



NORTEL

Nortel WLAN 8100

Regulatory Information - AP 8120

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Regulatory Compliance Statements

The Avaya WLAN 8100 product line consists of the following models:

- AP 8120-A1
- AP 8120-E1

This section contains regulatory compliance statements for these units.

Federal Communications Commission (FCC) Compliance Notices

This section includes the following FCC statements for the AP 8120-A1 access point:

- FCC ID:
- Class B Interference Statement
- RF Radiation Exposure and Hazard Warning
- Non-Modification Statement
- Deployment Statement

Class B Interference Statement

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:

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.

RF Radiation Exposure and Hazard Statement

To ensure compliance with FCC RF exposure requirements, this device must be installed in a location such that the antenna of the device will be greater than 20 cm (8 in.) away from all persons. Using higher gain antennas and types of antennas not covered under the FCC certification of this product is not allowed. Installers of the radio and end users of the product must adhere to the installation instructions provided in this manual.

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

Non-Modification Statement

Use only the supplied internal antenna. Unauthorized antennas, modifications, or attachments could damage the AP 8120-A1 and violate FCC regulations. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device must be operated with the CAT-5 Ethernet cable installed on each activated Ethernet Port of an AP 8120-A1 access point to ensure compliance with the Class B emissions standards. Failure to comply with this installation requirement may cause the device to operate in excess of the allowable emissions limits

Deployment Statement

This product is certified for indoor deployment only. **Do not** install or use this product outdoors.

Dynamic Frequency Selection (DFS) in the 5.0 GHz UNII bands

The AP 8120-A1 access point has been prohibited, via software, from operating in the 5250 to 5350 MHz and 5470 to 5725 MHz frequency bands for the US and Canada because it cannot meet the DFS requirements as outlined in the rules of the FCC for Part 15, Subpart E that come into force on July 20, 2007.

Canadian IC Statements

IC: (Applies to AP 8120-A1)

Operation is subject to the following two conditions in Canada:

1. this device may not cause interference, and
2. this device must accept any interference, including interference that may cause undesired operation of the device

To prevent radio interference to the licensed service (i.e. co-channel Mobile Satellite systems) this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing and not supported by the AP 8120-A1 access point.

Because high power radars are allocated as primary users (meaning they have priority) in the 5250 to 5350 MHz band, these radars could cause interference and/or damage to license exempt WLAN devices.

European Union and European Free Trade Association (EFTA) Regulatory Compliance

This equipment may be operated in the countries that comprise the member countries of the European Union and the European Free Trade Association. These countries, listed in the following paragraph, are referred to as The European Community throughout this document:

AUSTRIA, BELGIUM, BULGARIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, MALTA, NETHERLANDS, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, UNITED KINGDOM, ICELAND, LICHTENSTEIN, NORWAY, SWITZERLAND.

The Avaya WLAN 8100 AP 8120-E1 access point communicates with an Avaya WLAN 8100 Wireless Controller using a standard CAT-5 (Category 5) or higher 10/100 Mbps twisted pair Ethernet cable to provide wireless local area networking (WLAN) capabilities. The Avaya WLAN 8100 AP 8120-E1 access point includes two 802.11a+n and two 802.11b/g+n radio and three 802.11a+n and three 802.11b/g+n omnidirectional internal antennas.

Declaration of Conformity

Marking by this symbol



indicates compliance with the Essential Requirements of the R&TTE Directive of the European Union (1999/5/EC). This equipment meets the following conformance standards:

Safety: EN 60950-1:2001 + A11:2004

EMC: EN 55022:2006, EN 55024:1998 + A1:2001 + A2:2003, EN 301-489-1 v1.6.1, EN 301-489-17 v1.2.1, CISPR22:2005, CISPR24

Including: EN 61000-3-2, -3-3, -4-2, -4-3, -4-4, -4-5, -4-6 and -4-11. The product is also licensed as required for additional country specific standards as required for the International Marketplace.

Radio: EN 300-328 v.1.7.1 (2006-10) & EN 301-893 v.1.5.1 (2008-12)

DEVIATION: The AP 8120-A1 access point was tested to and are compliant with all of the technical specifications of EN 301-893 v1.4.1 for operation in the 5.0 GHz bands, except the DFS requirements in the 5600 – 5650 MHz band.

