

WatchGuard AP130 Hardware Guide

The WatchGuard AP130 is a 2x2 802.11ax dual radio access point that supports up to 574 Mbps data rate on 2.4 GHz band and 1200 Mbps on 5 GHz band.

The AP130 is an ideal Wi-Fi 6 solution to support low-density indoor environments like a small office or remote workers.



Access Point Management

You can manage the AP130 with WatchGuard Cloud. WatchGuard Cloud delivers a simplified platform for Wi-Fi management to easily deploy, configure, and report on your wireless networks.

For more information on how to set up your access point with WatchGuard Cloud, see watchguard.com/start.

About Your Hardware

Hardware Specifications

Hardware	Description
Chipset	Qualcomm QCA8072 1 Gbps
Processor	Qualcomm Cypress IPQ6010-0 Cypress Quad-core A53 at 1.6GHz
Memory	<ul style="list-style-type: none">Flash: NOR Flash 8MB, NAND Flash 256MBRAM: 1024 MB DDR3L (512 x 2)

Hardware	Description
Radio Model	<ul style="list-style-type: none">■ Radio 1: 2.4 GHz Qualcomm Colbalt QCN5021 2x2 with internal PA■ Radio 2: 5 GHz Qualcomm Colbalt QCN5052 2x2
Radio Type and Frequency Band	<ul style="list-style-type: none">■ Radio 1: 2.4 GHz 2x2 11b/g/n/ax■ Radio 2: 5 GHz 2x2 11a/n/ac/ax
Antennas	<ul style="list-style-type: none">■ 2 x 3dBi 2.4 GHz internal antennas (Maximum Antenna Gain: 3.46dBi)■ 2 x 3dBi 5 GHz internal antennas (Maximum Antenna Gain: 4.85dBi)
Ethernet Interfaces	<ul style="list-style-type: none">■ 1 GbE Ethernet port
Power Interface	<ul style="list-style-type: none">■ PoE 54V DC 802.3at■ 12V / 2A DC in
Power Consumption	Maximum: 12.5W
MTBF (Mean Time Between Failures)	478,738 hours at 25 °C / 77 °F
Dimensions	160 mm X 160 mm X 33.2 mm (6.3" x 6.3" x 1.3")
Weight	0.39 kg (0.86 lb)

Environmental Requirements

To safely install your WatchGuard access point, we recommend that you:

- Install the device indoors
- Make sure the device has adequate clearance for air flow and cooling

Other environmental requirements:

Operating Temperature	0°C to 40°C (32°F to 104°F)
Operating Humidity	5% to 95% non-condensing
Non-operating Temperature	-20°C to 65°C (-4°F to 149°F)
Non-operating Humidity	5% to 95%, non-condensing

Hardware Description

The access point has these connections on the bottom panel of the device.



Bottom Panel Connections

Reset Button

Resets the access point to factory-default settings.

- Use a paper clip or other small object to press the reset button through the hole.
- Press and hold the reset button for up to 10 seconds. When you release the reset button, all LEDs will go off to indicate that the device has rebooted.

LAN/POE

This is a LAN port that connects the access point to a wired LAN connection through a switch or hub. This port also provides PoE (802.3af/at) power for the device.

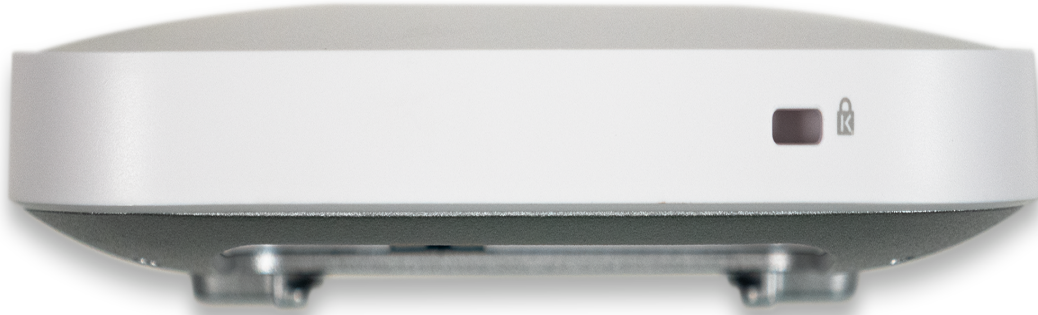
DC 12V

If PoE power is unavailable, you can power the device with the optional 12V DC power adapter (WG9009).

