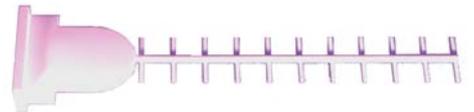
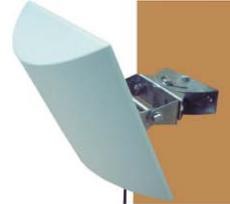


# D-Link Quick Installation Guide

These products can be compliant with D-Link Air, Air Plus products to make your wireless LAN have better linking quality.

## ANT24 Series

D-Link Fast Antenna Kits



# 1

## D-Link Antenna-kit Installation Guide

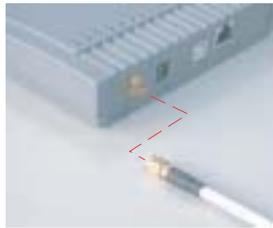
### Step 1

Remove the default antenna.

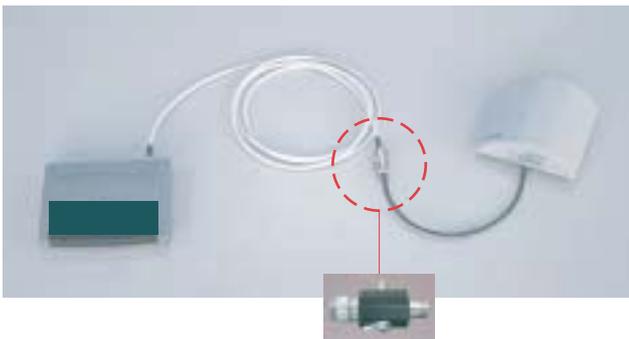


### Step 2

Connect the extension cable onto the external connector on device.



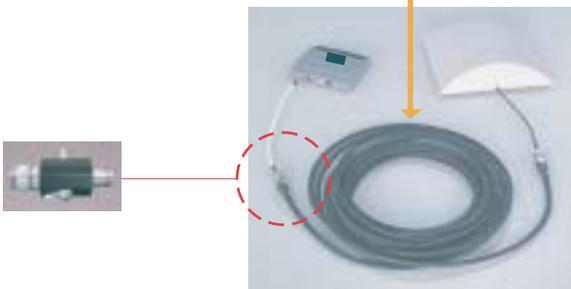
### Step 3



Install the surge protector as recommended position when you do not purchase the low loss cables ( ANT24-CB03N, ANT24-CB06N and ANT24-09N...)

### Step 4

Option: Ultra low-loss cable HDF-400  
Length options: 3M/6M/9M



Install the surge protector as recommended position ,near the device side, when you have the low loss cables (ANT24-CB03N, ANT24-CB06N and ANT24-CB09N ...)

### Step 5

Use water-proof tape to wrap around both connectors tightly, as the pictures showed below

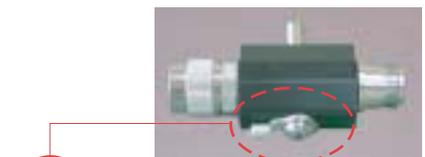


### CAUTION!!

Please always put the surge protector indoors and near the device side, if you cannot keep it indoors, use the tapes to wrap all the connectors as pictures showed below.



When install the surge protector between cables, wrap the connectors as well. The lightning protection adaptor for grounding the antenna.



Option: Surge protector  
Connectors: N-plug to N-jack

With Surge protector (ANT24-SP) adaptor on an outdoor serial is attached to the lightning protection system (ground) of the building. All devices downstream are then protected by the ground from lightning strikes. It can protect your sensitive WLAN equipments from high voltage surges caused by discharge and transients at the antennas. It will be integrated in the cabling system between the antenna and the coax-cable and must have direct ground contact.



**D-Link WLAN Antenna-kit**  
**Extended range differentiation for FCC/ CE regulated regions**  
 Indoor installation for OUTDOOR Inter-building link



**CE ETSI EN 300 328 regulated regions (European countries)**

Indoor antenna application for Outdoor inter-building transmission based on ( ETSI EN 300 328 ), EIRP (Emitted Isotropic Radiated Power) limited within **20dB**. Therefore, the extended range might be shorter than FCC-regulated antennas.



Indoor application for outdoor inter-building linking:

Antenna-kits extended range based on ETSI EN 300 328: 750m



Indoor application for outdoor inter-building linking:

Antenna-kits extended range based on ETSI EN 300 328: 1000m



**CE ETSI  
 EN 300 328  
 Regulated regions**

**FCC regulated regions (US, Canada...)**

Using the same antenna-kit in FCC-regulated regions, the extended range might be **LONGER** than CE-regulated antennas due to **HIGHER output power allowance !** ( FCC Regulations: point-to-multipoint EIRP 36dB max. p-t-p EIRP allows 48dBm max.)



Indoor application for outdoor inter-building linking:

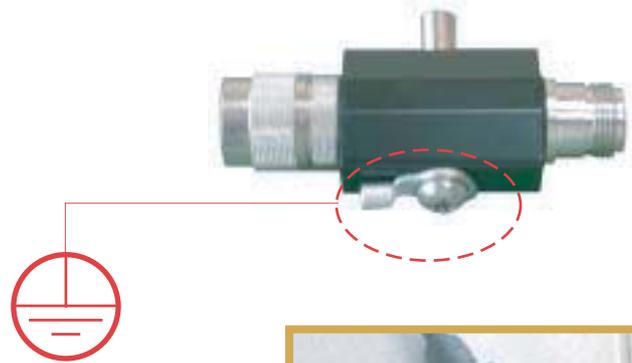
Antenna-kits extended range based on : 1800m



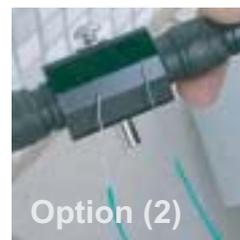
**FCC  
 regulated regions**

# 1

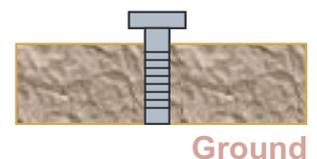
## ANT24-SP Surge protector Installation guide for outdoor antenna-kit



**Step 1**  
loosen the screw from the surge protector.



**Step 2**  
get a normal conductive copper wire with 2 sides stripped long enough to be conductive, these wires can lead high voltage surges into the grounding.



**Step 3**  
find a conductive material nearby the antenna installation sites, connect another end of the wire into position, there are several options:

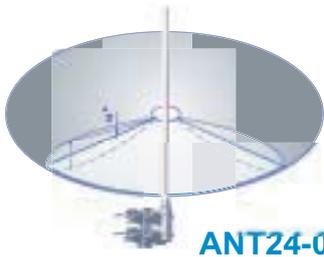
- (1) Use a long screw to stick into the ground tightly, connect another wire onto.
- (2) fix or solder another end of wire onto a steel material/ bar under steel construction, such as wall for buildings, railings or other conductive materials which set up from the ground.

**Remark:**

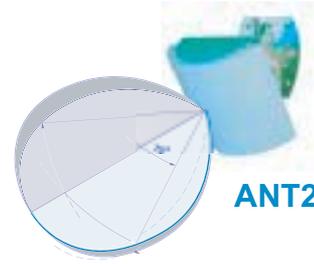
- (1) for the ground screw you use, we suggest the longer (deeper into ground) the better performance it has.
- (2) please use a copper wire with diameter at least from 2.0mm, the thicker the diameter, the higher voltage it can sustain.