IEEE 802.11a operation in the 5250 to 5350 MHz and 5470 to 5725 MHz frequency bands is governed by ETSI EN 301-893 v1.4.1 and the R&TTE Directive 1999/5/EC. Effective July 1, 2008, EN 301-893 v1.4.1 was updated to require compliance with 0.8 µsecond pulse widths and staggered PRF's in the 5470 – 5725 MHz band. The AP 8120-A1 access point meets compliance with these new mandates by disabling operation, via software, on channels 120, 124, 128 and 132 in the 5600 to 5650 MHz frequency band because it cannot meet the 0.8 µsecond pulse width and staggered PRF DFS requirements as outlined in the updated EN 301-893v1.4.1 standard.

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 and Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN. Certifications are harmonized to the EN standards covering essential requirements under article 3.2 of the R&TTE Directive.

SAR: EN 50385:2002

European Community Declaration of Conformity

WLAN Radio Model AP 8120-E1, as stated in the following Declarations of Conformity, represents all models in the AP 8120-E1 as listed above.

Bulgaria	, nortel , WLAN AP 8120-E1, 1999/5
Czech Republic	Èesky Norteltímto prohlašuje, že tento WLAN Rádío Model AP 8120-E1, je ve shodì se základními požadavky a dalšími pøíslušnými ustanoveními smìrnice 1999/5/ES.
Denmark	Dansk Undertegnede Nortel erklærer herved, at følgende udstyr WLAN Radio Model AP 8120-E1, overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
English	English Hereby, Nortel declares that this WLAN Radio Model AP 8120-E1, is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Estonia	Eesti Käesolevaga kinnitab Nortelseadme WLAN Radio Model AP 8120-E1, vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
Finland	Suomi Nortel vakuuttaa täten että WLAN Radio Esikuvallinen AP 8120-E1, tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
France	Français Par la présente Nortel déclare que l'appareil Model Par radio AP 8120-E1 de WLAN, est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Germany	Deutsch Hiermit erklärt Nortel., dass sich das Gerät WLAN Radiomodell AP 8120-E1, in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Greece	ΕΛΛΗΝΙΚΗ ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Nortel ΔΗΛΩΝΕΙ ΟΤΙ WLAN Radio Model 8120 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ
Hungary	Magyar Alulírott, Nortel nyilatkozom, hogy a WLAN Rádío Minta AP 8120-E1, megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

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Italy	Italiano Con la presente Nortel dichiara che questo Modello Radiofonico AP 8120-E1 di WLAN, è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latvia	Latviski Ar šo Nortel deklarā, ka WLAN Radio Model AP 8120-E1, atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lithuania	Lietuvių Šiuo Nortel deklaruoja, kad šis WLAN Radio Model AP 8120-E1, atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Malta	Malti Hawnhekk, Nortel., jiddikjara li dan WLAN Radio Model AP 8120-E1, jikkonforma mal-tijiet essenzjali u ma provvedimenti orajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Netherlands	Netherlands Hierbij verklaart Nortel dat het toestel WLAN Radiomodel AP 8120-E1, in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Poland	Polski Niniejszym Nortel oświadczam, że WLAN Radio Model AP 8120-E1, jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Portugal	Português Nortel declara que este Modelo De rádio AP 8120-E1 de WLAN, está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Romania	Român Astfel, Nortel declară acel acest WLAN Radio Model AP 8120-E1, este în conformitate cu cerințele necesare și proviziile alte semnificative de Directive 1999/5/EC.
Slovakia	Slovensky Nortel týmto vyhlasuje, že WLAN Radio Model AP 8120-E1 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Slovenia	Slovensko Nortel izjavlja, da je ta WLAN Radio Model AP 8120-E1, v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili directive 1999/5/ES.

Spain	<p>Español</p> <p>Por medio de la presente Norteldeclara que el Modelo De radio AP 8120-E1 de WLAN, cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.</p>
Sweden	<p>Svenska</p> <p>Härmed intygar Nortelatt denna WLAN Radiotelegrafer till Modell AP 8120-E1, står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.</p>

Countries of Operation and Restrictions of Use in the European Community

Operation Using the 2.400 to 2.4835 GHz Channels in the European Community

The professional installer should use the configuration utility provided with this product to verify the current channel of operation, the expected transmit power level, and to confirm that the device is operating in conformance with the spectrum usage rules for the selected European Community country. **If operation is occurring outside of the allowable channels as indicated in this guide, then operation of the product must cease immediately** and the installer must consult with the local technical support staff responsible for the wireless network.

This device is intended to be operated in all countries of the European Community. Additional restrictions of use for the AP 8120-A1 access point within the European Community countries in the 2.400 to 2.4835 GHz band are listed below.