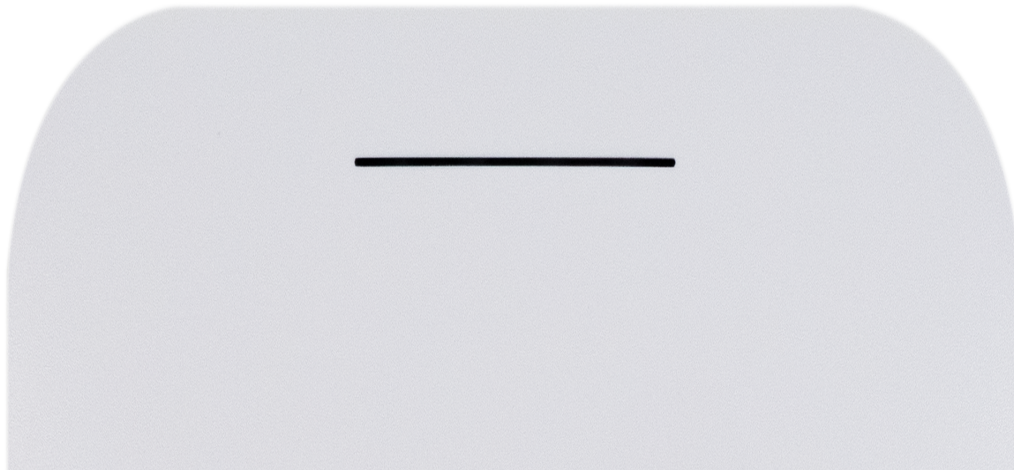
Side Panel Connections

Kensington Lock Slot

The Kensington security lock slot is for use with a security cable to secure your device.



LED Indicators



The access point has LED indicators that can show status conditions for the device connection to WatchGuard Cloud. The LED indicator status depends on the firmware version on the device.

Access Point Firmware 1.1.7-0 and Higher

Access Point Firmware 1.1.4-0 and Lower

Current factory default access points ship with firmware version 1.1.4-0 or lower.

Mount and Connect the Access Point

Your package includes the AP130, ceiling mount t-rail brackets, and wall mount screws and spacers.



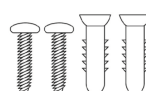
Access Point



T-Rail Mount (9/16")



T-Rail Mount (15/16")



