

ANT24501B-10000S/ANT224D10/ANT2409  
ACC-10314-01/ACC-10314-03/ACC-10314-04

### Optimize WLAN Range and Power

The NETGEAR® ProSAFE® line of antennas and accessories for 802.11b, 802.11g and 802.11n devices give you multiple options for maximizing the reach and performance of your wireless infrastructure devices. Every WLAN deployment is unique. When planning a network that incorporates wireless, varying facility sizes, construction materials, distance between transmission points and physical obstructions must be accounted for. With both directional and omni-directional antennas, indoor and outdoor options, low-loss cables, mounting hardware, and other accessories, installers can customize a wireless solution that meets the requirements of even the most challenging applications.

#### ANT24501B-10000S

##### NETGEAR Outdoor Dual Band Omni Antenna Bundle Kit

The ANT24501B antenna bundles provides omni directional access with extended range for client connectivity in a hotspot deployment scenario. Simply connect the 2.4 and 5 GHz antennas to the WND930 Outdoor Access Point to achieve optimum performance at wireless 802.11n speed. Each antenna bundle comes with 2 units of 2.4 GHz antennas (5 dBi) and 2 units of 5 GHz antennas (7 dBi). The small form factor the lightweight antennas allows the installation to be simple and intuitive. The ANT24501B antenna bundle is rated to operate in outdoor deployment in extreme environmental condition that matches the specification of the WND930 Outdoor Access Point.



#### ANT224D10

##### ProSAFE 10 dBi 2x2 Indoor/Outdoor Directional Antenna

The ANT224D10 2.4 GHz antenna provides extended range connectivity for point-to-point wireless bridges at wireless 802.11n speeds. With a maximum range of 8.5 KM, the ANT224D10 enables high speed connections for building-to-building deployments. Additionally, this antenna can be used indoors for floor-to-floor connectivity or to provide a narrow beam of coverage. Due to the multiple streams of traffic in the 802.11n specification, this antenna requires two antenna cables, which are available in a variety of lengths. It includes several mounting options and comes with wall/pole mounting hardware. Cables are sold separately.



#### ANT2409

##### ProSAFE 9 dBi Indoor/Outdoor Omni-directional Antenna

The ANT2409 indoor/outdoor 2.4 GHz antenna provides extended point-to-multi-point coverage for wireless 802.11g devices. Optimal for medium range indoor or outdoor point-to-multi-point applications. Included lightning arrester (a \$90 value) helps prevent damage due to lightning-induced surges or static electricity in outdoor applications. Typically hung from crossbars of drop ceilings or on a rooftop, the waterproof and UV resistant ANT2409 includes wall and pole mounting materials for installation ease; antenna cable and grounding cable not included.