- The frequencies associated with channels 1 to 13 in the 2.400 to 2.4835 GHz band are allowed to be used either indoors or outdoors in all countries of the European Community, except where noted below.
- In France, the following operation is permitted:
 - Indoor operation is permitted in the 2.400 to 2.4835 GHz band on channels 1 to 13 at a maximum EIRP of 100 mW (20 dBm).

The AP 8120-E1 access point, using the internal antennas, are guaranteed to meet this limit by automatically adjusting the transmit power level through the operating software.

Operation Using the 5.15 to 5.25 GHz, 5.25 to 5.35 GHz, and 5.470 to 5.725 GHz Channels in the European Community

To remain in conformance with European National spectrum usage laws, follow the channel limitations associated with the 5 GHz bands as specified in this document. The professional installer should verify the current channel of operation and the expected transmit power level of

the AP 8120-A1 access point to confirm that the device is operating in conformance with the spectrum usage rules for the European Community country where the unit is being installed. **If operation is occurring outside of the allowable frequencies or above the power levels, as indicated in this guide, then operation of the product must cease immediately** and the installer must consult with the local technical support staff responsible for the wireless network.

This device is intended to be operated in all countries of the European Community. Additional restrictions of use for the AP 8120-A1 access points within the European Community countries in the 5.15 to 5.25 GHz, 5.25 to 5.35 GHz, and 5.470 to 5.725 GHz bands are listed below.

- This device is restricted to indoor use only when operated in the European Community using the 5.15-5.25 GHz and 5.25-5.35 GHz bands, which includes channels 36, 40, 44, 48, 52, 56, 60 & 64. • The 5 GHz Turbo Mode feature is not allowed for operation in any European Community country.

Dynamic Frequency Selection (DFS)

The AP 8120-A1 access point implements a DFS feature in accordance with the limits in EN 301-893v1.4.1, Section 4.7 and Annex D, Tables D.1, D.2 & D.4 for a device operating in the mode defined as “Master”. Section 4.7 and Tables 5 of this document define the requirements prior to using a channel and during normal operation for a Master device (i.e., Interference Detection Threshold, Channel Availability Check Time, Uniform Spreading, Channel Closing Transmission Time and Channel Move Time). This product qualifies for this category since the maximum achievable transmit power is greater than 23 dBm per the requirements of Table D.2 in Annex D of the standard.

IEEE 802.11a operation in the 5250 to 5350 MHz and 5470 to 5725 MHz frequency bands is governed by ETSI EN 301-893v1.4.1 and the R&TTE Directive 1999/5/EC. Effective July 1, 2008, EN 301-893 v1.4.1 was updated to require compliance with 0.8 μsecond pulse widths and staggered PRF's in the 5470 – 5725 MHz band. The AP 8120-A1 access point meets compliance with these new mandates by disabling operation, via software, on channels 120, 124, 128 and 132 in the 5600 to 5650 MHz frequency band because it cannot meet the 0.8 μsecond pulse width and staggered PRF DFS requirements as outlined in the updated EN 301-893v1.4.1 standard.

Transmit Power Control

European Regulatory requirements specify that wireless devices must employ Transmit Power Control (TPC) to reduce the potential for interference to other communication systems operating in the 5 GHz

frequency bands. This device includes a provision for adjustment of Transmit Power in accordance with the limits in EN 301-893v1.4.1, Sections 4.4.2.1 and 4.4.2.2.

Antenna Statement

Intentional radiators, such as the Avaya WLAN 8100 AP 8120-A1 and AP 8120-E1 access points, are not intended to be operated with any antenna(s) other than those furnished by Avaya. An intentional radiator may only be operated with the antenna(s) with which it is authorized.

Use of an antenna not specifically authorized by Avaya may not comply with local regulatory requirements with respect to radiated emission limits and may result in illegal operation of the product. The installer of the wireless system and associated antenna is required to ensure that only those antennas specifically approved by Avaya are deployed with the intentional radiator.

Be sure to associate the appropriate antenna model number and localized regulatory region when selecting the Avaya authorized antenna(s).

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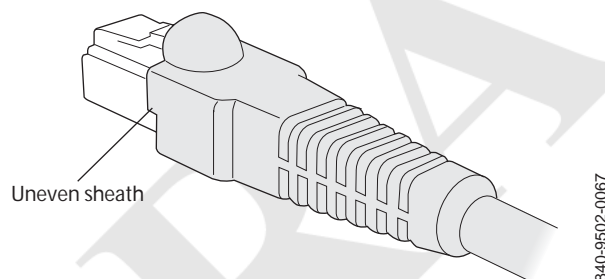
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English

These are the proposed English procedures. Once we get these solid we can get them translated.