Wall Mount Screws



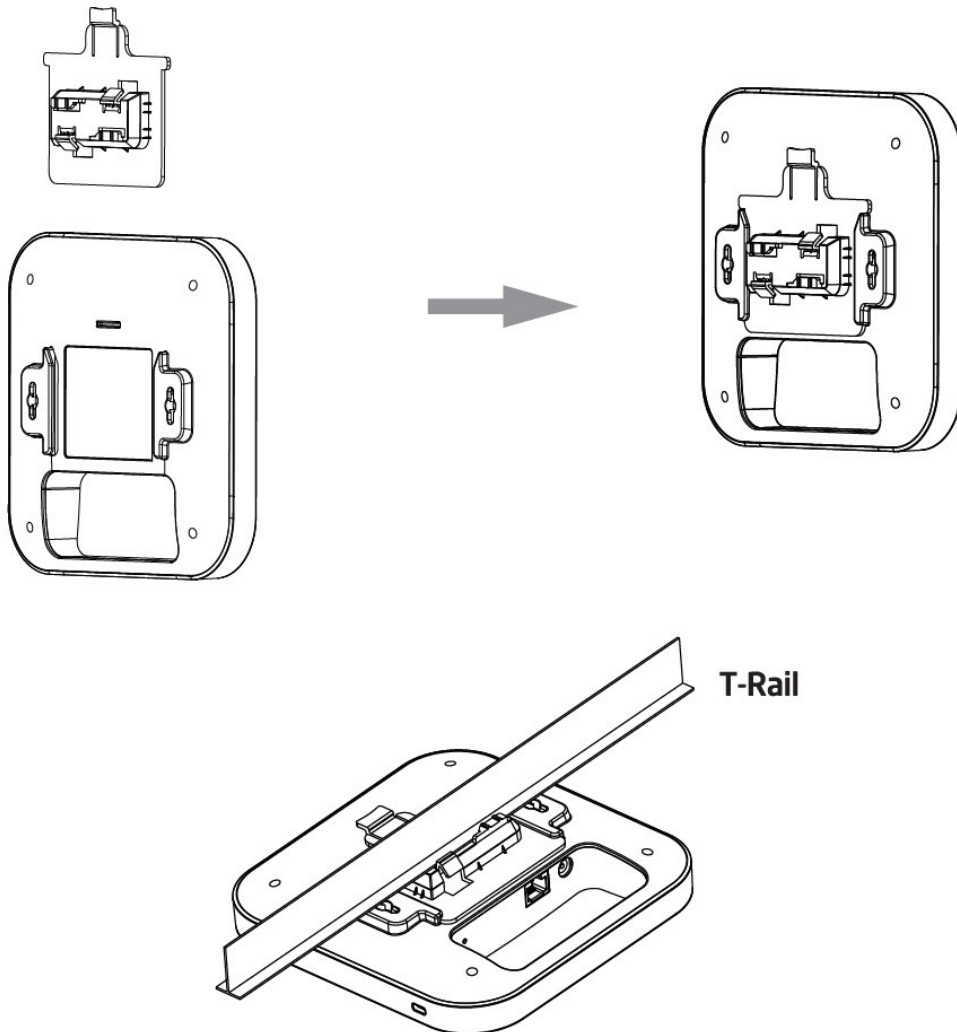
Spacers

The MAC address and serial number of your access point are printed on a label on the back of the device. Make sure you record this information before you mount the access point.

Ceiling Mount

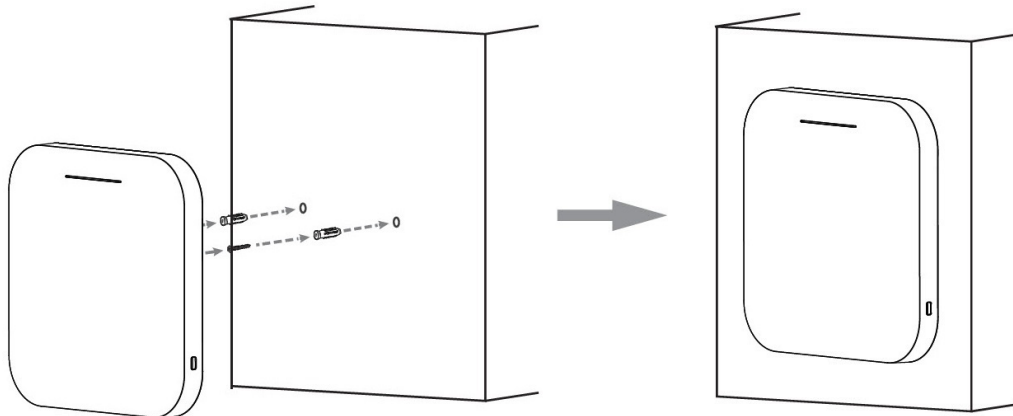
The ceiling mount bracket is intended for use with ceilings with a t-rail system.

1. Slide the ceiling mount base into the slot on the back panel of the access point.
2. Hold the access point with one hand to reach the other hand over the t-rail sides of the bracket.
3. Attach the stationary end of the ceiling mount bracket on to the t-rail.



