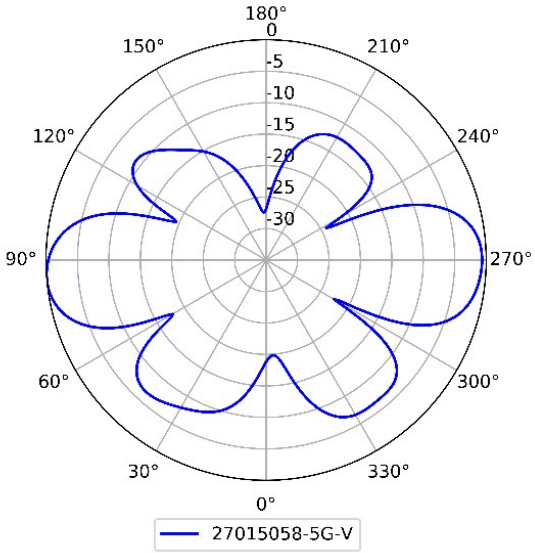
Radiation pattern of the 27015058 antenna (2.4 GHz)



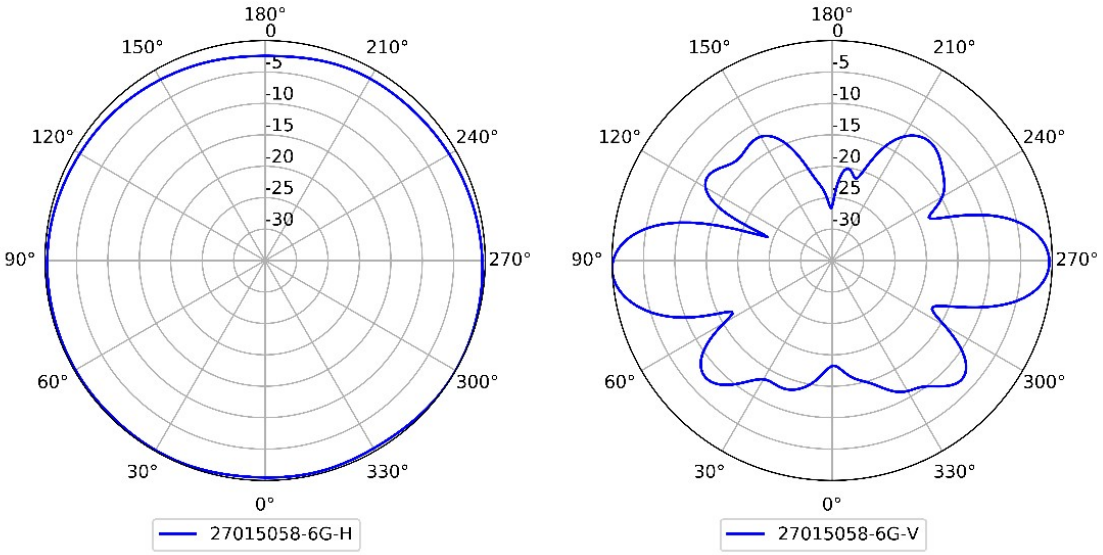


Radiation pattern of the 27015058 antenna (5 GHz)





Radiation pattern of the 27015058 antenna (6 GHz)



27012545 Indoor 2.4 GHz & 5 GHz Omnidirectional Antenna (H360 V110 G4 & H360 V110 G5)

The 27012545 omnidirectional antenna is named ANTDG0404D4SR and applicable to indoor scenarios with aesthetic requirements.

Antenna Appearance

Appearance of the 27012545 antenna

Technical Specifications

Technical specifications of the 27012545 antenna

Item	Value (2.4 GHz)	Value (5 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850
Gain (dBi)	4	5
Coverage distance (m)	50	22
Horizontal lobe width (degrees)	360	360
Vertical lobe width (degrees)	110	110
Standing wave ratio (SWR)	≤ 2	≤ 2
Polarization mode	Linear polarization	
Connector	RP-SMA-J×4	
Dimensions (H x W x D)	20 mm x 150 mm x 150 mm	
Weight (g)	450	
Installation mode	Ceiling mounting	

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

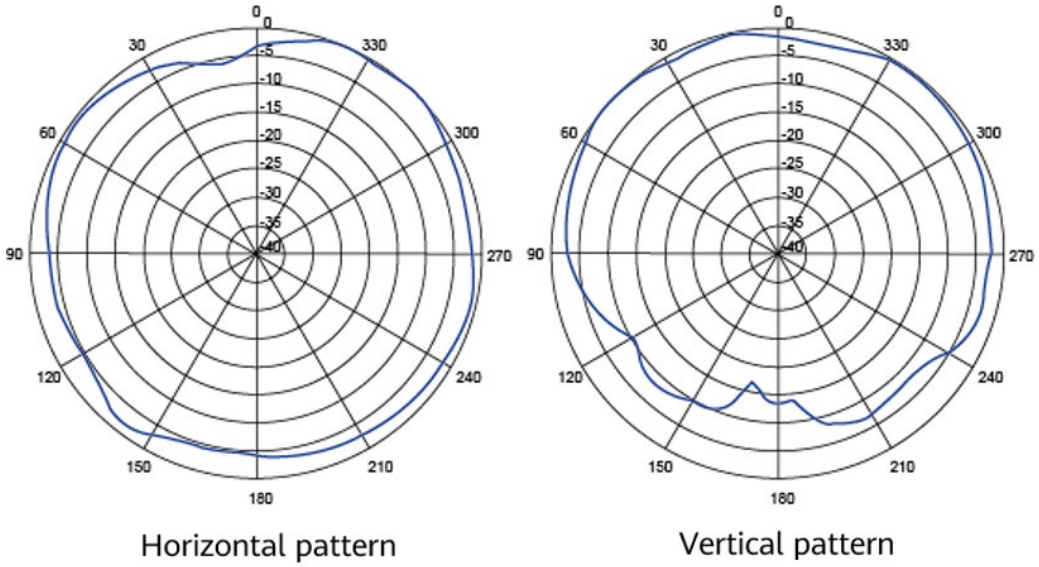
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

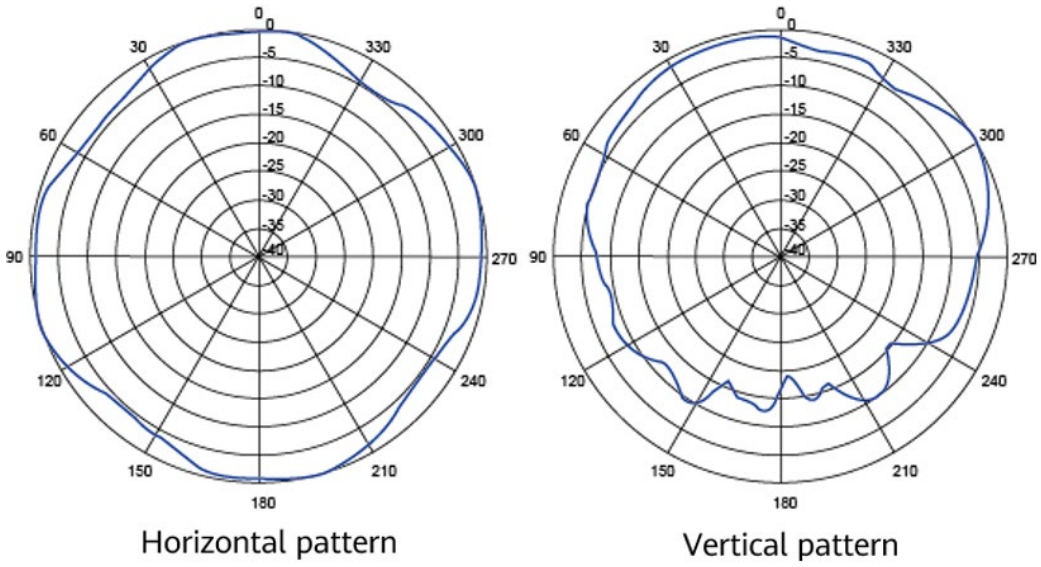
Antenna Pattern

The following figures show the radiation patterns of the 27012545 antenna in the horizontal and vertical directions on the 2.4 GHz and 5 GHz frequency bands.