1

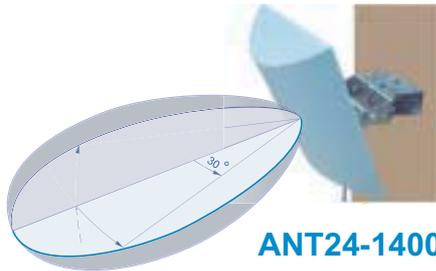
## Optional ultra low attenuation cable for ANT24-Outdoor high gain series



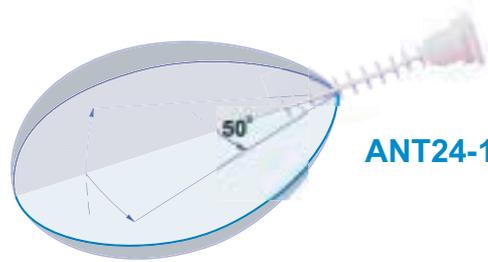
ANT24-0800



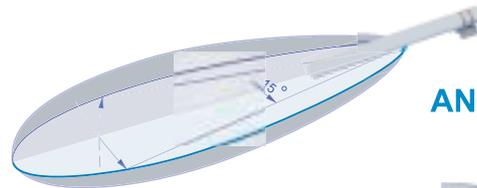
ANT24-0801



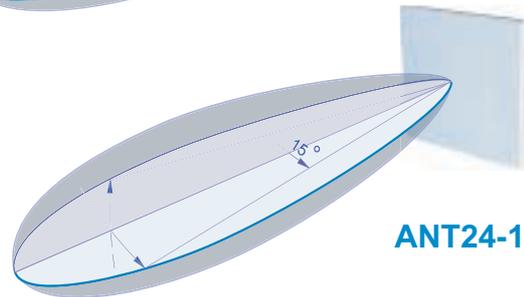
ANT24-1400



ANT24-1201



ANT24-1801



ANT24-1800

We have the following length options to create flexible antenna deployment:



Default extension cables

- P/N: ANT24-CB03N: 3meter @ 0.78dB attenuation
- P/N: ANT24-CB06N: 6meter @ 1.56dB attenuation
- P/N: ANT24-CB09N: 9meter @ 2.34dB attenuation

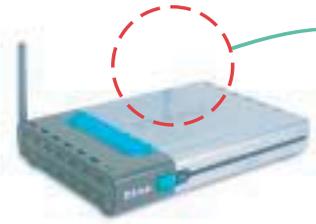


### NOTE:

The longer cable you use, the more attenuation it causes, therefore, the extended range might be shorten than a normal link with default extension cables.

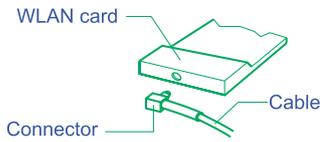
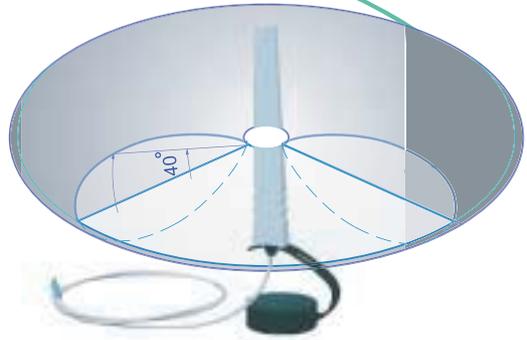
# 2

## D-Link ANT24-0400 Indoor Omni-Directional Antenna

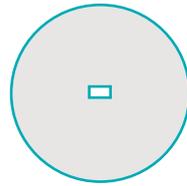


Remove one default antenna from the wireless device and start to assemble!

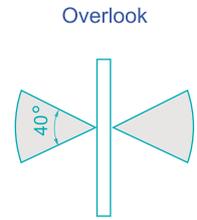
Using ANT24-JC jumper cable to switch to smaller connector which can be compliant with DWL-660 WLAN card.



ANT24-JC jumper cable

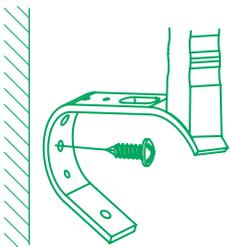


Horizontal coverage

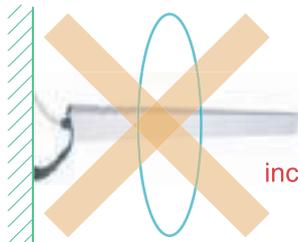
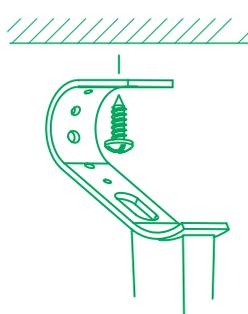


Vertical coverage

### Wall mount



### Ceiling mount



incorrect placement

Frequency band	2400-2500MHz
Antenna gain	4dBi
VSWR	2.0 max
Polarization	Linear vertical
HPBW / H-plane	360°
HPBW / E-plane	40°
Impedance	50 Ohms
Dimensions LxWxH	70x48x200 mm
Weight	180g without joint

### Package Contents:

- ANT24-0400 Antenna
- With 1.5m cable
- Mounting Kit
- Quick Installation Guide

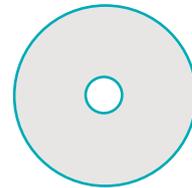
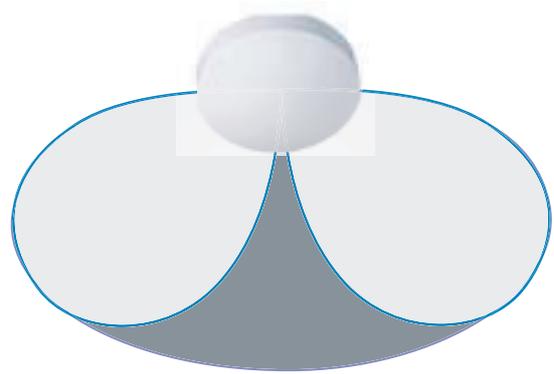
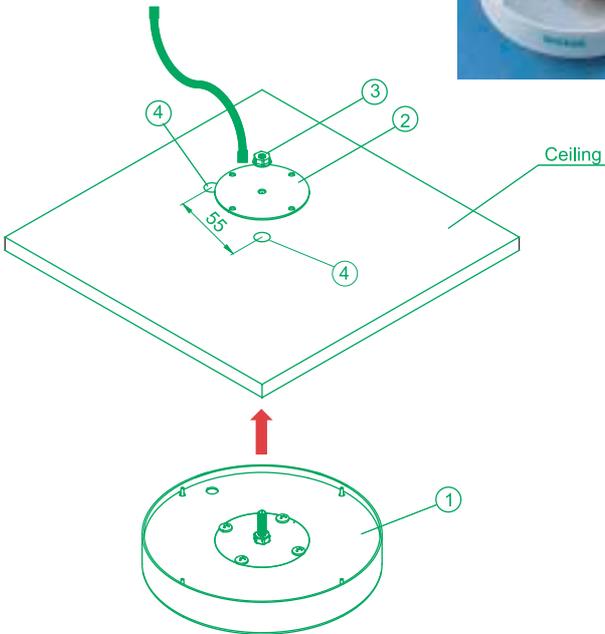
### CAUTION:

Please always place the antenna vertically to the desk/ceiling, not recommend to mount the antenna perpendicular to the wall.

# 3

## D-Link ANT24-0401 Ceiling Mount Antenna

Remove one default antenna from the wireless device and start to assemble!



Horizontal coverage



Vertical coverage

Overlook

### Installation Note:

- Carefully remove the antenna from the package.
- Take out the Washer ( 1 pcs ) from the package
- Take out the Flange washer ( 1 pcs ) as well.
- Drill 2 holes through the ceiling board, one to fix the antenna main body with washer, another for the antenna SMA connector linked onto extension cable which is included within the package.

