

NETGEAR®

Installation Guide

ProSafe Light Wireless Access Point, WAGL102 or WGL102

Start Here

This guide describes installation for the WAGL102 ProSafe™ 802.11a/g Dual Band Light Wireless Access Point or WGL102 Prosafe 802.11g Light Wireless Access Point.

Note: The WAGL102 or WGL102 Light Wireless Access Points work **only** in conjunction with the WFS709TP ProSafe Smart Wireless Switch. In order to complete access point installation, the WFS709TP should be already configured and available on your network. For instructions on advanced configuration options for access points, please refer to the *WFS709TP ProSafe Smart Wireless Switch Software Administration Manual*, which can be downloaded from <http://www.netgear.com/support>.

Estimated Completion Time: 20 minutes.

Installing the Access Point

- Unpack the box and verify the contents, as follows:
 - WAGL102 ProSafe 802.11a/g Dual Band Light Wireless Access Point or WGL102 Prosafe 802.11g Light Wireless Access Point
 - Antenna:
 - WAGL102—one 2.4 GHz antenna and one 5 GHz antenna
 - WGL102—one 2.4 GHz antenna
 - Wall mounting screws
 - Straight through Category 5 Ethernet cable
 - Power adapter and cord (12 V dc, 1.2 A)
 - ProSafe Light Wireless Access Point, WAGL102 or WGL102 Installation Guide (this document)
 - Support Registration card

Note: Contact your reseller or customer support in your area if there are any missing or damaged parts. You can refer to the Support Information Card for the telephone number of customer support in your area. You should keep the Support Information card, along with the original packing materials, and use the packing materials to repack the WAGL102 or WGL102 if you need to return it for repair.

- Connect the access points directly to the WFS709TP ProSafe Smart Wireless Switch to configure them and to download firmware (for full instructions, see the documentation for the WFS709TP ProSafe Smart Wireless Switch).
- Mount or place the access point where you intend to deploy it.
- Power the access point by one of these methods:
 - Power adapter—connect to a power source using the supplied power adapter.
 - PoE (power over Ethernet)—connect an Ethernet cable between the access point's 65 FE Port and:
 - A network port on a WFS709TP ProSafe Smart Wireless Switch, or
 - A network mid-span device that supports a 802.3af compliant port.
- Orient the antenna (for best performance, a vertical position is recommended).
- Verify successful installation by observing the LED status:

LED	Color(s)	Activity	Action
ENET (10/100 Mbps)	Green	Off	No link
		Green on	10/100Mbps link negotiated
		Green flashing	10/100Mbps data activity
WLAN LEDs	Green	Off	Wireless radio disabled
		Green on	Wireless radio AP mode enabled
		Green flashing	Wireless radio AM mode enabled

- Complete your installation by defining the operational behavior for each access point in your network.

Troubleshooting Tips

Here are some tips for correcting simple problems you may have.

No lights are lit on the access point.

- Make sure the power is connected to the access point.

- Make sure the Ethernet cable connectors (if used) are securely plugged in at the access point and the network device (hub, switch, or router).

- Make sure the connected device is turned on.

The WLAN lights are not lit.

- Disconnect the adapter from its power source and then plug it in again. Contact NETGEAR if the Wireless LAN lights remain off.

I cannot configure the access point from the WFS709TP ProSafe Smart Wireless Switch.

- Check that the WAGL102 or WGL102 is properly installed, the LAN connections are OK, and that the LAN port LED is green. Check the operational status of the WFS709TP ProSafe Smart Wireless Switch.

Specifications

Parameter	WAGL102 ProSafe 802.11a/g Dual Band Light Wireless Access Point or WGL102 Prosafe 802.11g Light Wireless Access Point
Maximum Clients	Limited by the amount of wireless network traffic generated by each node; typically 15 to 20 nodes.
Status LEDs	Power/Ethernet LAN/Wireless LAN/Test
Power Adapter	12V DC, 1 A
Environmental Specifications	Operating temperature: 0 to 50° C Operating humidity: 5-95%, non-condensing
Antenna	<ul style="list-style-type: none">WAGL102: One (1) external 5dBi 2.4 GHz detachable antenna and one (1) external 5 dBi 5GHz detachable antennaWGL102: One (1) external 5 dBi 2.4 GHz detachable antenna
Wireless LAN network standards	IEEE 802.11a, IEEE 802.11b and IEEE 802.11g
Radio technology	<ul style="list-style-type: none">802.11b: 1 and 2 Mbps, Direct Sequence Spread Spectrum (DSSS)802.11b: 5.5 and 11 Mbps, Complementary Code Keying (CCK)802.11g: All rates, Orthogonal Frequency Division Multiplexing (OFDM)
Radio modulation type	<ul style="list-style-type: none">802.11a - BPSK, QPSK,16-QAM, 64-QAM802.11b - CCK, BPSK, QPSK802.11g - CCK, BPSK, QPSK,16-QAM, 64-QAM
Media Access Control	CSMA/CA with ACK