Radiation pattern of the 27012545 antenna (2.4 GHz)



Radiation pattern of the 27012545 antenna (5 GHz)



Outdoor Omnidirectional Antenna

Currently, the following outdoor omnidirectional antennas are available: 2.4 GHz single-polarized omnidirectional antenna (11 dBi) and 2.4 GHz and 5 GHz single-polarized omnidirectional antennas. The features of each antenna are as follows:

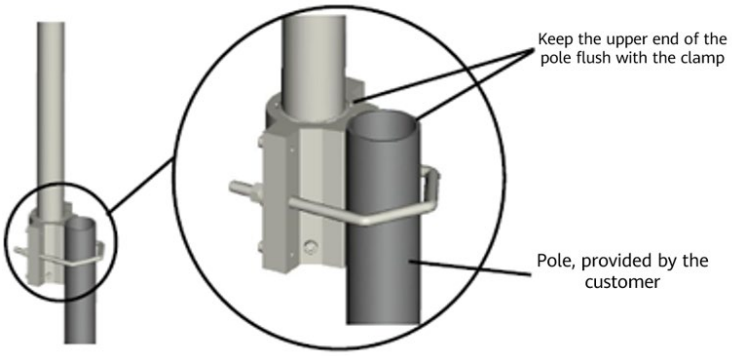
27010215 Outdoor 2.4 GHz Single-Polarized Omnidirectional Antenna (H360 V9 G11)

The single-polarized omnidirectional antenna of the model 27010215 is named TQJ-2400-11-T2. It supports 2.4 GHz single frequency. Typically, it is connected to an AP through a cable and installed on a

high pole in pole mounting mode to implement outdoor omnidirectional coverage. It is applicable to outdoor omnidirectional coverage scenarios, such as squares and parks.

Antenna Appearance

Appearance and installation effect of the 27010215 antenna



Technical Specifications

Technical specifications of the 27010215 antenna

Item	Value
Frequency range (MHz)	2400 - 2500
Gain (dBi)	11
Coverage distance (m)	130
Horizontal lobe width (degrees)	360
Vertical lobe width (degrees)	9
Standing wave ratio (SWR)	≤1.4
Polarization mode	Vertical polarization
Connector	N-female
Dimensions (mm)	Length < 1100 mm
Weight (kg)	0.976
Support pole diameter (mm)	φ35–φ50
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

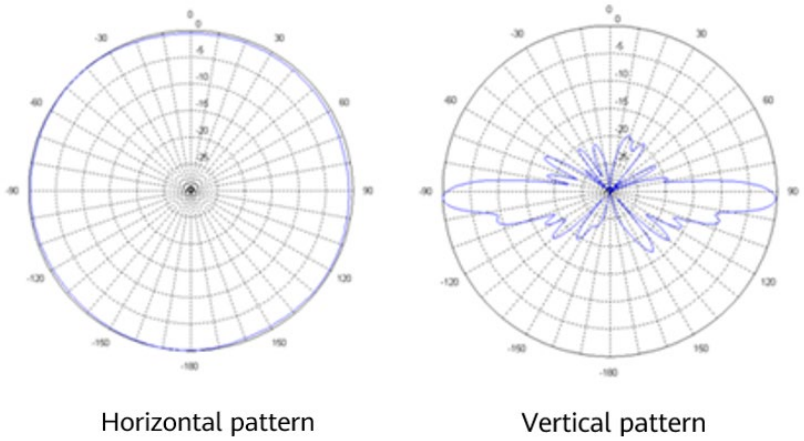
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27010215 omnidirectional antenna in the horizontal and vertical directions.

Radiation pattern of the 27010215 antenna



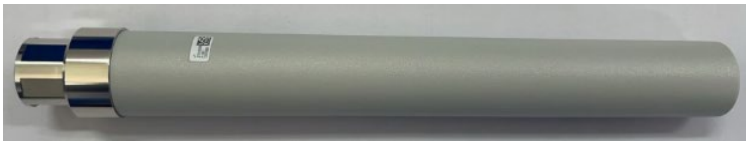
Horizontal pattern Vertical pattern

27015057 Outdoor 2.4 GHz & 5 GHz & 6 GHz Single-Polarized Omnidirectional Antenna (H360 V40 G4 & H360 V20 G7 & H360 V20 G7)

The 27015057 omnidirectional antenna is named ANTTG040707A1NV and applicable to outdoor wide-coverage scenarios.

Antenna Appearance

Appearance of the 27015057 antenna



Technical Specifications

Technical specifications of the 27015057 antenna

Item	Value (2.4 GHz)	Value (5 GHz)	Value (6 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850	5925–7125
Gain (dBi)	4	7	7
Coverage distance (m)	70	70	60

Item	Value (2.4 GHz)	Value (5 GHz)	Value (6 GHz)
Horizontal lobe width (degrees)	360	360	360
Vertical lobe width (degrees)	40	20	20
Standing wave ratio (SWR)	<2	<2	<2
Polarization mode	Vertical polarization		
Connector	N-male		
Dimensions (mm)	Diameter x length: φ27.5 x 233		
Weight (g)	99		
Operating temperature	-40°C to +65°C		
Installation mode	Directly installed on the AP		

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

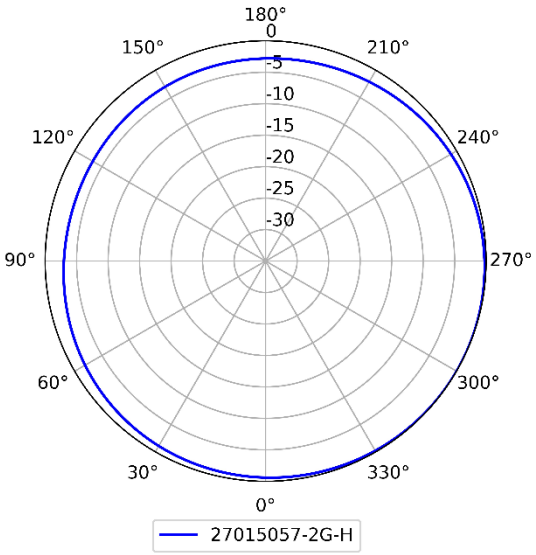
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.
- 6 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

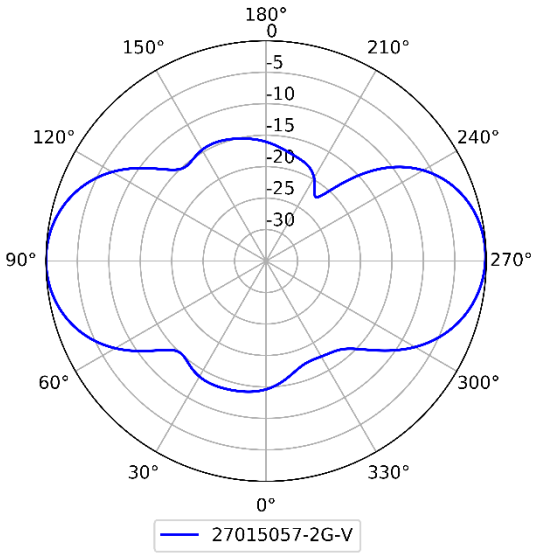
For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

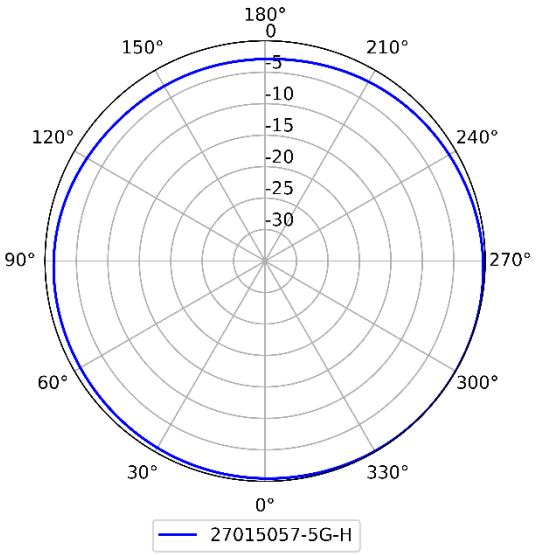
The following figures show the radiation patterns of the 27015057 antenna in the horizontal and vertical directions on the 2.4 GHz, 5 GHz, and 6 GHz frequency bands.