Frequency band	2400-2500MHz
Antenna gain	2.5 ~ 3.7 dBi
VSWR	2.0 max
Polarization	Linear vertical
HPBW / H-plane	360°
HPBW / E-plane	50 ~ 75 °
Impedence	50 Ohms
Dimensions	ø132x42 mm
Weight	110g without joint

### Package Contents:

- ANT24-0401 Antenna
- Extension Cable ( 2M )
- Mounting Kit
- Quick Installation Guide

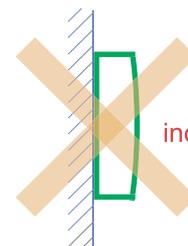
To have correct connection of the attached extension cable (Based on connector color management)



Silver to Antenna



Golden to Device

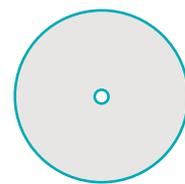
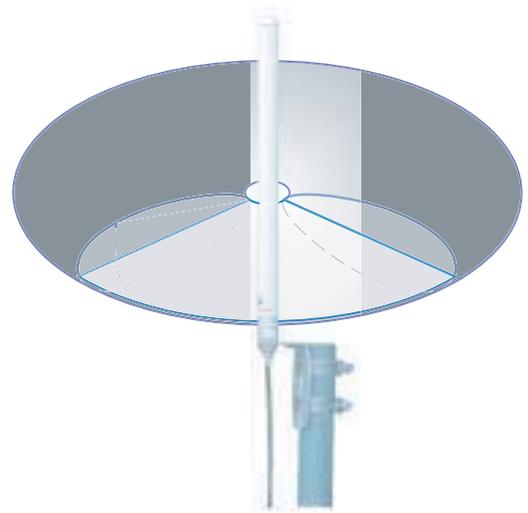
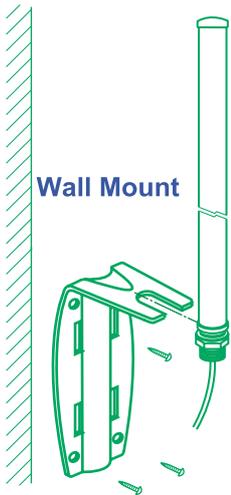


incorrect placement

# 4

## D-Link ANT24-0500 Indoor/Outdoor Omni- Directional Antenna

Remove one default antenna from the wireless device and start to assemble!



Horizontal coverage

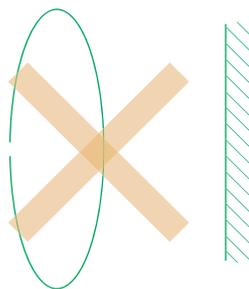


Vertical coverage

### Installation Note:

1. use L- type mounting to fix with antenna
2. use 4 plastic anchor with (4) screws to install the antenna onto the wall.
3. use band clamp ( 2pcs ) to fix the antenna on the pole.

incorrect placement



### CAUTION:

Please always place the antenna vertically to the horizontal surface, not recommend to mount the antenna perpendicular to walls.

Frequency band	2400-2500MHz
Antenna gain	5.0 dBi
VSWR	2.0 max
Polarization	Linear vertical
HPBW / H-plane	360°
HPBW / E-plane	32°
Impedence	50 Ohms
Dimensions LxWxH	∅19x310 mm
Weight	180g without joint

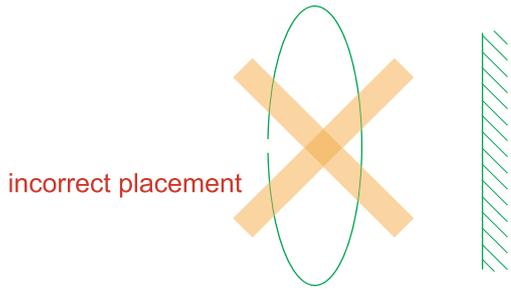
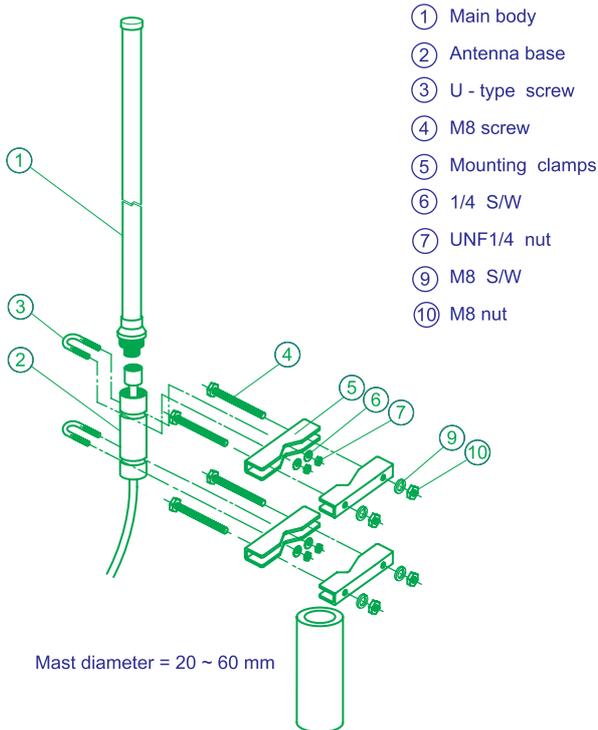
### Package Contents:

- ANT24-0500 Antenna
- Extension Cable ( 3m )
- Mounting Kit
- Quick Installation Guide

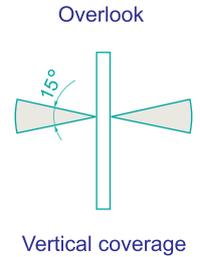
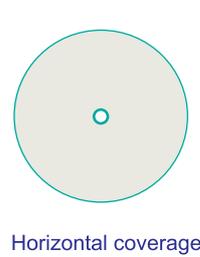
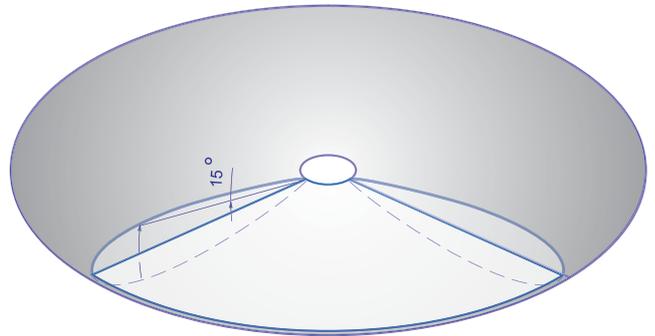
# 5

## D-Link ANT24-0800 Indoor/Outdoor Omni-Directional Antenna

Remove one default antenna from the wireless device and start to assemble!



**CAUTION:**  
Please always place the antenna vertically to the horizontal surface, not recommend to mount the antenna perpendicular to the wall.



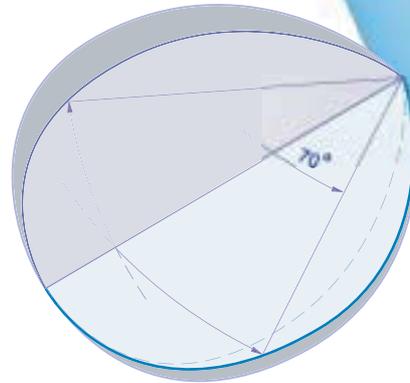
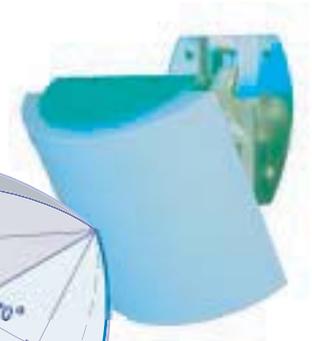
Frequency band	2400-2500MHz
Antenna gain	8.0 dBi
VSWR	2.0 max
Polarization	Linear vertical
HPBW / H-plane	360°
HPBW / E-plane	15°
Impedence	50 Ohms
Dimensions LxWxH	∅19x630 mm
Weight	360g without joint

- Package Contents:**
- ANT24-0800 Antenna
  - Extension Cable ( 50m )
  - Mounting Kit
  - Surge Protector
  - Water-proof tape
  - Quick Installation Guide

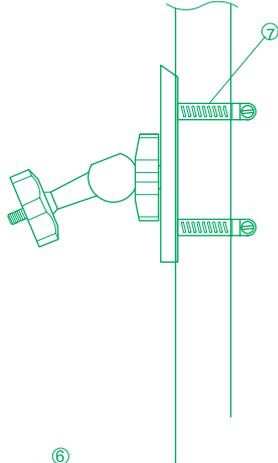
# 6

## D-Link ANT24-0801 Indoor Directional Panel Antenna

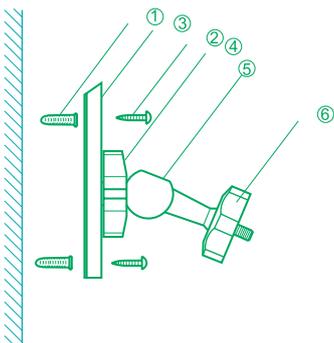
Remove one default antenna from the wireless device and start to assemble!