Supported Frequency Bands	2.400 ~ 2.4835GHz (Global), 5.18 ~ 5.32 GHz, 5.745 ~ 5.825 GHz, channels country specific
Supported Operating Channels	<ul style="list-style-type: none"> • 802.11b—US, Canada, Taiwan 11; ETSI up to 13; Japan 14 • 802.11g—US, Canada, Taiwan 11; ETSI up to 13; Japan 13 • 802.11a—US, Canada, Taiwan 13; ETSI up to 19; Japan 8
Output transmit power	100 mW maximum (or lower as configured on the WFS709TP ProSafe Smart Wireless Switch to comply with local regulatory requirements)
Radio band selection	Via WFS709TP ProSafe Smart Wireless Switch in software manageability: <ul style="list-style-type: none"> • Management of all 802.11 parameters • Network wide AP management via WEB GUI and SNMPv3 • Access Point Profiles, managed by geographical location, BSSID and radio type
Encryption	40bit / 64bit / 128bit / 152bit WEP, TKIP, AES
802.11b and g Typical Receive Sensitivity	<ul style="list-style-type: none"> • 802.11b mode at 1Mbps: -95 dBm; 802.11b mode at 2 Mbps: -93 dBm; 802.11b mode at 5.5 Mbps: -91dBm; 802.11b mode at 11 Mbps: -89 dBm; • 802.11g mode at 6 Mbps: -91 dBm; 802.11g mode at 9 Mbps: -90 dBm; 802.11g mode at 12 Mbps: -89 dBm; 802.11g mode at 18 Mbps: -87 dBm; 802.11g mode at 24 Mbps: -84 dBm 802.11g mode at 36 Mbps: -81 dBm; 802.11g mode at 48 Mbps: -77 dBm; 802.11g mode at 54 Mbps: -75 dBm; 802.11g mode at 108 Mbps: -72 dBm

Compliance

Access Points are radio transmission devices and as such are subject to governmental regulation. Network administrators responsible for the configuration and operation of Access Points must comply with local transmission regulations. Specifically, Access Points must use channel assignments appropriate to the location in which the Access Point will be used.

WAGL102 or WGL102 Light Wireless Access Points are intended only for installation in Environment A as defined in IEEE 802.3af, Power over Ethernet. All interconnected equipment must be contained within the same building, including the interconnected equipment's associated LAN connections.

When installed in an air-handling space, such as above suspended ceiling (plenum), the unit is required to be powered via PoE only. Additional cabling such as Fast Ethernet (FE) cables installed in such spaces should be suitable under NEC Article 800.50 and marked accordingly for use in plenums and air-handling spaces with regard to smoke propagation, such as CL2-P, CL3-P, MPP or CMP.

FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate



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radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This product complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 20cm (7.9 inches) between the radiator and your body for 2.4 GHz and 5 GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device when operated in the 5.15 to 5.25 GHz frequency range is restricted to indoor use to reduce the potential for harmful interference to co-channel Mobile Satellite Systems.

Europe

Warning-This is a Class B product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

This product complies with 1999/5/EC, EN5022 Class B, and EN5024 standards.

Certifications

Electromagnetic Compatibility

IEC 60950 CB certificate and report
FCC DOC Part 15 Class B (digital portion)
FCC Part 15 Subpart C 15.247
FCC Part 15 Subpart E 15.407
RSS 210 (Canada)
CE marked with NB letter of opinion

- EN 300 328 2.4 GHz
- EN 301 893 5.4 GHz

AS/NZS 3548 Class B
AS/NZS4771 (C-tick)

Safety Compliance: IEC 60950; EN 60950

Plenum Use: Suitable for use in environmental air handling space in accordance with Section 300.22.C of the National Electrical Code, and Sections 2-128, 12-010(3) and 12-100 of the Canadian Electrical Code, Part 1, C22.1

Medical: EN 60601-1-1: 2001; EN 60601-1-2: 2001

Technical Support

Thank you for selecting NETGEAR products.

After completing installation, locate the serial number on the bottom label of the Light Wireless Access Point and use it to register your product at <http://www.netgear.com/register>.

Registration on the web site or over the phone is required before you can use our telephone support service. The phone numbers for worldwide regional customer support centers are on the Warranty and Support Information card that came with your product.

Go to <http://www.netgear.com/support> for product updates and web support.



This symbol was placed in accordance with the European Union Directive 2002/96 on the Waste Electrical and Electronic Equipment (the WEEE Directive). If disposed of within the European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing the WEEE Directive.

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