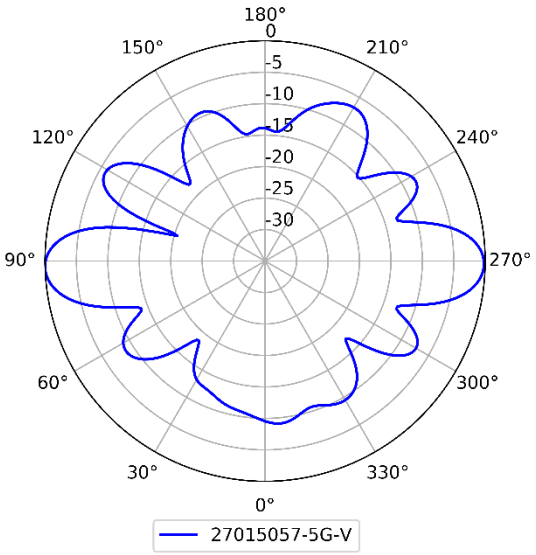
Radiation pattern of the 27015057 antenna (2.4 GHz)



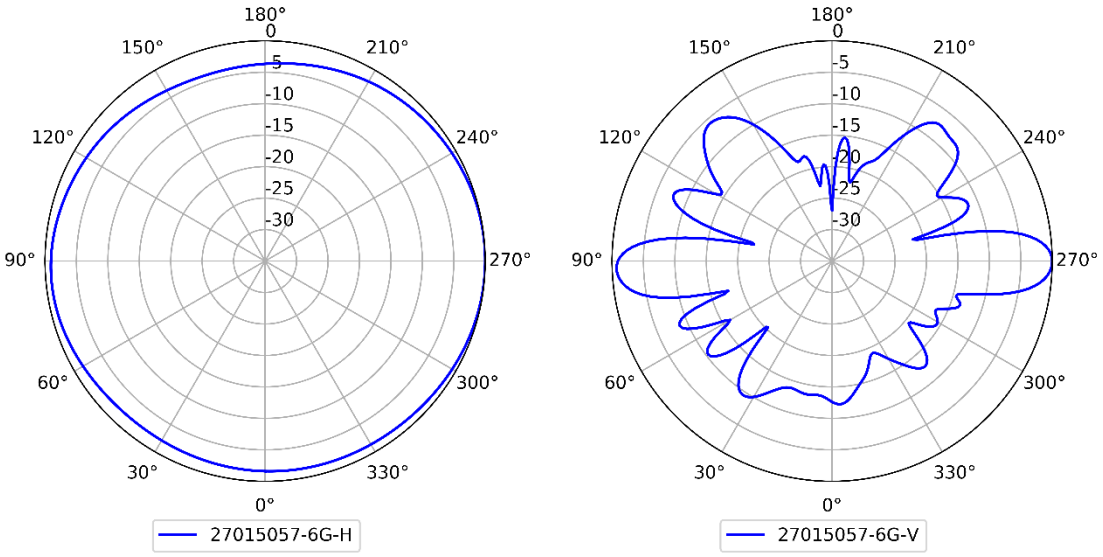


Radiation pattern of the 27015057 antenna (5 GHz)





Radiation pattern of the 27015057 antenna (6 GHz)



27010812 Outdoor 2.4 GHz Dual-Polarized Directional Antenna (H60 V30 G12)

The 27010812 directional antenna supports only the 2.4 GHz frequency band. It is named ADU451100 and mainly applicable to outdoor scenarios. The antenna is connected to an AP through an RF cable and mounted on a pole to provide directional outdoor coverage. This mounting mode applies to outdoor scenarios such as squares and roads.

Antenna Appearance

Appearance of the 27010812 antenna

Technical Specifications

Technical specifications of the 27010812 antenna

Item	Value
Frequency range (MHz)	2400 - 2500
Gain (dBi)	12
Coverage distance (m)	150
Horizontal lobe width (degrees)	60
Vertical lobe width (degrees)	30
Standing wave ratio (SWR)	≤1.45
Polarization mode	±45° dual polarization
Connector	2 x N-female
Dimensions (H x W x D)	60 mm x 250 mm x 155 mm
Weight (kg)	< 1
Support pole diameter (mm)	φ30-φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

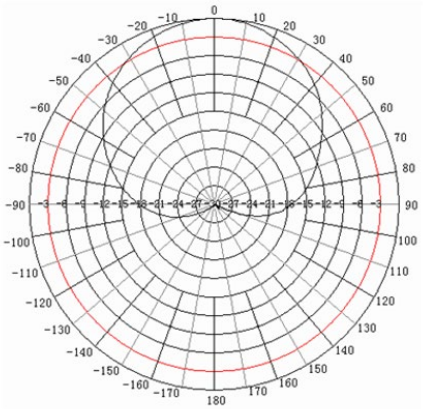
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27010812 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27010812 directional antenna



27010904 Outdoor 2.4 GHz Dual-Polarized Directional Antenna (H30 V30 G14)

The 27010904 directional antenna supports only the 2.4 GHz frequency band. It is named AD24145D00 and mainly applicable to outdoor scenarios. The antenna is connected to an AP through an RF cable and mounted on a pole to provide directional outdoor coverage. This mounting mode applies to outdoor scenarios such as squares and roads.

Antenna Appearance

Appearance of the 27010904 antenna

Technical Specifications

Technical specifications of the 27010904 antenna

Item	Value
Frequency range (MHz)	2400 - 2500
Gain (dBi)	14
Coverage distance (m)	180
Horizontal lobe width (degrees)	30
Vertical lobe width (degrees)	30

Item	Value
Standing wave ratio (SWR)	≤1.5
Polarization mode	±45° dual polarization
Connector	2 x N-female
Dimensions (H x W x D)	25 mm x 250 mm x 250 mm
Weight (kg)	< 0.6
Support pole diameter (mm)	φ30-φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

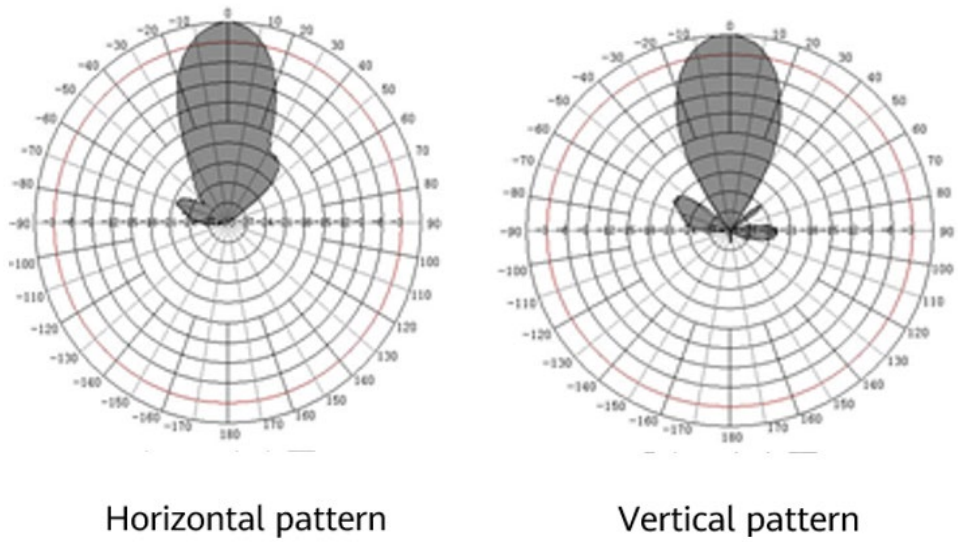
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27010904 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27010904 directional antenna



Horizontal pattern Vertical pattern

Outdoor Directional Antenna (5 GHz)

Currently, seven types of 5 GHz dual-polarized outdoor directional antennas are available. The characteristics of each antenna are as follows:

27010906 Outdoor 5 GHz Dual-Polarized Directional Antenna (H32 V32 G14)

The 27010906 directional antenna supports only the 5 GHz frequency band. It is named AD515145D00 and applicable to outdoor road, wireless backhaul, and high-density scenarios. To achieve better performance, install antennas at high positions and away from metal obstacles, for example, building tops, mountaintops, and tower tops. Additionally, keep the transmit end of an antenna away from obstacles.