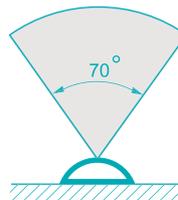
Pole mount



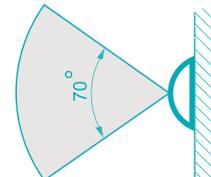
Wall mount



Overlook



Horizontal coverage



Vertical coverage

### Installation Note:

The following parts are needed for wall mounting:

1. plastic wall anchors (4) screws
2. wall screws
3. mounting base
4. locking wheel on the mounting base
5. adjustable pivot arm
6. locking wheel for pivot arm

Frequency band	2400-2500MHz
Antenna gain	8.5 dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	70°
HPBW / E-plane	70°
Impedence	50 Ohms
Dimensions LxWxH	120x120x43mm
Weight	300g without joint

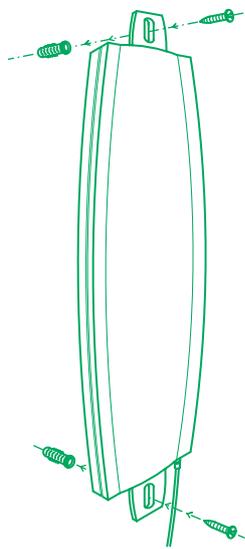
### Package Contents:

- ANT24-0801 Antenna
- Extension Cable ( 3m )
- Mounting Kit
- Surge Protector
- Water-proof tape
- Quick Installation Guide

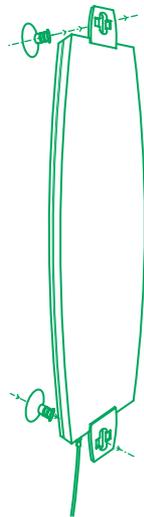
# 7

## D-Link ANT24-1200 Indoor Directional Panel Antenna

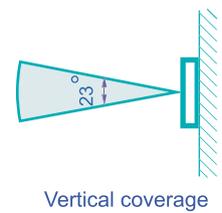
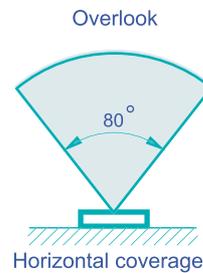
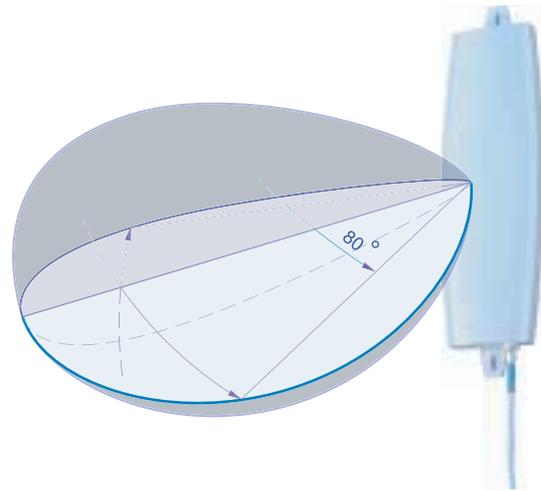
Remove one default antenna from the wireless device and start to assemble!



Wall mount with plastic wall plug



Window suction mount with widow suction cup



Frequency band	2400-2500MHz
Antenna gain	11.5 dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	80°
HPBW / E-plane	23°
Impedence	50 Ohms
Dimensions LxWxH	330x93x20 mm
Weight	190g without joint

To have correct connection of the attached extension cable (Based on connector color management)



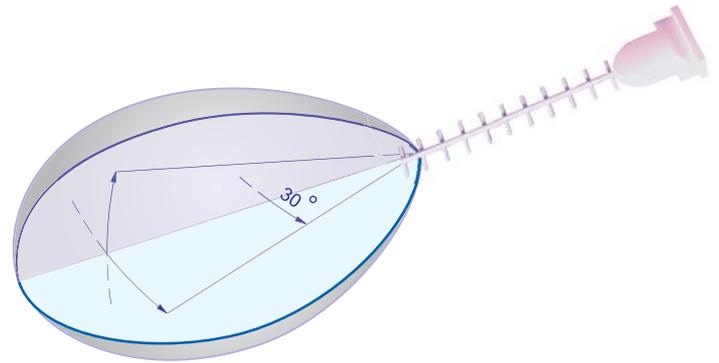
### Package Contents:

- ANT24-1200 Antenna
- Extension Cable ( 3m )
- Mounting Kit
- Quick Installation Guide

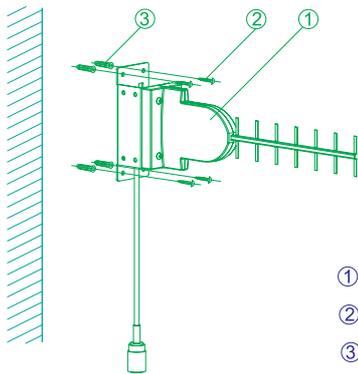
# 8

## D-Link ANT24-1201 Outdoor Directional Yagi Antenna

Remove one default antenna from the wireless device and start to assemble!

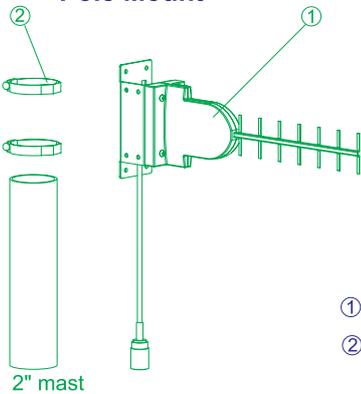


### Wall Mount



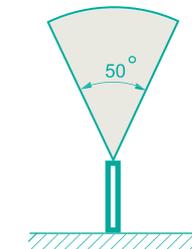
- ① Ant body
- ② 3/4" screw
- ③ Pole mount clip

### Pole Mount

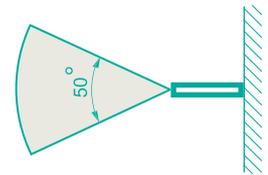


- ① Ant body
- ② 2-1/2" hose clamp

### Overlook



Horizaontal coverage



Vertical coverage

Frequency band	2400-2500 MHz
Antenna gain	12 dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	50°
HPBW / E-plane	50°
Impedence	50 Ohms
Dimensions LxWxH	280x87x48 mm
Weight	300g without joint

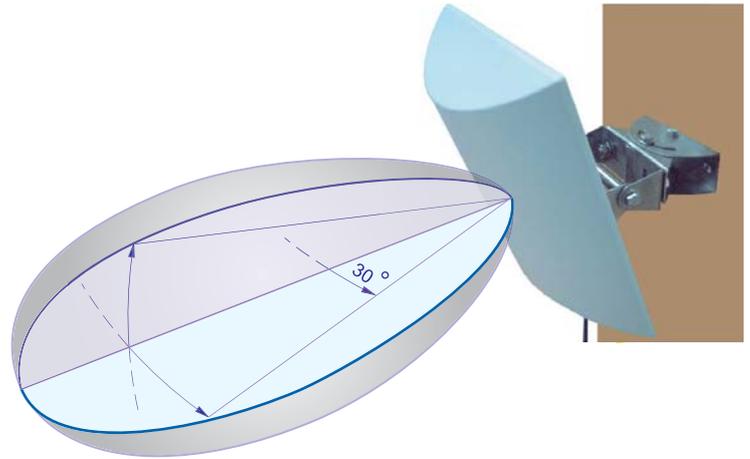
### Package Contents:

- ANT24-1201 antenna
- Extension cable ( 50cm )
- Mounting kit
- Surge protector
- Water-proof tape
- Quick installation guide

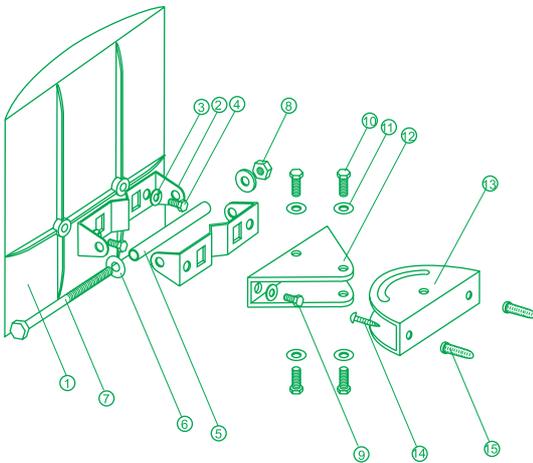
# 9

## D-Link ANT24-1400 Outdoor Directional Panel Antenna

Remove one default antenna from the wireless device and start to assemble!