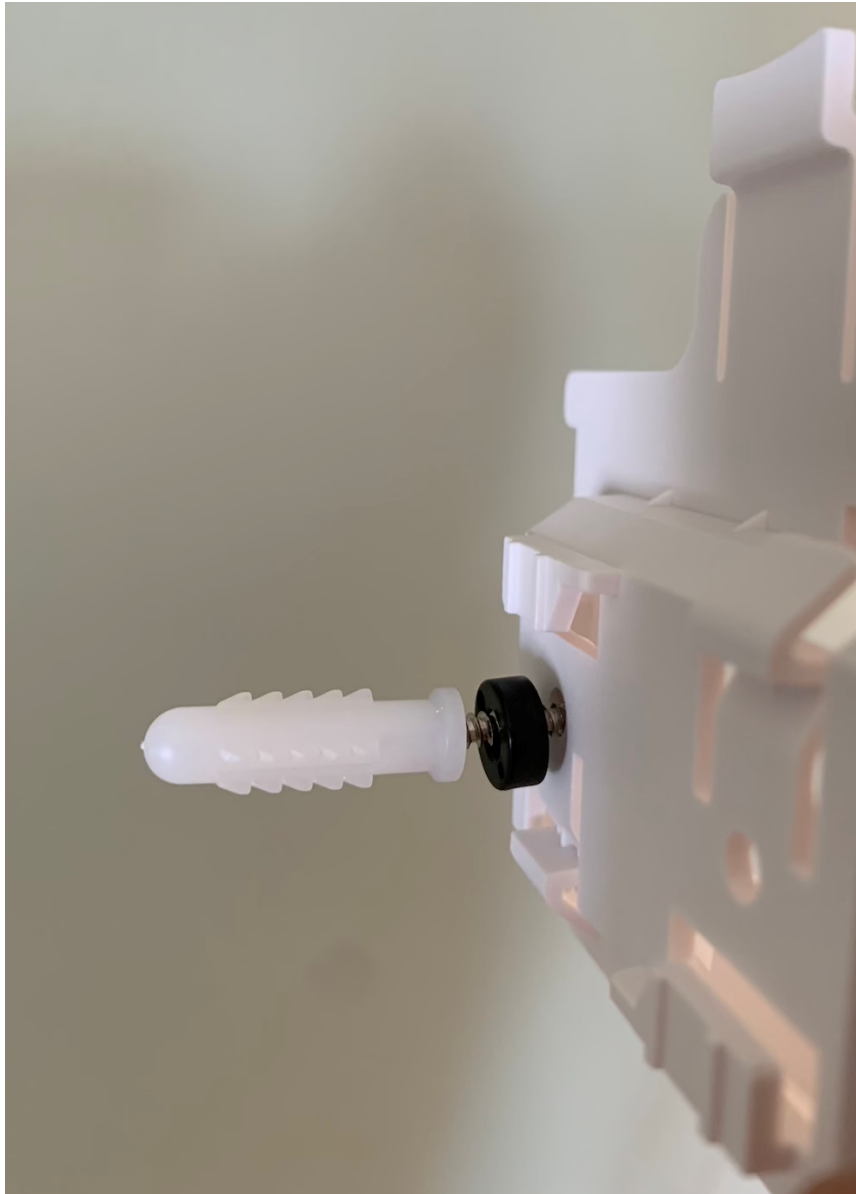
Wall Mount

1. Determine where the access point will be placed and mark the location for the two mounting holes (98.14 mm apart).
2. Drill the two mounting holes (8.1mm diameter and 26mm depth) and hammer the anchors into the holes.
3. Screw the anchors into the holes until they are flush with the wall, then screw the included screws into the anchors.
4. Attach the access point to the wall with the mounting screws.



Wall or Ceiling Mount with T-Rail Mount and Spacers

For ease of use, you can also affix the access point to a wall or ceiling with no t-rail system with the t-rail 15/16" mount bracket attached. Use the included spacers to place between the mounting screws and the anchors.



Access Point Free Standing Bracket

You can optionally purchase a free standing bracket for your access point:

- WatchGuard AP Universal Free Standing Bracket (WG9017)

The stand enables you to safely place your access point on a desk or other flat surface if you do not want to mount the device on a wall or ceiling.

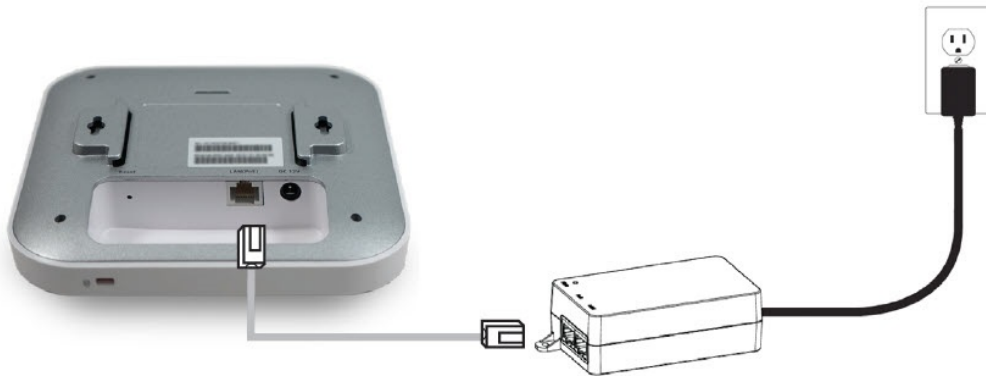
To install the access point in the free standing bracket, align the slot on the back of the access point with the stand and slide the access point firmly into place.