Antenna Appearance

Appearance of the 27010906 antenna

Technical Specifications

Technical specifications of the 27010906 antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	14
Coverage distance (m)	140
Horizontal lobe width (degrees)	32
Vertical lobe width (degrees)	32
Standing wave ratio (SWR)	≤ 1.8

Polarization mode	±45º polarization
Connector	2 x N-female
Dimensions (H x W x D)	25 mm x 220 mm x 120 mm
Weight (kg)	0.8
Support pole diameter (mm)	φ30-φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

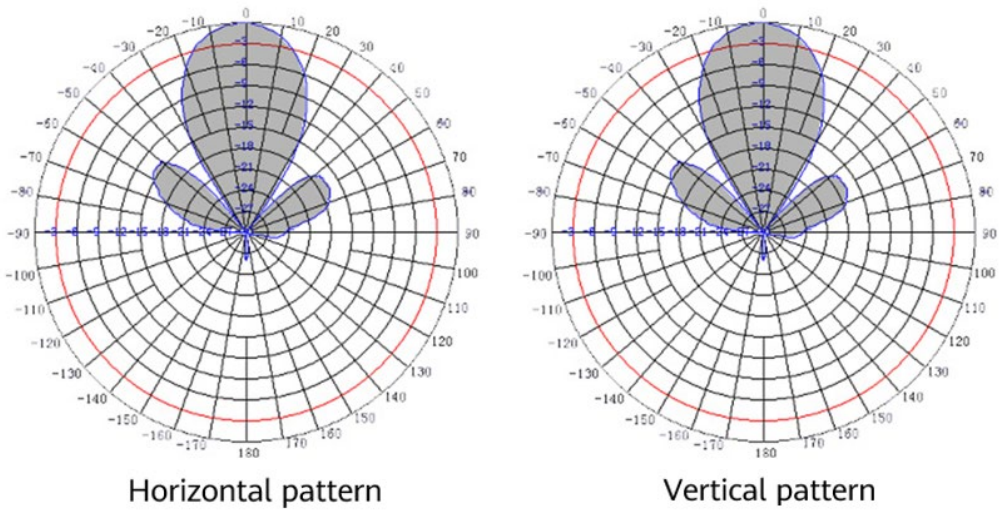
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27010906 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27010906 directional antenna



27010889 Outdoor 5 GHz Dual-Polarized Directional Antenna (H60 V30 G11.5)

The 27010889 directional antenna supports only the 5 GHz frequency band. It is named ASB115G00 and applicable to roads and wide coverage scenarios. To achieve better performance, install antennas

at high positions and away from metal obstacles, for example, building tops, mountaintops, and tower tops. Additionally, keep the transmit end of an antenna away from obstacles.

Antenna Appearance

Appearance of the 27010889 antenna

Technical Specifications

Technical specifications of the 27010889 antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	11.5
Coverage distance (m)	110
Horizontal lobe width (degrees)	60
Vertical lobe width (degrees)	30
Standing wave ratio (SWR)	≤1.8
Polarization mode	±45° polarization
Connector	2 x N-female
Dimensions (H x W x D)	55 mm x 230 mm x 145 mm
Weight (kg)	1.300
Support pole diameter (mm)	φ35-φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

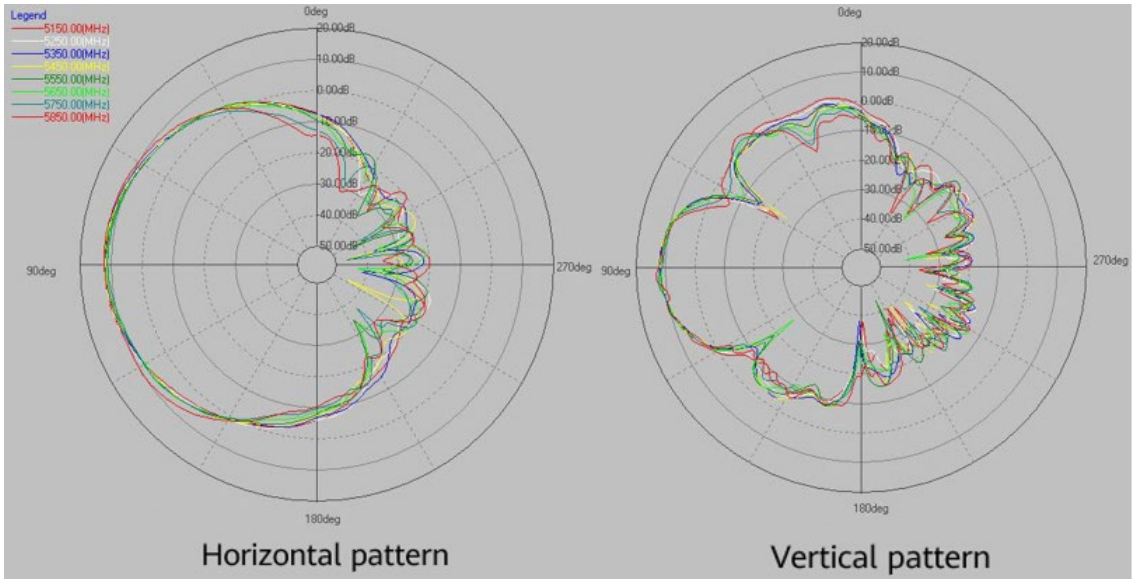
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27010889 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27010889 directional antenna

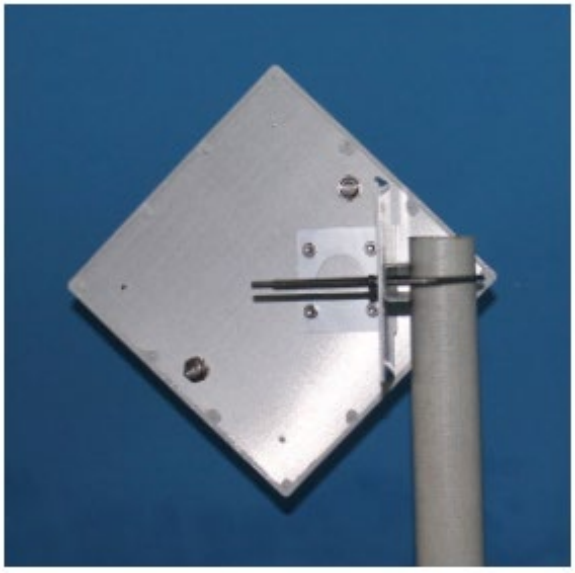


27010890 Outdoor 5 GHz Dual-Polarized Directional Antenna (H15 V15 G19)

The 27010890 directional antenna supports only the 5 GHz frequency band. It is named ASB185G00 and applicable to wireless backhaul and high-density scenarios. To achieve better performance, install antennas at high positions and away from metal obstacles, for example, building tops, mountaintops, and tower tops. Additionally, keep the transmit end of an antenna away from obstacles.

Antenna Appearance

Appearance of the 27010890 antenna



Technical Specifications

Technical specifications of the 27010890 antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	19
Coverage distance (m)	220
Horizontal lobe width (degrees)	15
Vertical lobe width (degrees)	15
Standing wave ratio (SWR)	≤ 1.8
Polarization mode	±45° dual polarization
Connector	2 x N-female
Dimensions (H x W x D)	25 mm x 250 mm x 250 mm
Weight (kg)	1.300
Support pole diameter (mm)	φ35-φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

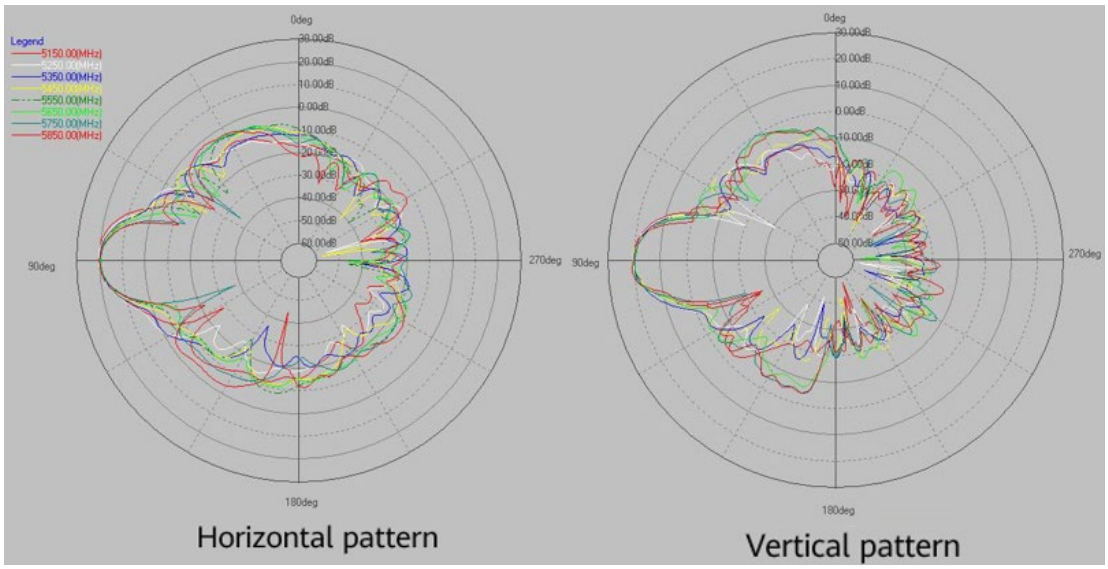
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27010890 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27010890 directional antenna



27013413 5 GHz Dual-Polarized Directional Antenna (H45 V15 G15.5)

The 27013413 directional antenna is named ANT5G15D2NR and applicable only to rail transmit scenarios.