Cable requirements

The Ethernet ports on the access point cannot accept a CAT-5 cable that has an uneven sheath as shown below. The RJ-45 connector on the cable will not seat properly in the receptacle on the access point. Use a CAT-5 cable with an even sheath instead.



Mounting a wireless LAN access point on a wall

The mounting bracket is designed to use wall anchors with threaded section diameters ranging between 3.5mm and 4.5mm. If wall anchors have threaded diameters greater than 3.5mm, only the two mounting holes marked 'A' may be used. If wall anchors have threaded diameters of less than 3.5mm, the holes marked 'A' and the holes marked 'B' may be used. All wall anchors must have a head diameter of less than 10mm or the wall mounting bracket cannot be installed over them.

Perform the following procedure to mount a wireless LAN access point on a wall:

1. Locate the appropriate position of the wall anchors. The wall anchors should be 95mm apart horizontally and 80mm apart vertically.
2. Install the screws into the wall anchors but do not seat them fully, leave at least a 2mm gap between the screw head and the wall.

3. Slip the wall bracket over the heads of the screws and slide the bracket to the right as viewed facing the wall.
4. Tighten the screws to secure the wall mounting bracket tightly against the wall.
5. Align the mounting tabs on the bottom of the access point sheet metal enclosure with the vertically oriented keyhole slots in the mounting bracket.
6. Allow the access point to slide down the keyhole slots, making sure the access point mounting tabs are seated at the bottom of the slot.
7. Secure the access point to the wall mounting bracket and tighten the thumbscrews.
8. Verify that the access point is secured to both the bracket and to the wall.

Installing an Access Point with a ceiling grid adaptor

The ceiling grid adaptor comes with two interlocking bracket parts. The larger bracket includes keyhole shaped slots which mate with tabs on the under surface of the AP and a threaded hole that mates with the captive thumbscrew on the AP. The smaller bracket also includes a captive fastener and it can be oriented with respect to the larger bracket in two different ways corresponding to narrow or wide ceiling grids.

Perform the following procedure to install the access point with a ceiling grid adaptor:

1. Secure a safe work environment. Obtain a ladder that allows easy access to the ceiling grid system.
2. Identify an appropriate location on the ceiling grid where the ceiling T-bars are safely accessible and where the ceiling tiles can be temporarily elevated and cleared away from the work area. The adaptor bracket assembly is intended for use with the thin section grid runners, not the thicker section runners used to cross large spans. To provide access for hands and tools, use a pair of pencils or sticks to hold up the ceiling tiles out of the grid. Doing this provides easy access for securing the bracket to the grid.
3. Mount the larger bracket to the grid. While installing, pay attention to the width of the grid strip in order to ascertain the appropriate orientation for the smaller bracket which is installed next.
4. Mount the interlocking small bracket to the large bracket and clamp the two pieces together on the grid. The smaller bracket has tabs formed into it which engage slots in the larger tab. This allows the two parts to slide together and lock to one another. When this is done, the two brackets effectively clamp themselves around the ceiling grid. When the two halves of the bracket are correctly slid together, the captive fastener in the small bracket should engage threads provided in the

larger bracket. Use a screwdriver to screw down the captive fastener. Securing the two brackets in this manner is essential to prevent them from disengaging from one another. Tighten the captive fastener screw securely.

5. Attach the access point to the bracket. Align the access point securing tabs with the keyhole slots in the ceiling grid bracket and carefully slide the access point onto the ceiling grid bracket assembly. If the access point and the bracket assembly are correctly engaged, it should be possible to engage the access points captive thumbscrew into the threaded tab provided on the ceiling grid bracket.
6. Make electrical connections and return ceiling tiles.

Safety Messages

We need translations for these messages and any others we want to add to the document.



CAUTION

The Nortel WLAN Access Point 8120 radios are disabled by default and can be enabled only by a system administrator.



WARNING

This situation or condition can cause injury.



WARNING

High voltage. This situation or condition can cause injury due to electric shock.



WARNING

Only qualified service personnel must perform installation. Read and follow all warning notices and instructions marked on the product or included in the documentation.



WARNING

Install this device in such a manner as to maintain a minimum of 20 cm (7.9 inches) separation distance between the radiating element(s) and all persons. This safety warning conforms with FCC radio frequency exposure limits.



WARNING

Do not operate access point near unshielded blasting caps or in an otherwise explosive environment unless the device has been modified for such use by qualified personnel.



WARNING

Do not touch or move the access point when the antennas are transmitting or receiving.



WARNING

Before using a wireless device in a hazardous location, consult the local codes, national codes, and safety directors of the location for usage constraints.

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