Connect the Access Point

Plug one end of the Ethernet cable from your network into the LAN PoE port on the bottom panel of the access point.

Make sure the other end of the Ethernet cable is connected to your network through a hub, switch, or injector with PoE (802.3af/at) power enabled.



Access Point connected to PoE Injector



Access Point connected to switch with PoE power

Power Adapter (Optional)

An optional AC power adapter supplies 12V DC power to the device.



AC Power Adapter Specs	
WatchGuard Part Number	WG9009
AC Input Voltage Rating	100-240V, 50-60Hz
Output Voltage	DC 12V, 2.5A
Region Specific Adapter Plugs	US, UK, AU/NZ, EMEA (all included)
Temperature	Operating: 0 - 40°C (32 - 104°F) Storage: -20 - 85°C (-4 - 185°F)
Humidity	Operating: 5% - 95% Storage: 0% - 95%
Dimensions	69 mm x 32.6 mm x 49.5 mm (2.7" x 1.28" x 1.5")

Ethernet Power Injector (Optional)

You can power the access point with an optional Ethernet Power Injector. The PoE+ power injector enables you to power the access point through an existing Ethernet connection. With this device, you do not have to position your access point near a power outlet.



This device complies with IEEE 802.3at/af PoE specifications. Do not use any PoE adapters that are not IEEE 802.3at/af compliant as they may damage your device.

To connect an Ethernet Power Injector to the WatchGuard access point:

1. Plug the Ethernet Power Injector into an AC power source.
2. Connect an Ethernet cable from your network backbone (for example, a PoE-capable router, switch, or hub) to the **LAN** connector on the Ethernet Power Injector.
3. Connect an Ethernet cable from the **LAN1 PoE** Ethernet interface on the access point to the **PoE** connector on the Ethernet Power Injector.

The table provides the specifications for the power adapter.

Ethernet Power Injector Specs	
WatchGuard Part Number	802.3at PoE+ Injector with AC cord (US/FCC) (WG8599) 802.3at PoE+ Injector with AC cord (CE) (WG8600) 802.3at PoE+ Injector with AC cord (UK) (WG8601) 802.3at PoE+ Injector with AC cord (AUS) (WG8602)
Specification	IEEE 802.3at/af
AC Input Voltage Rating	100-240VAC
Input Current	0.8A max for 100VAC

Ethernet Power Injector Specs	
Output Power	30W maximum
Ethernet Interfaces	LAN: RJ-45 for 10/100/1000/2500 Mbps data POE: RJ-45 for 10/100/1000/2500 Mbps data and power Voltage: Pin4, 5:54V, Pin7, 8:Return
Indicator	Power: Green
Temperature	Operating: 0 - 40°C (32 - 104°F) Storage: -30 - 80°C (-22 - 176°F)
Humidity	5% - 90% (Operating and storage)
Dimensions	L = 99 mm (3.9") W = 68.5 mm (2.27") H = 33 mm (1.3")
Weight	149.6 g (0.33 lbs)

Notices

All WatchGuard products are designed and tested to meet strict safety requirements. These requirements include product safety approvals and other global compliance standards. Please read these instructions carefully before operating the product, and refer to them as needed to ensure the continued safe operation of your product.

For patent information, please visit <http://www.watchguard.com/patents>

Safety Warning

If protective earthing is used as a safeguard, the instructions shall require connection of the equipment protective earthing conductor to the installation protective earthing conductor (for example, by means of a power cord connected to a socket-outlet with earthing connection). To meet safety and electromagnetic interference (EMI) requirements, you must make sure the power source is connected to earth ground before you connect power to the access point.

Power Adapter Requirements

This product is intended to be supplied by a Listed Power Adapter or DC power source marked "L.P.S." (or Limited Power Source or PS2) rated 12V DC, 2A minimum, maximum ambient temperature (Tma)=40°C, or supplied by a Listed PoE Adapter marked "L.P.S." (or Limited Power Source or PS2) rated 54V DC, 0.6A minimum, maximum ambient temperature (Tma)=40°C. For more information regarding approved power sources, please contact WatchGuard Technologies.

FCC Certification

This device 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.