Antenna Appearance

Appearance of the 27013413 antenna

Technical Specifications

Technical specifications of the 27013413 directional antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	15.5
Coverage distance (m)	160
Horizontal lobe width (degrees)	45
Vertical lobe width (degrees)	15
Standing wave ratio (SWR)	≤ 2
Polarization mode	Orthogonal 45° dual polarization
Connector	2 x N-female
Dimensions (H x W x D)	56 mm x 230 mm x 128 mm
Weight (kg)	0.53
Support pole diameter (mm)	φ35-φ75
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

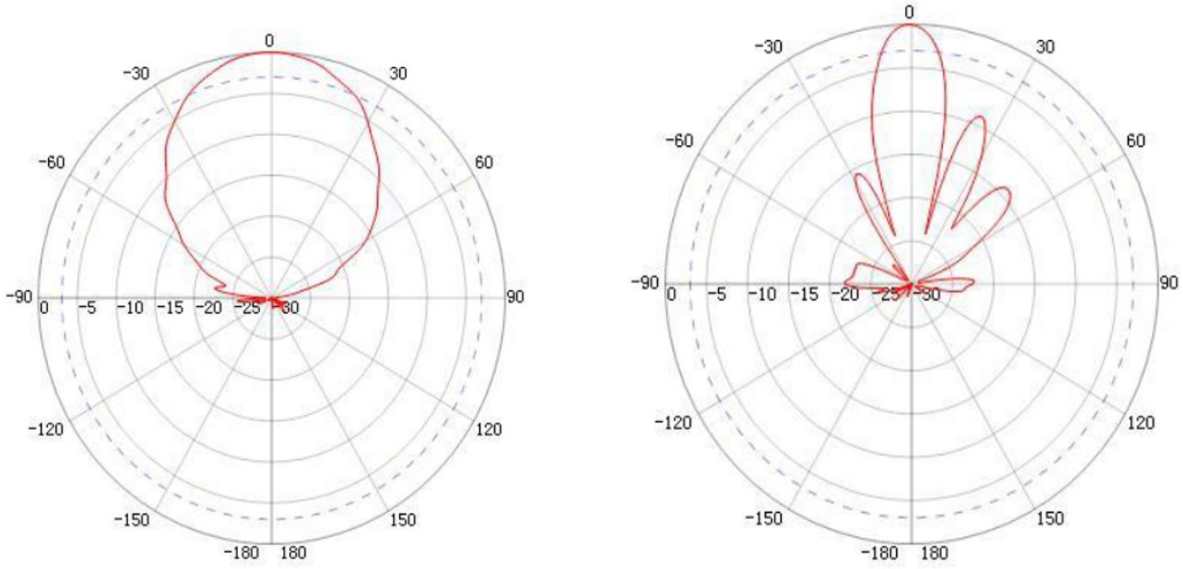
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27013413 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27013413 directional antenna



Horizontal pattern

Vertical pattern

27013921 5 GHz Dual-Polarized Directional Antenna (H45 V15 G15.5)

The 27013921 directional antenna is named ANT5G15D2NW and applicable only to rail transmit scenarios.

Antenna Appearance

Appearance of the 27013921 antenna

Technical Specifications

Technical specifications of the 27013921 directional antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	15.5
Coverage distance (m)	160
Horizontal lobe width (degrees)	45
Vertical lobe width (degrees)	15
Standing wave ratio (SWR)	≤ 2
Polarization mode	±45° polarization
Connector	2 x N-female
Dimensions (H x W x D)	60 mm x 240 mm x 133 mm
Weight (kg)	0.8
Installation mode	Wall mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

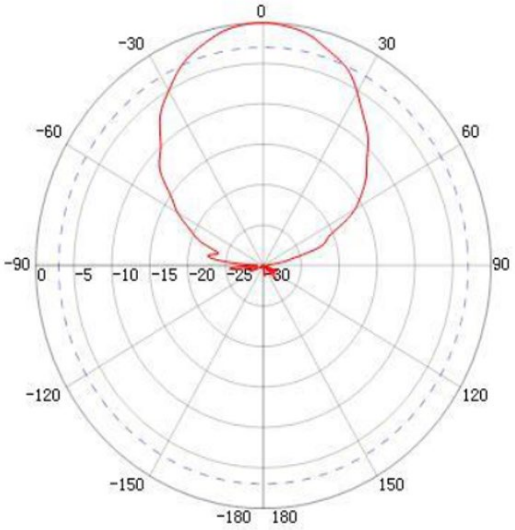
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

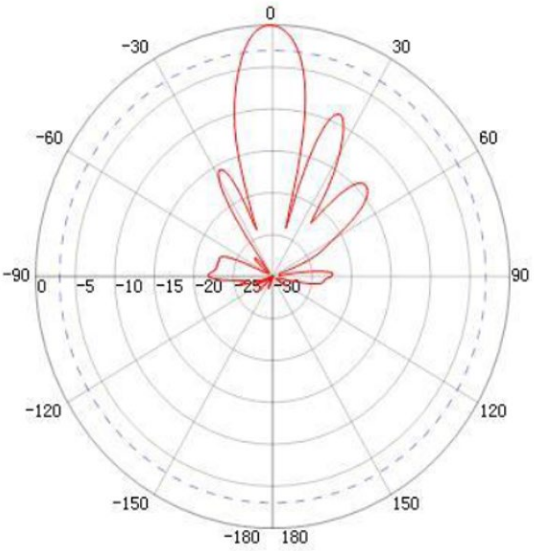
Antenna Pattern

The following figure shows the radiation patterns of the 27013921 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27013921 directional antenna



Horizontal pattern



Vertical pattern

27013955 5 GHz Dual-Polarized Directional Antenna (H25 V25 G16)

The 27013955 directional antenna is named ANT5G16D4NW and applicable only to rail transmit scenarios.

Antenna Appearance

Appearance of the 27013955 antenna

Technical Specifications

Technical specifications of the 27013955 directional antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	16
Coverage distance (m)	170
Horizontal lobe width (degrees)	25
Vertical lobe width (degrees)	25
Standing wave ratio (SWR)	≤ 2
Polarization mode	±45° polarization
Connector	4 x N-female
Dimensions (H x W x D)	64 mm x 265 mm x 134 mm
Weight (kg)	1.26±0.05
Installation mode	Wall mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

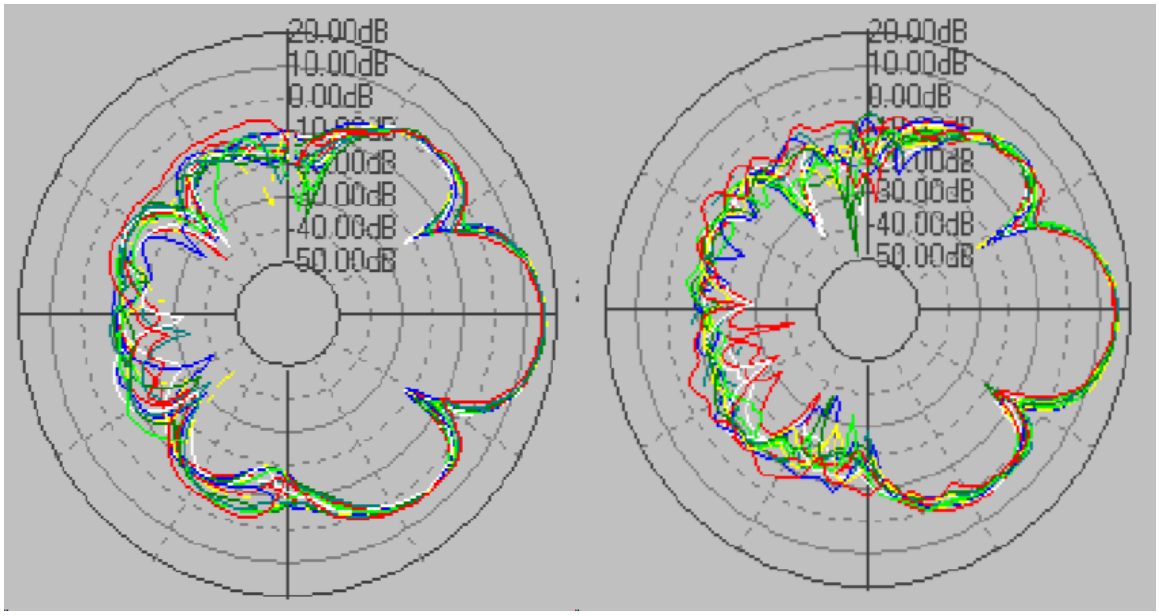
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27013955 directional antenna in the horizontal and vertical directions.

