



Wireless Antennas, Cables and Accessories

To commit the wireless long distance connectivity, PLANET WireFree provides variety of Antennas, Cables and other Accessories for 2.4GHz ISM band applications where more RF gain power is required to increase converge of the installations in Wireless.

▶▶ ORDERING INFORMATION

WLAN 2.4GHz Antennas

- ▶ **ANT-OM5** 5dBi Desktop Omni-directional Antenna
- ▶ **ANT-OM8** 8dBi Omni-directional Antenna
- ▶ **ANT-FP18** 18dBi Flat-Panel directional Antenna
- ▶ **ANT-YG13** 13dBi Yagi directional Antenna
- ▶ **ANT-YG20** 20dBi Yagi directional Antenna

Wireless LAN Cables

- ▶ **WL-SMA-0.6** 0.6 meters reverse SMA (female) - N-type (male)
- ▶ **WL-SMA-6** 6 meters reverse SMA (female) - N-type (male)
- ▶ **WL-N-10** 10 meters N-type cable (female - male)

Lightning Arrester

- ▶ **WL-LTN** Lightning Arrester (N male to N female)

The Antennas include directional antenna and omni-directional antenna to meet the need of different environments. The Omni-directional antenna is ideal to install in a central base-station in a Point to Multi-point Wireless application. And Directional antennas are designed for long-distance.

Product	Wireless Antennas				
Model	ANT-OM5	ANT-OM8	ANT-FP18	ANT-YG13	ANT-YG20
Frequency	2400~2485MHz	2400~2485MHz	2400~2485MHz	2400~2485MHz	2400~2485MHz
Antenna Type	Omni-directional, Desktop	Omni-directional, General Purpose	Uni-directional, Flat Panel	Uni-directional, Yagi	Uni-directional, Yagi
Gain (dBi)	5	8	18	13	20
VSWR	<=2.0	<= 2.0	<= 1.5	<= 1.5	<= 1.5
H-plane (3dB beam width)	360 degree	360 degree	45 degree	32 degree	24 degree
E-plane (3dB beam width)	60 degree	60 degree	75 degree	30 degree	13 degree
Mounting Type	Magnetic bottom	Mast mount	Mast mount	Mast mount	Mast mount
Wave impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Connector	SMA	N Female	N Female	N Female	N Female
Max. input power	-	50W	20W	50W	50W
Weight	150g	390g	900g	485g	575g
Dimensions (mm)	height:238	415 x 35 x 35	263 x 263 x 30	772 x 90 x 43	1005 x 90 x 43

□ **Hints for Installation and Distance**

There are parameters to make the wireless distance longer as expected, Transmit power, Receive sensitive, Antenna power gain, cable distance and connectors. The most convenient method to expand the operating distance of an AP is increasing its dB gain by attaching an external antenna on it. The following table shows an example distance using WAP-1965 (TX power: 17dB, RX sensitive: -80dB) connect with WL-SMA-0.6 (0.5dB loss) in pairs. (Line of sight with no objects in between)

Antenna	ANT-OM8	ANT-YG13	ANT-FP18	ANT-YG20
ANT-OM8	2km/4km	4km/8km	7km/14km	5.6km/11km
ANT-YG13	-	7km/14km	7.9Km/15km	10km/20km
ANT-FP18	-	-	14km/28km	17km/34km
ANT-YG20	-	-	-	20km/40km

Note:

1. The distance referenced here are approximations and should be used for estimation purposes only.
2. The first distance is for 22Mbps data rate and the second distance is for 2Mbps data rate.
3. By using power over Ethernet products, POE-100 and POE-100S, the length of the cable between Access Point and external antenna can be shortened, thus effectively reducing the dB loss.

To commit the flexibility, the series of Wireless Accessories cables make the connection varies for the needs. With low loss, weatherproof and phase-stability coaxial cables, the cable's distance can be found is from 0.6 meters up to 10 meters (0.6m+ 10m). Those cables feature 50ohm impedance for connecting between Access Point like WAP-1960, WAP-1965 and antenna like ANT-OM8.

Model Name	WL-SMA-0.6	WL-SMA-6	WL-SMA-10
Side A	Reverse SMA (female)	Reverse SMA (female)	N type (male)
Side B	N type (male)	N type (male)	N type (male)
Length	0.6m	6m	10m
dB loss @2.4GHz	0.5 dB	3.5 dB	2.4 dB

To keep the Wireless device free from lightning induced surges that travel on the coaxial transmission lines, PLANET also includes the arrester guarding the wireless equipments from damage that could cause your previous network resources break down.

Type	Gas Discharged
Frequency	0~3GHz
Gain Loss	Less than 0.25dB on 2.4GHz
Maximum withstand current	10KA
Connector	Type N male to N female