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 in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25 GHz band are restricted to indoor usage only. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body

CE Notice

The CE symbol on your WatchGuard Technologies equipment indicates that it is in compliance with the Electromagnetic Compatibility (EMC) directive and the Low Voltage Directive (LVD) of the European Union (EU).



Industry Canada Certification

This device complies with ISSED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISSED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Caution

- (i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (ii) where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Avertissement

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

- (i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- (ii) lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués

Radiation Exposure Statement

This equipment complies with ISSED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements ISSED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

For indoor use only.

Pour une utilisation en intérieur uniquement.

EU Declaration of Conformity

This device complies with the essential requirements of the RED Directive 2014/53/EU. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the RED Directive 2014/53/EU:

EN 60950-1:2006+A11+A1+A12+A2:2013

Safety of Information Technology Equipment (ITE)

EN 55024:2010

Immunity for Information Technology Equipment (ITE)

EN 55032:2015/AC:2016

Electromagnetic compatibility of multimedia equipment - Emission requirements.

EN 62311:2008

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz).

EN 61000-3-2:2014

Limits for harmonic current emissions.

EN 61000-3-3:2013

Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.

EN 300 328 V2.1.1

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2.4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering the essential requirements of article 3.2 of the RED Directive

EN 301 893 V2.1.1

Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering the essential requirements of article 3.2 of the RED Directive

EN 301 489-1 V2.1.1

Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-17 V3.1.1

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems

This device is a 5 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies. In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 - 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

Declaration of Conformity

WatchGuard Technologies Inc. hereby declares that the product(s) listed below conform to the European Union directives and standards identified in this declaration.

Product (s):
802.11 a/b/g/n/ac/ax Access Point, AP130

EU Directive(s):
Low Voltage (2014/35/EU)
Electromagnetic Compatibility (2014/30/EU)
Energy-related Products (2009/125/EC)
RoHS (2011/65/EU and 2015/863/EU RoHS)
WEEE Directive 2012/19/EU
The Radio Equipment Directive (2014/53/EU)

Common Standard(s):

EN 62368-1:2014+A11:2017	Safety for ITE
EN 55024:2010	
EN 55024: 2010+A1:2015	Immunity for ITE
EN 55032:2015(AC:2016	
EN 55035: 2017	
EN 61000-3-2:2014	Harmonics
EN 61000-3-3:2013	Flicker

Wireless Standard(s):

EN 62311:2008	
EN 301 489-1 v2.2.3 (2019-11)	EMC and Radio Spectrum Matters
EN 301 489-17 v3.1.1 (2017-02)	EMC and Radio Spectrum Matters
EN 300 328 v2.2.2 (2019-07)	Radio Spectrum Matters
EN 301 893 v2.1.1 (2017-05)	Broadband Radio Access Networks
EN 50385: 2017	

This device complies with Directive 2014/53/EU issued by the Commission of the European Community.

Manufacturer / Hersteller:	WatchGuard Technologies 505 5th Ave S. Suite 500, Seattle, WA 98104 USA Radio
Equipment / Funkanlage:	802.11 a/b/g/n/ac/ax Access Point
Type Designation / Typenbezeichnung:	AP130
Specifications / Technische Daten:	802.11a,b,g,n,ac,ax (2.4Ghz & 5GHz)
Intended Purpose / Verwendungszweck:	Indoor access point
Equipment Class / Betriebsmittel der Klasse:	Class II
Operating temperature	0° C to 40° C

The above device complies with the essential requirements and other relevant provisions to Directive 2014/53/EU when used for its intended purpose. This equipment may be operated in the USA, Canada, & Europe Union.

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.

Frequency range (MHz)	Max. Transmit Power (W)
WLAN Wi-Fi 802.11x; 2.4 GHz	0.09418
WLAN Wi-Fi 802.11x; 5 GHz	0.86896

Restrictions: France (i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux; (ii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

Die oben genannten Gerät entspricht den grundlegenden Anforderungen und anderen relevanten Bestimmungen der Richtlinie 2014/53/EU, wenn für den vorgesehenen Zweck verwendet werden. Dieses Gerät ist für die Verwendung in den USA, Kanada, and Europäische Union.