Radiation pattern of the 27013955 directional antenna



Horizontal pattern Vertical pattern

27013956 5 GHz Dual-Polarized Directional Antenna (H25 V25 G16)

The 27013956 directional antenna is named ANT5G16D4NP and applicable only to rail transmit scenarios.

Antenna Appearance

Appearance of the 27013956 antenna

Technical Specifications

Technical specifications of the 27013956 directional antenna

Item	Value
Frequency range (MHz)	5150 - 5850
Gain (dBi)	16
Coverage distance (m)	170
Horizontal lobe width (degrees)	25
Vertical lobe width (degrees)	25
Standing wave ratio (SWR)	≤ 2
Polarization mode	±45° polarization
Connector	4 x N-female
Dimensions (H x W x D)	64 mm x 265 mm x 134 mm
Weight (kg)	1.26
Support pole diameter (mm)	φ34–φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

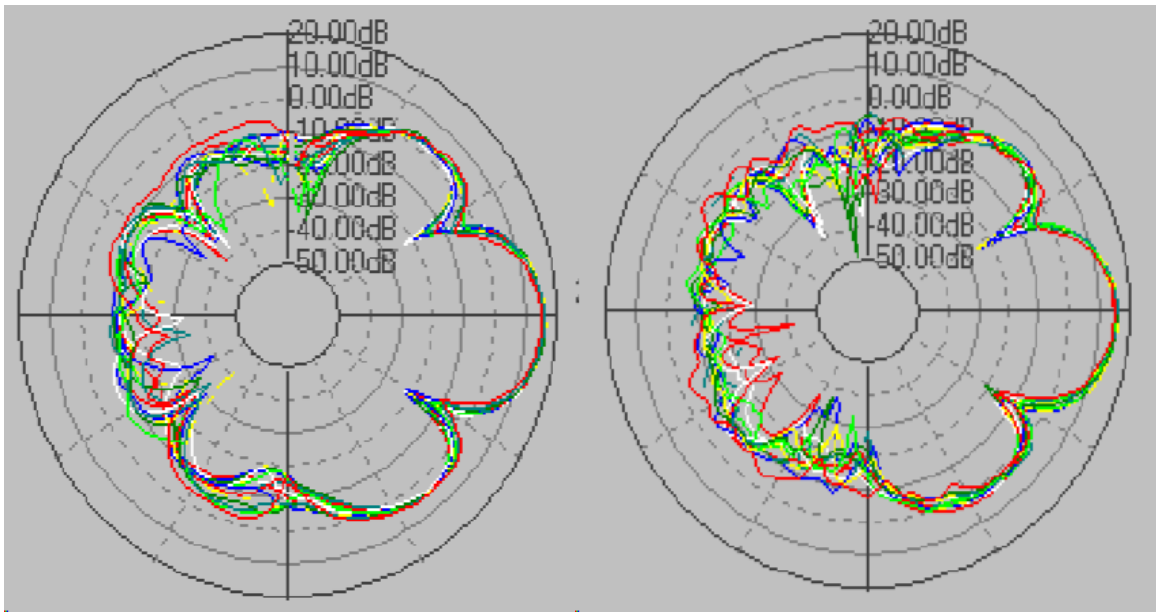
The coverage distance is subject to the following constraints:

- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

Radiation patterns of the 27013956 directional antenna



Horizontal pattern Vertical pattern

Outdoor Directional Antenna (6 GHz)

27015111 Outdoor 6 GHz Dual-Polarized Directional Antenna (H25 V45 G11)

The 27015111 directional antenna is named ANT6G11D4NR and mainly applicable to wireless backhaul and high-density stadium scenarios.

Antenna Appearance

Appearance of the 27015111 antenna

Technical Specifications

Technical specifications of the 27015111 directional antenna

Item	Value
Frequency range (MHz)	5925–7125
Gain (dBi)	11
Coverage distance (m)	90
Horizontal lobe width (degrees)	25
Vertical lobe width (degrees)	45
Standing wave ratio (SWR)	≤ 2
Polarization mode	±45° polarization
Connector	4 x N-female
Dimensions (H x W x D)	40 mm x 220 mm x 220 mm
Weight (kg)	0.95
Support pole diameter (mm)	φ34–φ114
Installation mode	Pole mounting

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

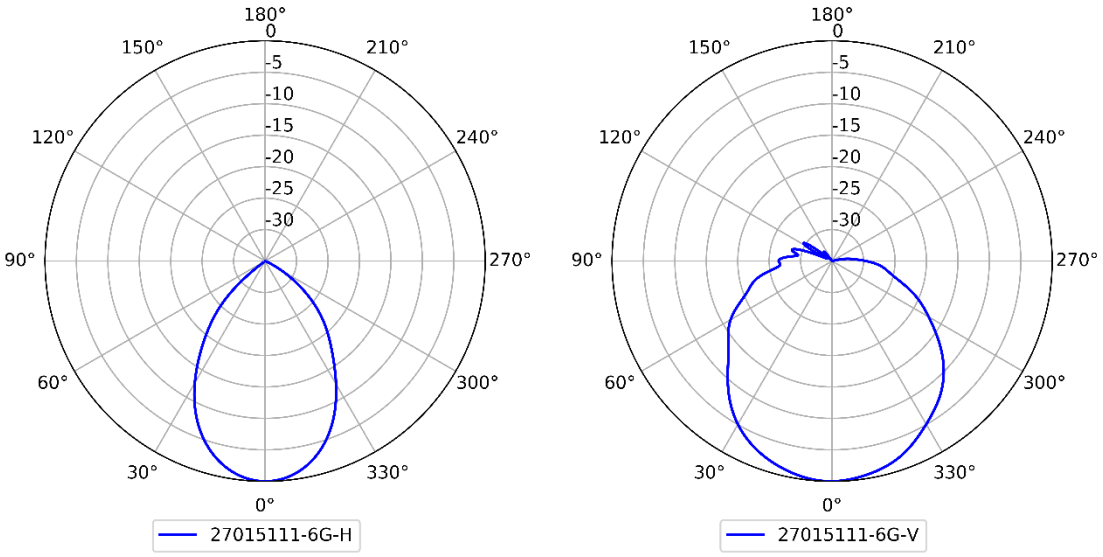
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.
- 6 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

Antenna Pattern

The following figure shows the radiation patterns of the 27015111 directional antenna in the horizontal and vertical directions on the 6 GHz frequency band.

Radiation pattern of the 27015111 antenna (6 GHz)



Outdoor Directional Antenna (2.4 GHz and 5 GHz)

27013718 Outdoor 2.4 GHz & 5 GHz Dual-Polarized Directional Antenna (H33 V33 G13 & H18 V18 G16)

The 27013718 directional antenna is named ANTDG1316D4NR and mainly applicable to wireless backhaul and high-density stadium scenarios.

Antenna Appearance

Appearance of the 27013718 antenna

Technical Specifications

Technical specifications of the 27013718 directional antenna

Item	Value (2.4 GHz)	Value (5 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850
Gain (dBi)	13	16
Coverage distance (m)	160	170
Horizontal lobe width (degrees)	33	18
Vertical lobe width (degrees)	33	18
Standing wave ratio (SWR)	≤ 2	≤ 2
Polarization mode	Horizontal polarization and vertical polarization	Horizontal polarization and vertical polarization
Connector	4 x N-female	
Dimensions (H x W x D)	33 mm x 380 mm x 380 mm	
Weight (kg)	2.18	
Operating temperature	-40°C to +65°C	

Item	Value (2.4 GHz)	Value (5 GHz)
Support pole diameter (mm)	φ34–φ114	
Installation mode	Wall mounting or pole mounting	

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

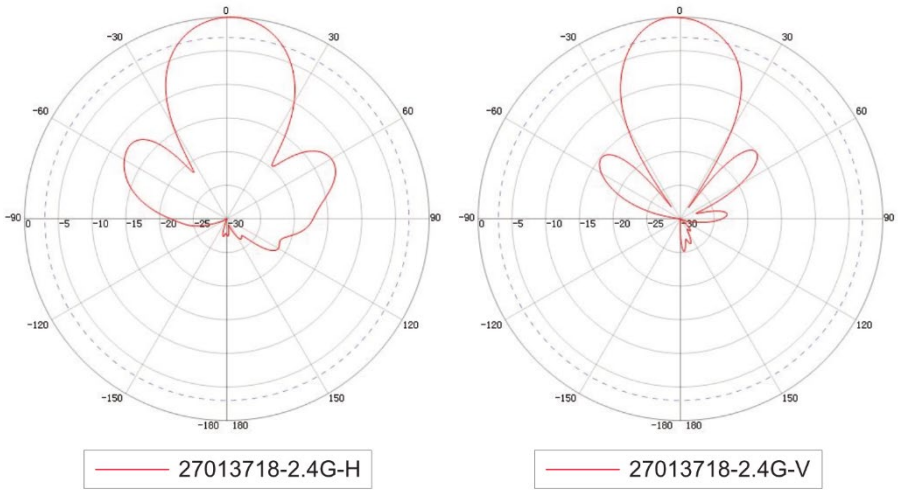
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