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Product	ANT24501B	ANT224D10	ANT2409
Description	NETGEAR Outdoor Dual Band Omni Antenna Bundle Kit	ProSAFE 10 dBi 2x2 indoor/outdoor directional antenna -ANT224D10	ProSAFE 9 dBi Omni-directional Antenna - ANT2409
Wireless Mode	802.11 a/b/g/n	IEEE 802.11n	IEEE 802.11g
Typical Application	Outdoor for wireless client access	Indoor/Outdoor	Indoor/Outdoor
Maximum Outdoor Range	1.6 km (1 mile)	8.5 km (5.28 miles) <sup>1</sup>	11.5 km (7.2 miles) <sup>2</sup>
Frequency Range	2400 - 2500MHz 4900 - 5850MHz	2400 - 2500MHz	2400 - 2485MHz
Gain	5dBi (2.4GHz) 7dBi (5GHz)	10dBi <sup>3</sup>	9dBi <sup>3</sup>
Beam Width	Horizontal 360° Vertical 11°	Horizontal 33° Vertical 32°	Horizontal 360° Vertical 30°
Polarization	Linear; Vertical	Linear; Vertical	Vertical
Operational Temperature	-20° to +60°C (-4° to 140°F)	-30° to 80°C (-22° to 176°F)	-30° to 80°C (-22° to 176°F)
Dimensions	215 x 22 x 11mm (8.5 x 0.9 x 0.4in)	240 x 240 x 40mm (9.45 x 9.45 x 1.57in)	625 x 75 x 56mm (24.6 x 2.95 x 2.2in)
Weight	.2kg (0.4lb)	.7kg (1.54lb)	.9kg (2lb)
Connectors	N-Plug Male	<ul style="list-style-type: none"> <li>• Antenna - N Jack Male</li> <li>• Lightning arrestor - N Jack Male to N Jack Male</li> <li>• Extended Cable - N Plug Female</li> </ul>	<ul style="list-style-type: none"> <li>• Antenna - Reverse N female</li> <li>• Lightning arrestor - Reverse N female</li> <li>• Adapter - Reverse SMA</li> </ul>
Package Contents	<ul style="list-style-type: none"> <li>• 2 x 2.4GHz omni directional antennas</li> <li>• 2 x 5GHz omni directional antennas</li> <li>• Installation guide</li> </ul>	<ul style="list-style-type: none"> <li>• NETGEAR ProSafe Indoor/Outdoor 10dB 2x2 Directional Antenna ANT224D10</li> <li>• 2 lightning arrestors with 30 cm low-loss cables</li> <li>• 2 reverse N/SMA adapters</li> <li>• Wall mount and pole mounting hardware</li> <li>• Installation Guide and Warranty/Support card</li> </ul>	<ul style="list-style-type: none"> <li>• Indoor/Outdoor 9dBi Omni-directional</li> <li>• Antenna - ANT2409 (cable required, sold separately)</li> <li>• Wall and pole mount brackets and hanging materials</li> <li>• One reverse N type to reverse SMA adapter</li> <li>• 2 m low-loss antenna cable (connection for lightning arrestor) <ul style="list-style-type: none"> <li>• Lightning arrestor</li> <li>• Installation guide and Warranty/support card</li> </ul> </li> </ul>
Warranty*	2-year		
Ordering Information (all regions)	ANT24501B-10000S	ANT224D10-10000S	ANT2409-20000S

<sup>1</sup> Range estimation is based on FCC-compliant operation of two (2) 802.11 APs each with two (2) ANT24D18 antennas, 3 m antenna cables, and lightning arrestors installed. With the antennas positioned 26 m above the ground, data rate should sustain 1 Mbps under ideal line-of-sight conditions.

<sup>2</sup> Range estimation is based on FCC-compliant operation of two (2) 802.11 APs each with two (2) ANT2409 antennas, 1 m antenna cables, and lightning arrestors installed. With the antennas positioned 27 m above the ground, data rate should sustain 1 Mbps under ideal line-of-sight conditions.

<sup>3</sup> Gain: A ratio of decibels to an isotropic antenna that is commonly used to measure antenna coverage.

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### ACC-10314-01/ACC-10314-03/ACC-10314-04



#### Low-loss Antenna Cables

These 1.5m, 5m, and 10m antenna cables offer low loss at 2.4GHz and added flexibility for setting up access points at a greater distance from a power source. They come with reverse SMA connectors and provide a standard connection optimized for use with the NETGEAR line of WLAN antennas (range can be drastically reduced if longer or higher loss cables than these are used).

NETGEAR low-loss cables with 2 Reverse SMA Connectors extend the length between NETGEAR wireless access points or routers and the external antenna without sacrificing range.

Product	ACC-10314-01	ACC-10314-03	ACC-10314-04
Cable Length	1.5m (4.9ft)	5m (16.4ft)	10m (32.8ft)
Maximum Cable Loss with Connectors	1.4dB	3.7dB	7.0dB
Weight	50g (1.76oz)	225g (7.94oz)	440g (15.53oz)
Attenuation	0.21dB/ft maximum or .659dB/m maximum at 2.5GHz		
Operating Temperature	-40° to 75°C (-40° to 167°F)		
Minimum Bend Radius	26mm (1in)		
Connectors	Reverse SMA female (both ends)		
Package Size	450 x 280 x .12mm (17.72 x 11.02 x .004in)		
Warranty*	2-year		
Ordering Information (all regions)	1.5 meter cable ACC-10314-01	5 meter cable ACC-10314-03	10 meter cable ACC-10314-04

\* 2-Year Warranties cover hardware, fans, and internal power supplies - not external power supplies or software. Warranty is only valid for the original purchaser, and modifications to product may void the warranty. See <http://www.netgear.com/about/warranty/> for details. Basic phone support for 90 days from purchase and lifetime online chat support when purchased from a NETGEAR authorized reseller.