### Wall mount

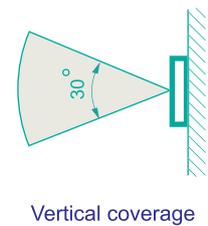
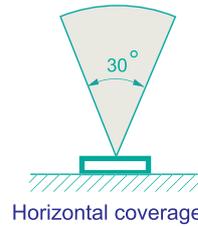


### Installation Note:

Required parts for wall mounting:

1. ANT-1400 antenna body with 2 screw holes
2. M-shaped metal fixing
3. spring washers 8mm
4. bolts M8 x 12
5. steel tubes
6. 8mm washer
7. bolt M8 x 110
8. nut M8 with lock washer
9. bolts M8 x16 with lock washer, washers and nuts
10. bolts M6 x10 with washers
11. 6mm washers
12. triangular stand
13. half-round metal stand
14. wall screws
15. plastic wall anchor

### Overlook



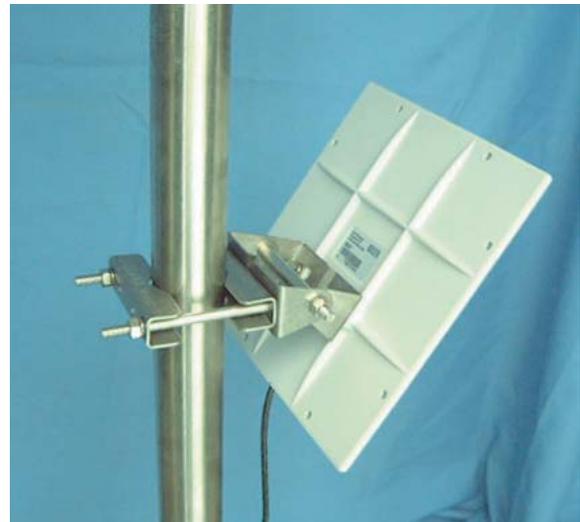
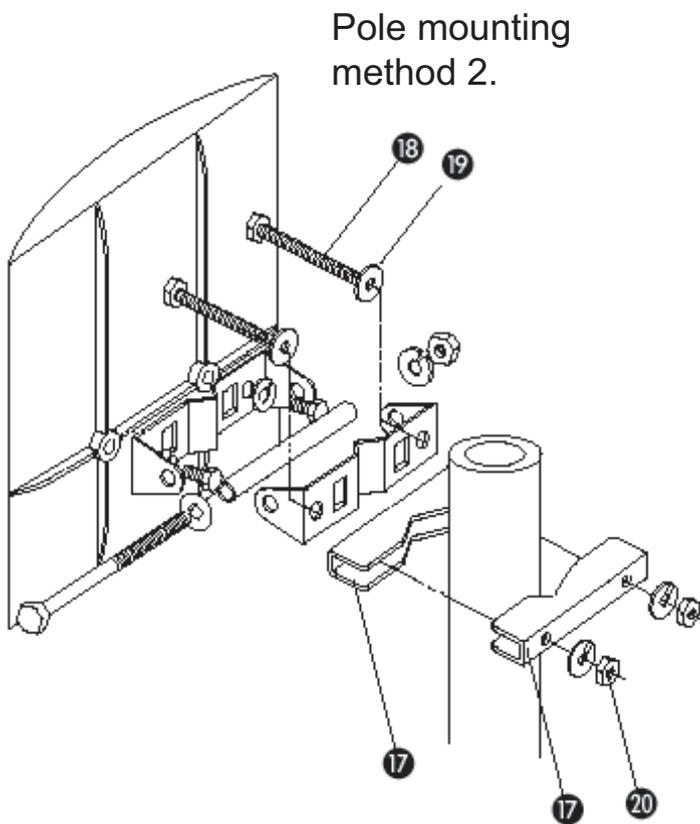
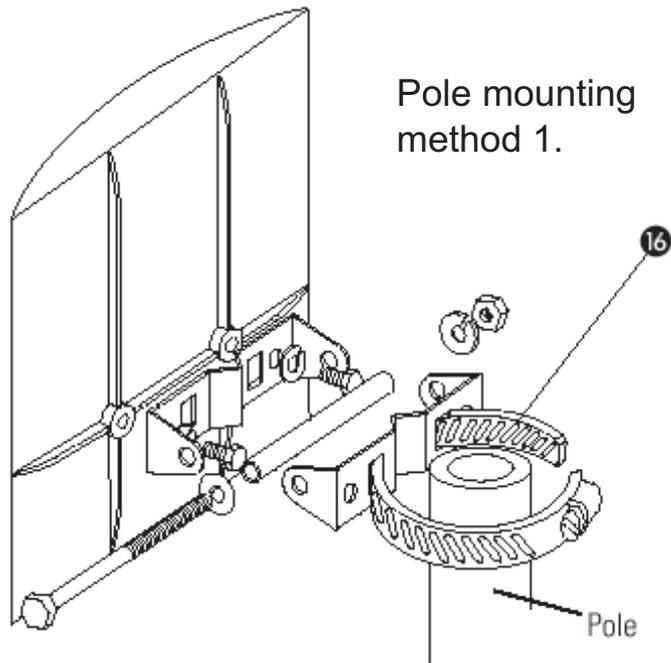
Frequency band	2400-2500 MHz
Antenna gain	14 dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	30Q
HPBW / E-plane	30°
Impedence	50 Ohms
Dimensions LxWxH	240x240x69 mm
Weight	825g without joint

### Package Contents:

- ANT24-1400 Antenna
- Extension Cable ( 50cm )
- Mounting Kit
- Surge protector
- Water-proof tape
- Quick Installation Guide

# 9

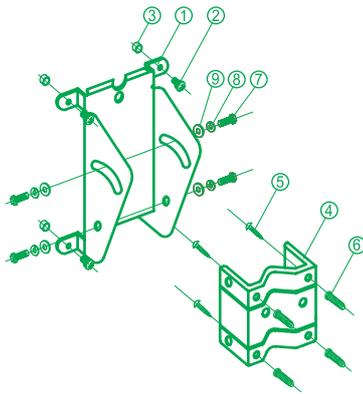
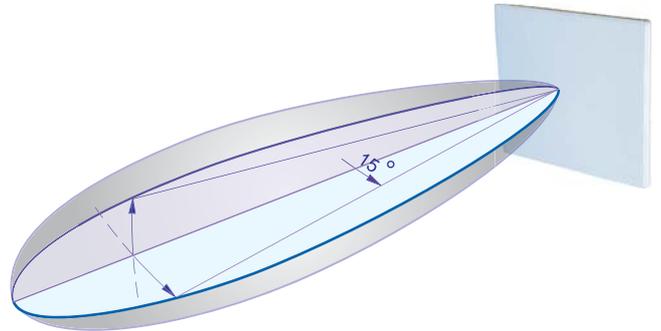
## D-Link ANT24-1400 Outdoor Directional Panel Antenna



# 10

## D-Link ANT24-1800 Outdoor Directional Panel Antenna

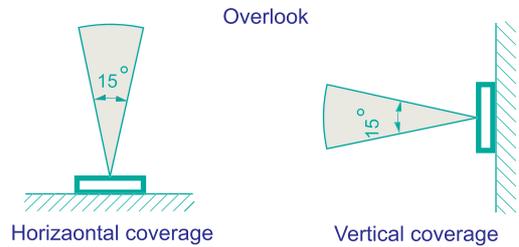
Remove one default antenna from the wireless device and start to assemble!