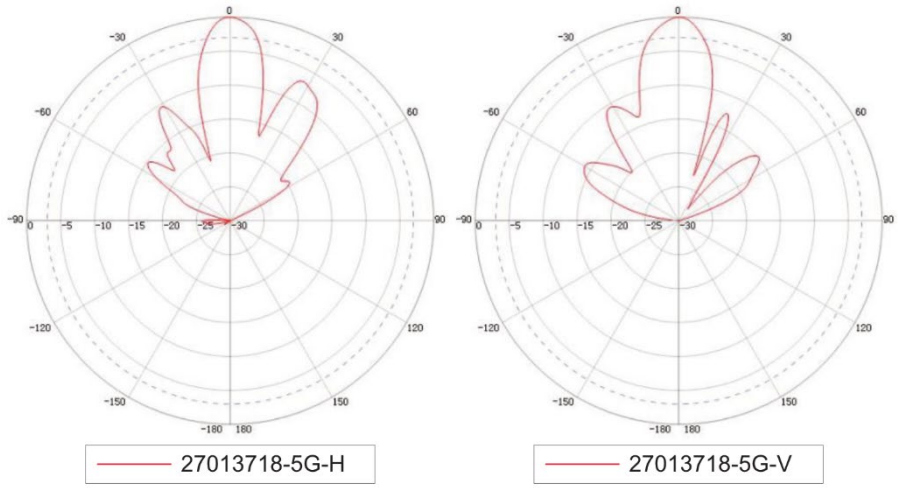
Antenna Pattern

The following figures show the radiation patterns of the 27013718 antenna in the horizontal and vertical directions on the 2.4 GHz and 5 GHz frequency bands.

Radiation pattern of the 27013718 antenna (2.4 GHz)



Radiation pattern of the 27013718 antenna (5 GHz)



27013719 Outdoor 2.4 GHz & 5 GHz Dual-Polarized Directional Antenna (H33 V33 G13 & H30 V30 G13)

The 27013719 directional antenna is named ANTDG1313D4NR and mainly applicable to outdoor road, wireless backhaul, and high-density stadium scenarios.

Antenna Appearance

Appearance of the 27013719 antenna

Technical Specifications

Technical specifications of the 27013719 directional antenna

Item	Value (2.4 GHz)	Value (5 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850
Gain (dBi)	13	13
Coverage distance (m)	160	130
Horizontal lobe width (degrees)	33	30
Vertical lobe width (degrees)	33	30
Standing wave ratio (SWR)	≤ 2	≤ 2
Polarization mode	Horizontal polarization and vertical polarization	±45º polarization
Connector	4 x N-female	
Dimensions (H x W x D)	33 mm x 380 mm x 380 mm	
Weight (kg)	2.15	
Operating temperature	-40°C to +65°C	
Support pole diameter (mm)	φ34–φ114	
Installation mode	Wall mounting or pole mounting	

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

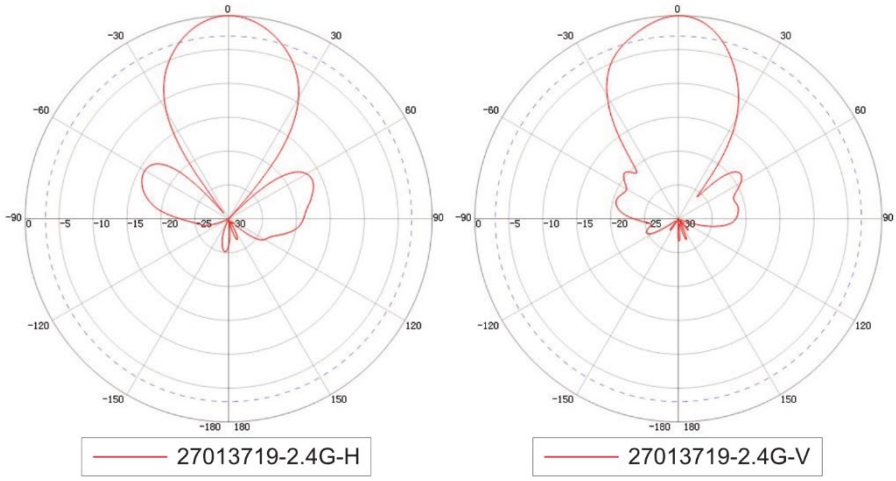
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

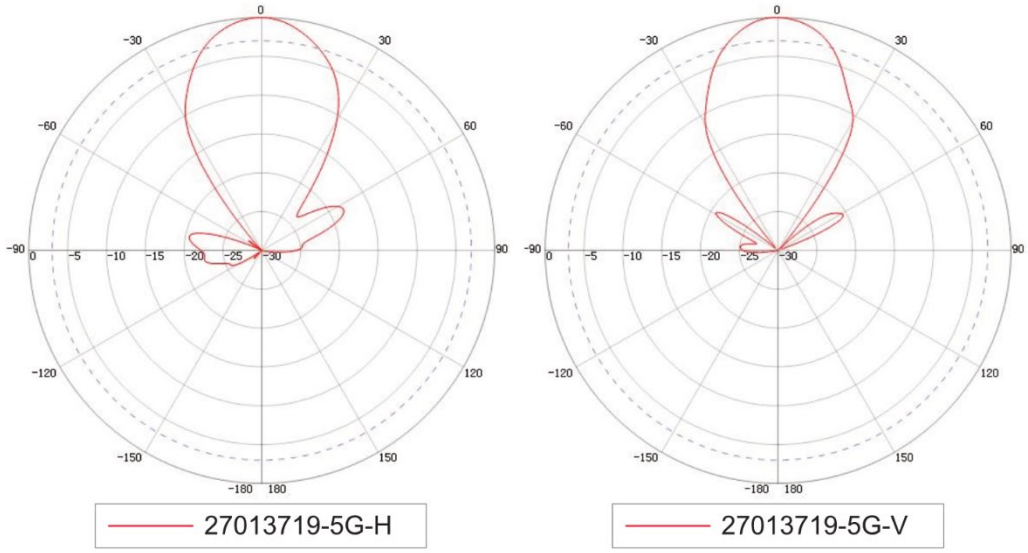
Antenna Pattern

The following figures show the radiation patterns of the 27013719 antenna in the horizontal and vertical directions on the 2.4 GHz and 5 GHz frequency bands.

Radiation pattern of the 27013719 antenna (2.4 GHz)



Radiation pattern of the 27013719 antenna (5 GHz)



27013720 Outdoor 2.4 GHz & 5 GHz Dual-Polarized Directional Antenna (H70 V70 G8 & H70 V70 G8)

The 27013720 directional antenna is named ANTDG0808D4NR and applicable to outdoor wide-coverage scenarios.

Antenna Appearance

Appearance of the 27013720 antenna

Technical Specifications

Technical specifications of the 27013720 directional antenna

Item	Value (2.4 GHz)	Value (5 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850
Gain (dBi)	8	8
Coverage distance (m)	100	80
Horizontal lobe width (degrees)	70	70
Vertical lobe width (degrees)	70	70
Standing wave ratio (SWR)	≤ 2	≤ 2
Polarization mode	Vertical, horizontal, and ±45° polarization	
Connector	4 x N-female	
Dimensions (H x W x D)	40 mm x 220 mm x 220 mm	
Weight (kg)	0.75	
Operating temperature	-40°C to +65°C	
Support pole diameter (mm)	φ34 - φ114	
Installation mode	Wall mounting or pole mounting	