Warnung! Dies ist eine Einrichtung der Klasse B. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen. In diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen

Einschränkungen: Frankreich –(i)-Geräte, die im Band 5150-5250 MHz ist nur für den Innenbereich, um das Risiko von Störungen des mobilen Satelliten-Systeme, die die gleichen Kanäle (ii) Darüber hinaus reduzieren vorbehalten, sollten Benutzer auch darauf hingewiesen werden, dass die Nutzer von Hochleistungs-Radare bezeichnet werden primäre Benutzer (dh d. sie haben Priorität) der Bänder 5 250-5 350 MHz und 5 650-5 850 MHz und dass diese Radargeräte können Störungen und / oder Schäden an LE-LAN-Geräten verursachen.

Laurence Huang



Full Name:	Laurence Huang	Date:	Oct 28, 2020
Position:	Manufacturing Program Manager		

Brazil ANATEL

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

CISPR 22 Statement

Este produto não é apropriado para uso em ambientes domésticos, pois poderá causar interferências eletromagnéticas que obrigam o usuário a tomar medidas necessárias para minimizar estas interferências.

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

Mexico NOM

La operación de este equipo está sujeta a las siguientes dos condiciones:

(1) es posible que este equipo o dispositivo no cause interferencia perjudicial y

(2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Japan Statement

この装置には、電波法に基づく技術規則適合証明書の認定を受けた特定の無線装置が含まれています。

This equipment contains specified radio equipment that has been certified to the Technical Regulation Conformity Certification under Radio Law.

Japan VCCI Class B Statement

この装置は、クラス B 情報技術装置です。この装置は、住宅環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。VCCI-B

Taiwan NCC Statement

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

1. 使用此產品時應避免影響附近雷達系統之操作。

「本產品電磁波曝露量(MPE)標準值1mW/cm²，送測產品實測值為0.347 mW/cm²，建議使用時至少距離人體20cm」

RoHS Statement

The member states of the European Union approved directive 2002/95/EC, Restrictions of Hazardous Substances ("RoHS directive") that became valid on July 1, 2006. It states that all new electrical and electronic equipment put on the market within the member states must not contain certain hazardous materials. This device complies with the European Union's RoHS directive 2002/95/EC and similar regulations that may be adopted by other countries for European Sales.

WEEE Statement

WEEE is a general set of requirements dictated in the EU Directive 2002/96/EC. This Directive mandated that member EU countries enact regulations governing the Waste of Electrical and Electronic Equipment (WEEE). The Directive, and its individual transpositions into specific country laws and legislation, is aimed at the reduction of WEEE through reuse, recovery, and recycling of WEEE.

WatchGuard is working in partnership with our European Union (EU) distribution partners to ensure that our products are in compliance with the WEEE statutes, and that the recovery of our product per the specific EU country legislative requirements is seamless for our product's end users. If you have a WatchGuard product that is at its end of life and needs to be disposed of, please contact WatchGuard Customer Care Department at:

U.S. Customers: 877.232.3531

International Customers: +1.206.613.0456

WatchGuard is reasonably confident that our products do not contain any substances or hazardous materials presently banned by any legislation, and do not present a risk due to hazardous materials. WEEE recovery professionals should also note that these products do not have any materials that are of particular high value in their individual form.

REACH Certificate of Compliance

The new EU chemicals policy REACH (Registration, Evaluation, Authorization and restriction of Chemicals) came into effect on June 1, 2007. REACH is Europe's new chemicals legislation, which is applicable in all 27 EU Member States as well as the EFTA European Economic Area (EEA). REACH creates a new system for gathering information, assessing risks to human health and the environment, and authorizing or restricting the marketing and use of chemicals produced or supplied in the EEA. REACH has an impact on EEA producers and importers of finished products and users of chemicals in the course of industrial or professional activities.

WatchGuard supports the overall REACH objective of improving the protection of human health and the environment and will meet all applicable REACH requirements. WatchGuard is strongly committed to working with our customers and supply chain to define and implement the REACH requirements and ensure a smooth transition to compliance.

One of the REACH requirements is that manufacturers and importers have the duty to register substances they are producing or importing. In accordance with the regulations, the products of WatchGuard do not need to be registered for the following reasons:

- WatchGuard does not import more than 1 metric ton per year of a substance as defined by REACH.
- WatchGuard products are non-chemical products that are not designed to release any substance under normal and reasonably predictable application.
- Our products do not contain the listed substances at more than 0.1% by weight of the whole product/part.

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