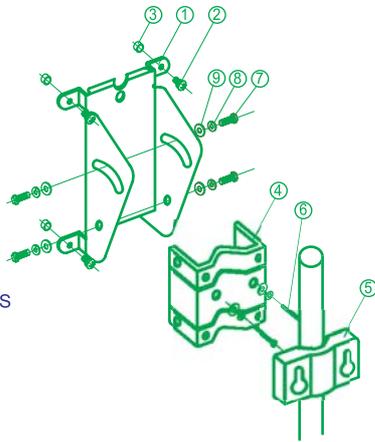
### Wall mounting



- ① Mounting base - 1 PC
- ② M4\*8 screw+W+S/W - 4 PCS
- ③ Space keeper - 4 pcs
- ④ M-shape mounting - 1 pc
- ⑤ 3/4" screw - 4 pcs
- ⑥ Plastic wallplug - 4 pcs
- ⑦ M6\*16 screw - 4 pcs
- ⑧ M6 S/W - 4 pcs
- ⑨ M6 W - 4 pcs



### Pole mounting



- ① Mounting base - 1 PC
- ② M4\*8 screw+W+S/W - 4 PCS
- ③ Space keeper - 4 pcs
- ④ M-shape mounting - 1 pc
- ⑤ Pole mount clip - 1 pc
- ⑥ M6\*60 screw - 2 pcs
- ⑦ M6\*16 screw - 4 pcs
- ⑧ M6 S/W - 4 pcs
- ⑨ M6 W - 4 pcs

Frequency band	2400-2500 MHz
Antenna gain	18 dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	15Q
HPBW / E-plane	15°
Impedence	50 Ohms
Dimensions LxWxH	360x360x16 mm
Weight	1600g without joint

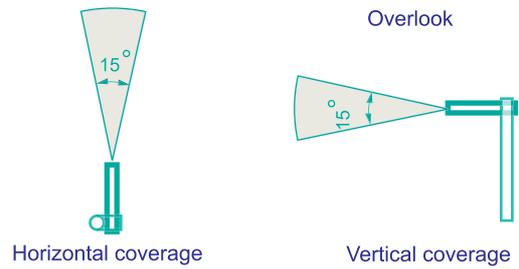
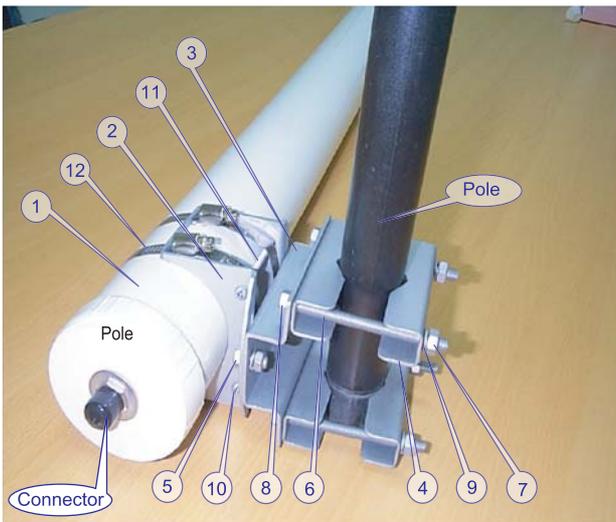
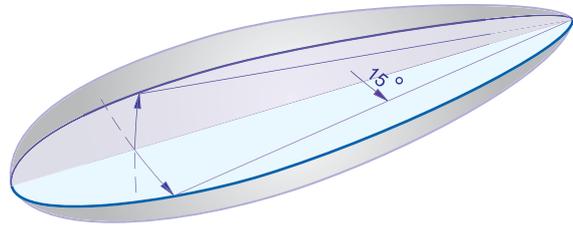
### Package Contents:

- ANT24-1800 Antenna
- Extension Cable ( 50cm )
- Mounting Kit
- Surge protector
- Water-proof tape
- Quick Installation Guide

# 11

## D-Link ANT24-1801 Outdoor Directional Yagi Antenna

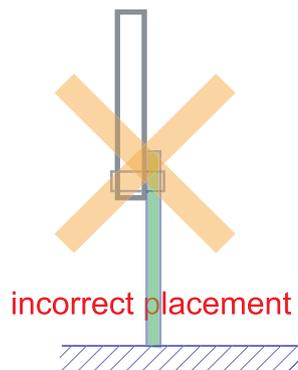
Remove one default antenna from the wireless device and start to assemble!



Frequency band	2400-2500 MHz
Antenna gain	18 dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	15Q
HPBW / E-plane	15°
Impedence	50 Ohms
Dimensions LxWxH	ø89x1000 mm
Weight	3500g without joint

### Installation Note:

1. Main body
2. Angle mounting
3. Mounting bracket
4. 2" pole clamp
5. M8x 20 bolt
6. M8x 110 bolt
7. M8 nut
8. M8 washer
9. M8 spring washer
10. M6-95 screw
11. M6 nut
12. Band clamp



### Package Contents:

- ANT24-1801 Antenna
- Extension Cable ( 50cm )
- Mounting Kit
- Surge protector
- Water-proof tape
- Quick Installation Guide

# 12

## D-Link DWL- 50AT Indoor Omni Antenna



Remove one default antenna from the wireless device and start to assemble!



D-Link's Omni Directional Antenna offers the most cost effective solution for extending the wireless LAN coverage area. The antenna is fully compatible with all products and can be used with any 2.40 to 2.4835 GHz products.

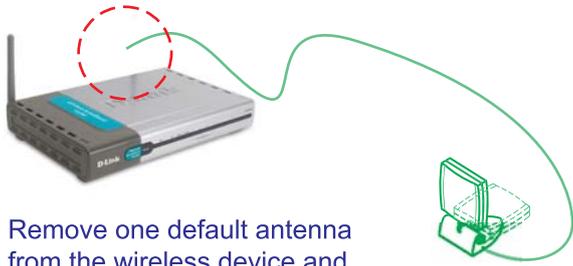
Frequency band	2400-2500MHz
Antenna gain	5.0dBi Typical
VSWR	2.0:1 Max.
Polarization	Linear
HPBW / H-plane	Toroidal
HPBW / E-plane	60 degree
Impedence	50 Ohms nominal
Dimensions HxWxD	197 mm(length)
Weight	29.5gw

### Installation:

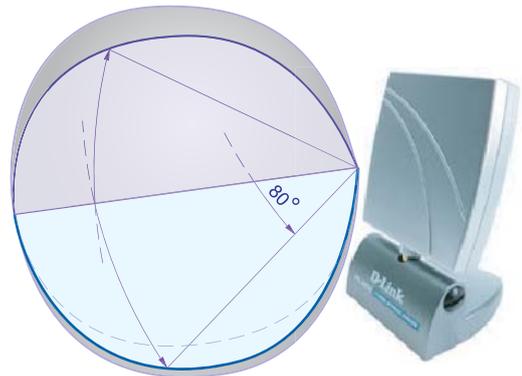
1. Remove the original antenna from your wireless device.
2. Screw the DWL-50AT RP- SMA connector into your wireless device.
3. Adjust the antenna to the suitable direction for extending the wireless coverage area.

# 13

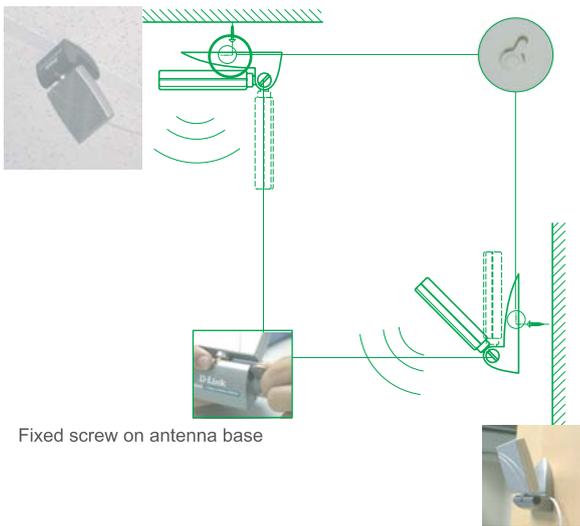
## D-Link DWL-M60AT Indoor Directional Antenna



Remove one default antenna from the wireless device and start to assemble!