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

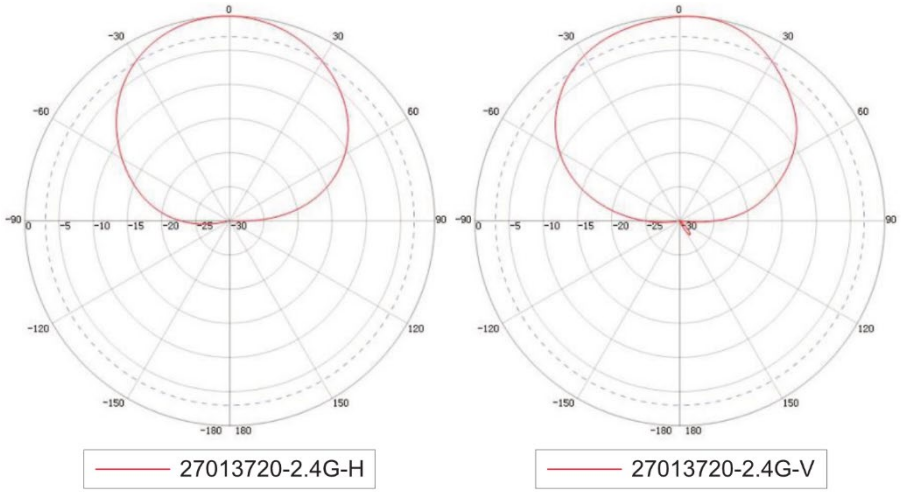
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

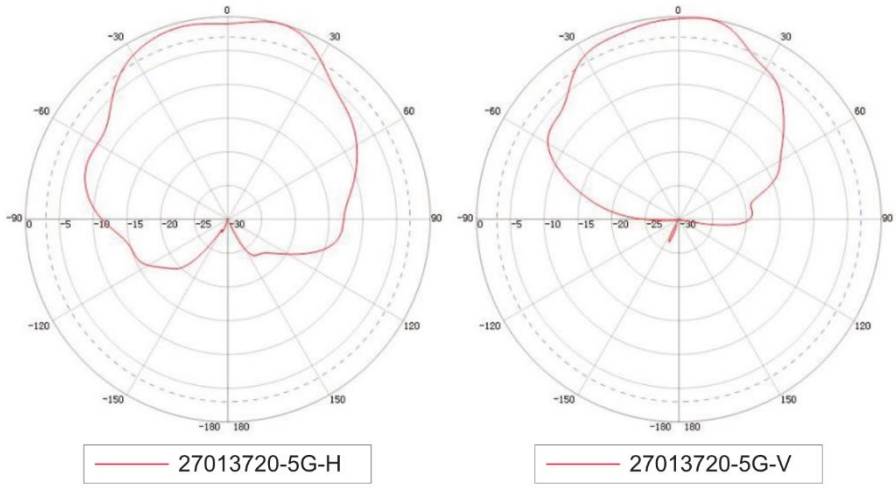
Antenna Pattern

The following figures show the radiation patterns of the 27013720 antenna in the horizontal and vertical directions on the 2.4 GHz and 5 GHz frequency bands.

Radiation pattern of the 27013720 antenna (2.4 GHz)



Radiation pattern of the 27013720 antenna (5 GHz)



27012565 Outdoor 2.4 GHz & 5 GHz Dual-Polarized Directional Antenna (H35 V35 G12 & H26 V26 G11)

The 27012565 directional antenna is named ANTDG1211D4NR and mainly applicable to high-density stadium scenarios.

Antenna Appearance

Appearance of the 27012565 antenna

Technical Specifications

Technical specifications of the 27012565 antenna

Item	Value (2.4 GHz)	Value (5 GHz)
Frequency range (MHz)	2400 - 2500	5150 - 5850
Gain (dBi)	12	11
Coverage distance (m)	150	110
Horizontal lobe width (degrees)	35	26
Vertical lobe width (degrees)	35	26
Standing wave ratio (SWR)	≤ 2	≤ 2
Polarization mode	Vertical, horizontal, and ±45° polarization	
Connector	4 x N-female	
Dimensions (H x W x D)	35 mm x 450 mm x 420 mm	
Weight (kg)	3.2	
Operating temperature	–40°C to +65°C	
Support pole diameter (mm)	φ34–φ114	
Installation mode	Wall mounting or pole mounting	

NOTE

The coverage distance is a reference value in certain conditions. Plan an appropriate distance value according to planning experience, local standards, and onsite environments.

There may be differences in the standards of different countries, so the mapping between antennas and APs shall comply with local standards. For details, refer to device access authentication information.

The coverage distance is subject to the following constraints:

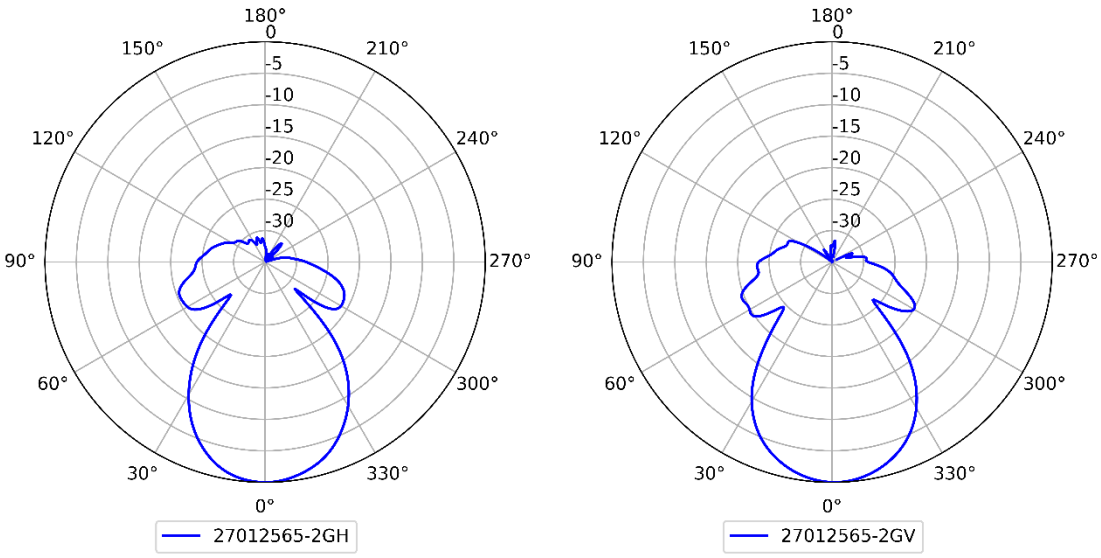
- The default AP transmit power is 15 dBm.
- The default STA type is mobile phone, and no obstacle exists.
- 2.4 GHz: The uplink and downlink RSSIs are greater than or equal to –70 dBm.
- 5 GHz: The uplink and downlink RSSIs are greater than or equal to –75 dBm.

For any questions about the parameters above, contact technical support personnel.

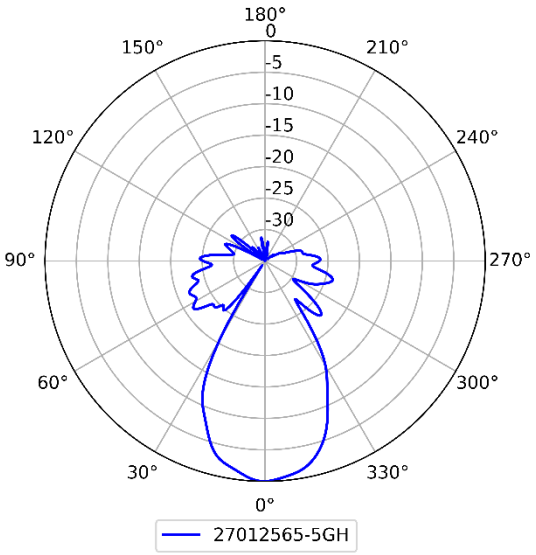
Antenna Pattern

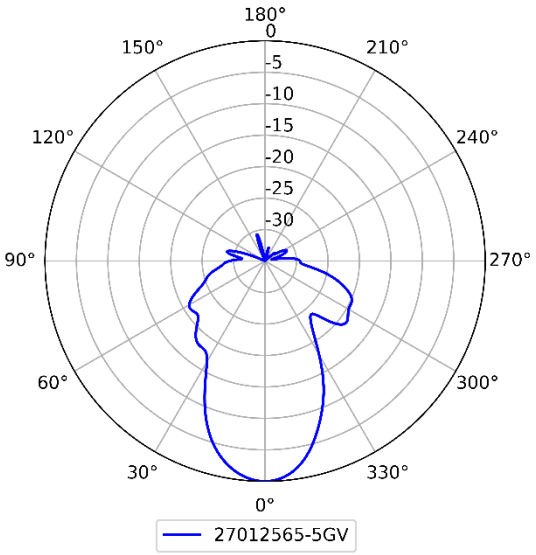
The following figures show the radiation patterns of the 27012565 antenna in the horizontal and vertical directions on the 2.4 GHz and 5 GHz frequency bands.

Radiation pattern of the 27012565 antenna (2.4 GHz)



Radiation pattern of the 27012565 antenna (5 GHz)





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