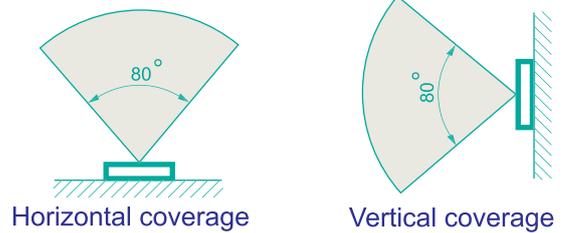


### Ceiling mount



### Wall Mount

### Overlook



Frequency band	2400-2500MHz
Antenna gain	6dBi
VSWR	1.5 max
Polarization	Linear vertical
HPBW / H-plane	80°
HPBW / E-plane	80°
Impedence	50 Ohms
Dimensions HxWxD	115x76x33mm
Weight	110g without joint

### CAUTION:

1. Always place the antenna on a flat or secure surface.
2. Concealing the antenna behind books, cabinets or other office equipment may affect the performance of the wireless networks.
3. The antenna transmission range may vary according to different environments or applications.

### Package Contents:

- DWL-M60AT Antenna
- Fixed cable (1.5m)
- Mounting Kit
- Quick Installation Guide

# 14

## D-Link DWL-R60AT Indoor Directional Antenna



Remove one default antenna from the wireless device and start to assemble!



D-Link's Single Patch Flat Antenna offers the most cost effective solution for extending the wireless LAN coverage area. The antenna is fully compatible with all products and can be used with any 2.40 to 2.4835 GHz products.

Frequency band	2400-2500MHz
Antenna gain	6.0dBi Typical
VSWR	2.0:1 Max.
Polarization	Linear
HPBW / H-plane	90°
HPBW / E-plane	75°
Impedence	50 Ohms nominal
Dimensions HxWxD	80x85x12.8 mm
Weight	75gw

### Installation:

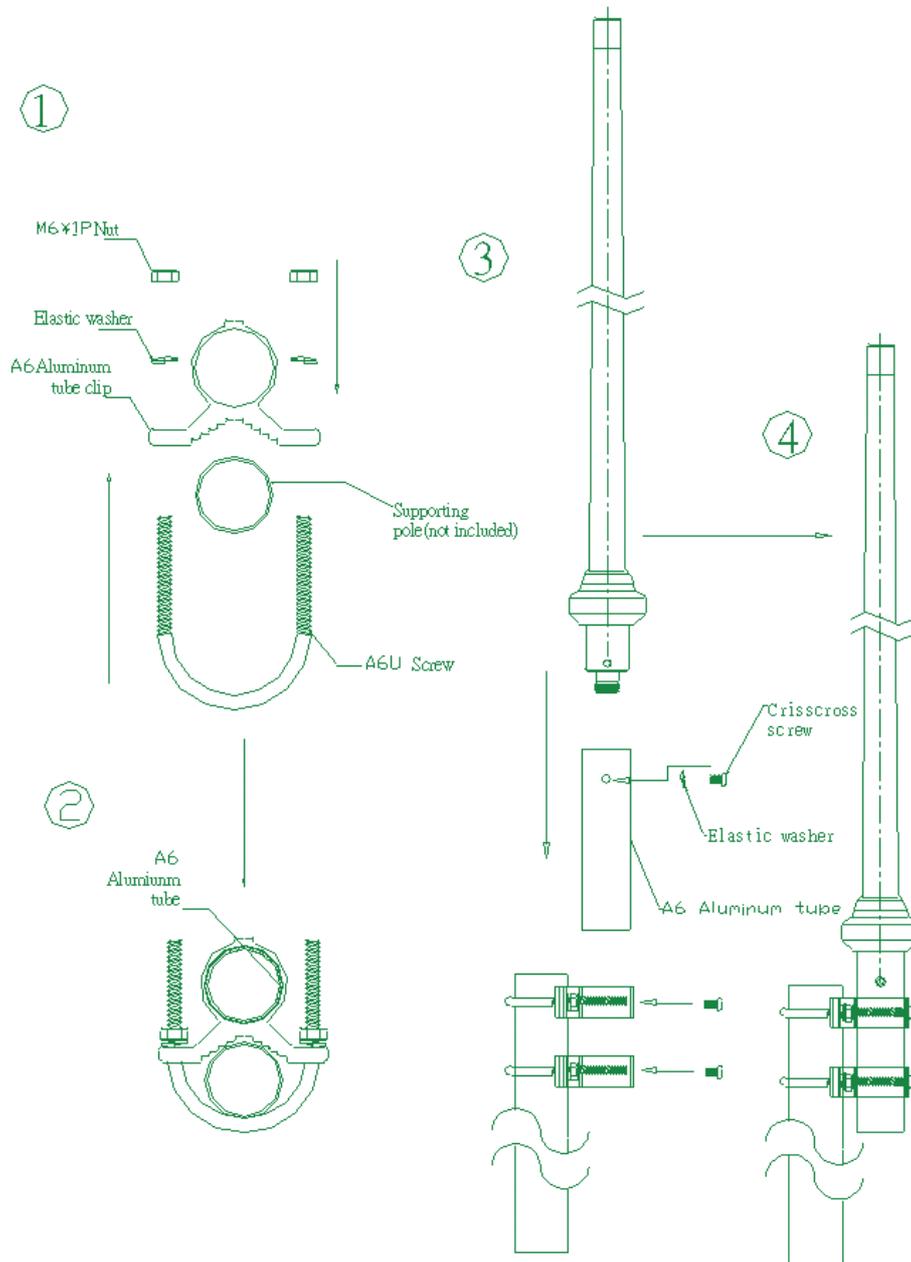
1. Remove the original antenna from your wireless device.
2. Screw the DWL-R60AT RP- SMA connector into your wireless device.
3. Adjust the antenna to the suitable direction for extending the wireless coverage area.

### Package Contents:

- DWL-R60AT Antenna
- Quick Installation Guide

# 15

## D-Link ANT24-1500 Outdoor Omni Antenna



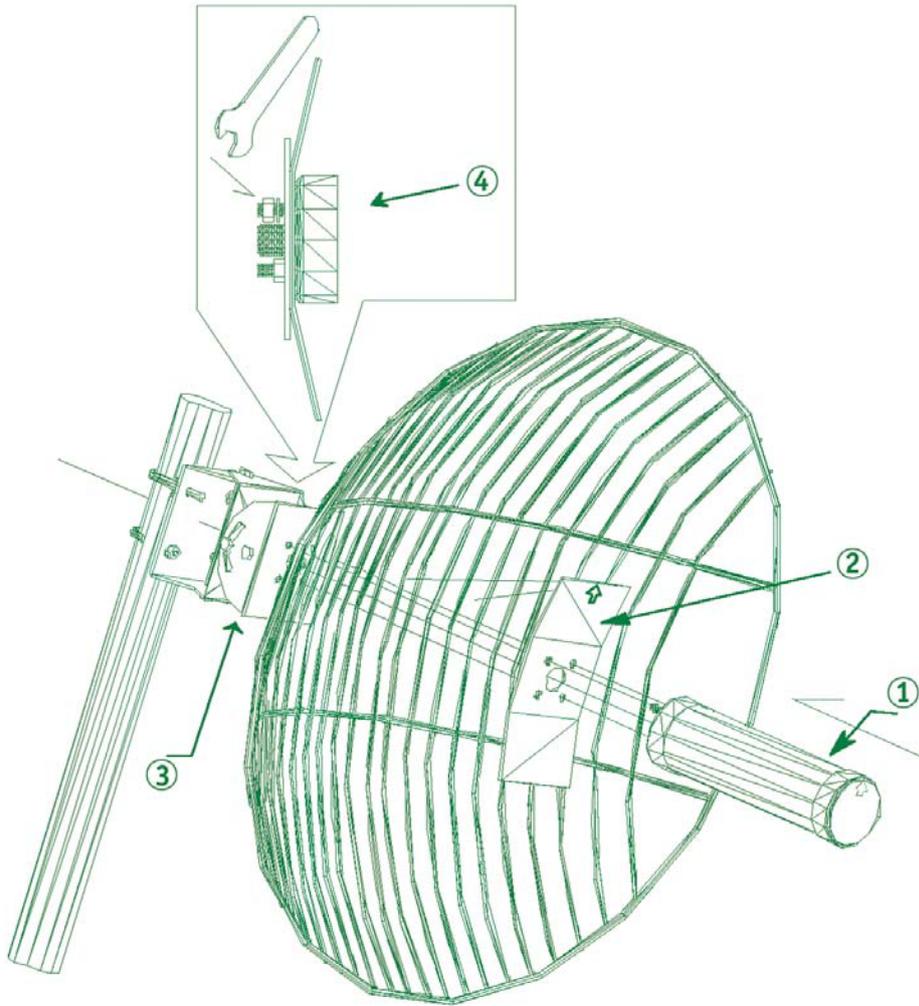
Frequency band	2400-2500MHz
Antenna gain	15dBi
VSWR	1.5 max
Polarization	Vertical
HPBW / H-plane	360°
HPBW / E-plane	5°
Impedence	50 ± Ohms
Dimensions	165cm (length)
Weight	750g ± 20g

### Package Contents:

- ANT24-1500 Antenna
- DHF extension cable(3m, N male-RPSMA)
- Mounting kit
- Waterproof tape
- Quick Installation Guide

# 16

## D-Link ANT24-2100 Outdoor Grid Antenna

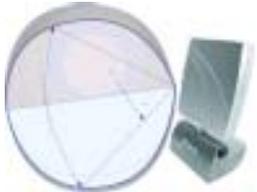


Frequency band	2400-2500MHz
Antenna gain	21dBi
VSWR	1.5 max
Polarization	Vertical
HPBW / H-plane	18°
HPBW / E-plane	12°
Impedence	50 ± Ohms
Dimensions	15cm x 61cm Diam.
Weight	2700g ± 10g

### Package Contents:

- ANT24-2100 Antenna
- DHF extension cable(3m, N male/RP-SMA)
- Mounting kit
- Waterproof tape
- Quick Installation Guide

## Indoor/ Outdoor Antenna Table:

					
<b>Model Name</b>	<b>DWL-R60AT</b>	<b>DWL-M60AT</b>	<b>ANT24-0400</b>	<b>ANT24-0401</b>	<b>ANT24-0500</b>
<b>Signal directivity</b>	Directional Antenna	Directional Antenna	Omni-directional	Omni-directional	Omni-directional
<b>Application range</b>	Indoor only	Indoor only	Indoor only	Indoor ceiling only	Indoor/ Outdoor
<b>Gain (Without cable loss)</b>	6dBi	6dBi	4dBi	3.5dBi	5dBi
<b>Approximate Range at 1 Mbps *</b>	60M	60M	40M	40M	40M
<b>Approximate Range at 11 Mbps *</b>	25M	25M	15M	15M	15M
<b>Half power beam width **</b>	H60 V90	H80 V80	H360 V40	H360 V120	H360 V30
<b>Pigtail cable length</b>	NA	150cm	150cm	NA	30cm
<b>Antenna fixed connector</b>	RP-SMA plug	RP-SMA plug	RP-SMA plug	SMA jack	N-jack
<b>Surge protector for outdoors</b>	---	---	---	---	Optional
<b>Default extension cable length</b>	NA	NA	NA	2M	3M
<b>Default mounting configuration</b>	NA	Wall/ desktop	Wall/ desktop	Ceiling	Pole
<b>Antenna-kit weight (Kg)</b>	300g	330g	320g	310g	540g
<b>Optional accessories</b>	ANT24-JC For DWL-660 links	ANT24-JC For DWL-660 links	ANT24-JC For DWL-660 links	ANT24-JC For DWL-660 links	ANT24-JC ANT24-SP ANT24-CB series

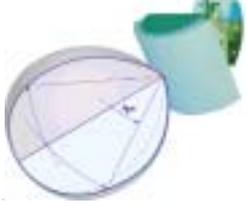
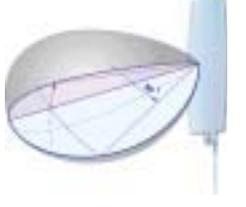
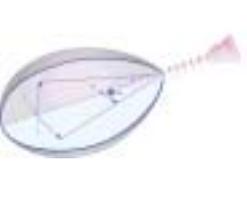
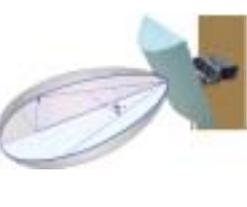
\*1.Extended range reference based on RF-Output Power 14dbm with default cable loss

\*2.The transmission distance range might depend on the two same spec antennas with default cable loss

\*\*HPBW: Half Power Beam Width. H : horizontal plane pattern, V : vertical plane pattern

**The actual Indoor range will be effected by users' physical environment. The above figures are reference.**

## Indoor/ Outdoor Antenna Table:

					
<b>Model Name</b>	<b>ANT24-0800</b>	<b>ANT24-0801</b>	<b>ANT24-1200</b>	<b>ANT24-1201</b>	<b>ANT24-1400</b>
<b>Signal directivity</b>	Omni-directional	Directional	Directional	Directional	Directional
<b>Application range</b>	Outdoor	Outdoor	<b>Indoor only</b>	Outdoor	Outdoor
<b>Gain (Without cable loss)</b>	8dBi	8.5dBi	12dBi	12dBi	14dBi
<b>Approximate Range at 1 Mbps *</b>	1Km under FCC 800M under ETSI	1.2Km under FCC 800M under ETSI	2Km under FCC 1Km under ETSI	2.5Km under FCC 1Km under ETSI	3Km under FCC 1.5Km under ETSI
<b>Approximate Range at 11 Mbps *</b>	300M under FCC 200M under ETSI	350M under FCC 200M under ETSI	600M under FCC 300M under ETSI	750M under FCC 300M under ETSI	900M under FCC 300M under ETSI
<b>Half power Beam width **</b>	H360 V15	H70 V70	H80 V23	H50 V50	H30 V30
<b>Pigtail cable length</b>	NA	30cm	NA	30cm	30cm
<b>Antenna fixed connector</b>	N-jack	N-jack	SMA jack	N-jack	N-jack
<b>Surge protector for outdoors</b>	Included	Included	---	Included	Included
<b>Default Extension Cable Length</b>	50cm	3M	3M	50cm	50cm
<b>Default mounting configuration</b>	Pole	Wall/ pole	Window/ wall	Wall/ pole	Wall/ pole
<b>Antenna-kit weight (kg)</b>	1.4Kg	1.04Kg	530g	380g	2.35Kg
<b>Optional accessories</b>	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series

\*1.Extended range reference based on RF-Output Power 14dbm with default cable loss

\*2.The transmission distance range might depend on the two same spec antennas with default cable loss

\*\*HPBW: Half Power Beam Width. H : horizontal plane pattern, V : vertical plane pattern

***The actual Indoor range will be effected by users' physical environment. The above figures are reference.***

## Indoor/ Outdoor Antenna Table:

				
<b>Model Name</b>	<b>ANT24-1800</b>	<b>ANT24-1801</b>	<b>ANT24-1500</b>	<b>ANT24-2100</b>
<b>Signal directivity</b>	Directional	Directional	Omni-directional	Directional
<b>Application range</b>	Outdoor	Outdoor	Outdoor	Outdoor
<b>Gain (Without cable loss)</b>	18dBi	18dBi	15dBi	21dBi
<b>Approximate Range at 1 Mbps *</b>	5Km under FCC 1.2Km under ETSI	5Km under FCC 1.2Km under ETSI	1Km	1Km
<b>Approximate Range at 11 Mbps *</b>	1.5Km under FCC 300M under ETSI	1.5Km under FCC 300M under ETSI	300M	300M
<b>Half power Beam width **</b>	H15 V15	H15 V15	H360 V5	H18 V12
<b>Pigtail cable length</b>	NA	NA	NA	NA
<b>Antenna fixed connector</b>	N-jack	N-jack	N-jack	N-jack
<b>Surge protector for outdoors</b>	Included	Included	Included	Included
<b>Default Extension Cable Length</b>	50cm	50cm	3M	3M
<b>Default mounting configuration</b>	Wall/ pole	Pole	Pole	Pole
<b>Antenna-kit weight (Kg)</b>	3.2Kg	4.22Kg	2.5Kg	4Kg
<b>Optional accessories</b>	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series	Ultra low loss cable For ANT24-CB series

\*1.Extended range reference based on RF-Output Power 14dbm with default cable loss

\*2.The transmission distance range might depend on the two same spec antennas with default cable loss

\*\*HPBW: Half Power Beam Width. H : horizontal plane pattern, V : vertical plane pattern

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