SIEMENS

Approvals for SCALANCE W780 / W740 802.11n

Approvals for SCALANCE W788C / W786C 802.11n

Approvals for SCALANCE W770/W730 802.11n

Approvals for SCALANCE W760/W720 802.11n

SIMATIC NET

Industrial Wireless LAN Approvals SCALANCE W700 802.11n

Reference Manual

01/2017
C79000-G8976-C392-05

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Siemens AG
Division Process Industries and Drives
Postfach 48 48
90026 NÜRNBERG
GERMANY

C79000-G8976-C392-05
Ⓟ 01/2017 Subject to change

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Note

Issued approvals on the type plate of the device

The specified approvals apply only when the corresponding mark is printed on the product. You can check which of the following approvals have been granted for your product by the markings on the type plate.

Range of validity

The approvals listed in this section apply to the following products:

	Article number of the RoW version:	Article number of the US version:	Article number of the Israel version:
Access point			
SCALANCE W786-1 RJ-45	6GK5 786-1FC00-0AA0	6GK5 786-1FC00-0AB0	-
Dual access points			
SCALANCE W786-2 RJ-45	6GK5 786-2FC00-0AA0	6GK5 786-2FC00-0AB0	6GK5786-2FC00-0AC0
SCALANCE W786-2IA RJ-45	6GK5 786-2HC00-0AA0	6GK5 786-2HC00-0AB0	-
SCALANCE W786-2 SFP	6GK5 786-2FE00-0AA0	6GK5 786-2FE00-0AB0	-

	Article number of the RoW version:	Article number of the US version:	Article number of the Israel version:
Access points			
SCALANCE W788-1 RJ-45	6GK5788-1FC00-0AA0	6GK5788-1FC00-0AB0	-
SCALANCE W788-1 M12	6GK5788-1GD00-0AA0	6GK5788-1GD00-0AB0	-
Dual access points			
SCALANCE W788-2 RJ-45	6GK5788-2FC00-0AA0	6GK5788-2FC00-0AB0	6GK5788-2FC00-0AC0
SCALANCE W788-2 M12	6GK5788-2GD00-0AA0	6GK5788-2GD00-0AB0	-
SCALANCE W788-2 M12 EEC	6GK5788-2GD00-0TA0	6GK5788-2GD00-0TB0	-
Ethernet client modules			
SCALANCE W748-1 RJ-45	6GK5748-1FC00-0AA0	6GK5748-1FC00-0AB0	-
SCALANCE W748-1 M12	6GK5748-1GD00-0AA0	6GK5748-1GD00-0AB0	-

Abbreviations used

Some approvals apply only to certain devices or series. In such situations, the designations of the products are shortened to avoid having to list all the type designations. The following table shows how the abbreviations relate to the product variants.

Product group	**The designation ... stands for ...**	**Product name**
Access points (IP30 and IP65)	W788-x	SCALANCE W788-1 M12 SCALANCE W788-2 M12 SCALANCE W788-2 M12 EEC SCALANCE W788-1 RJ-45 SCALANCE W788-2 RJ-45
Access points (IP65)	W786-x	SCALANCE W786-1 RJ-45 SCALANCE W786-2 RJ-45 SCALANCE W786-2IA RJ-45 SCALANCE W786-2 SFP
SCALANCE W without W786-x	W7x8	SCALANCE W788-1 RJ-45 SCALANCE W788-1 M12 SCALANCE W788-2 RJ-45 SCALANCE W788-2 M12 SCALANCE W788-2 M12 EEC SCALANCE W748-1 RJ-45 SCALANCE W748-1 M12

1.1 EC declaration of conformity

CE

The EC Declaration of Conformity is available for all responsible authorities at:

Siemens Aktiengesellschaft
Process Industries and Drives Division,
Process Automation
DE-76181 Karlsruhe
Germany

You will find the current EC declaration of conformity for these products on the Internet pages of Siemens Industry Online Support (hhttps://support.industry.siemens.com/cs/ww/en/ps/15853/cert).

The SIMATIC NET products described in these Operating Instructions meet the requirements of the following EC directives:

- 94/9/EC

  Directive of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres (until 19.04.2016).

- 2014/34/EU

  Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres official journal of the EU L96, 29/03/2014, pages. 309–356 (as of 20.04.2016)

- 1999/5/EC

  Directive of the European Parliament and of the Council of 1999 March 1999 on Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity (until 12.06.2016).

- 2014/53/EU

  Directive of the European Parliament and of the Council of April 16, 2014 on the harmonization of the laws of the member states relating to placing radio equipment on the market.; official journal of the EU L153, 22/05/2014, pages. 62–106 (as of 13.06.2016)

- 2011/65/EU (RoHS)

  RoHS directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

- 1999/519/EC
  Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

1.1.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EC directive:94/9/EC (until 19.04.2016) and 2014/34/EU (as of 20.04.2016) "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres" according to the standards listed in the section Products (Page 10):

Applied standard:

1 EN 60079-0 + A11
Hazardous areas - Part 0: Equipment - General requirements

2 EN 60079-15
Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

1.1.2 RoHS

RoHS directive (restriction of the use of certain hazardous substances)

The SIMATIC NET products described in these operating instructions meet the requirements of the EC directive 2011/65/EC for the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN 50581
Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

1.1.3 R&TTE / RED

1.1.3.1 Protection of health and safety

Article 3 (1) a) protection of health and safety

4 EN 60950-1+A1+A2+A11+A12
Information technology equipment - Safety - Part 1: General requirements

5 EN 62311
Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)

1.1.3.2 EMC

Art. 3 (1) b - EMC

6 EN 50121-3-2+AC

Railway applications - Electromagnetic compatibility - part 3-2: Railway Vehicles - Devices

7 EN 50121-4+AC

Railway applications - Electromagnetic compatibility - part 4: Interference emissions and immunity of signal telecommunications equipment

8 ETSI EN 301 489-1

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 1 : Common technical requirements

9 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17 :

10 EN 61000-6-1

Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

11 EN 61000-6-2+AC

Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

12 EN 61000-6-3+A1+AC

Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

13 EN 61000-6-4+A1

Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

1.1.3.3 Efficient use of the radio spectrum

Art. 3 (2) Efficient use of the radio spectrum

14 ETSI EN 301 328

Electromagnetic compatibility and radio spectrum matters (ERM) - wideband transmission systems - data transmission equipment operating in the 2.4 GHz ISM band and using wideband modulation techniques. Harmonized EN containing the essential requirements according to Article 3.2 of the R&TTE directive.

15 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) - 5 GHz high performance RLAN - Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

1.1.4 Products

Product designation and standards

The standards that apply to the product are described in RoHS (Page 8), ATEX (Page 8) and R&TTE / RED (Page 8).

Product name	Standards
W786-1 RJ45 W786-2 RJ45 W786-2IA RJ45 W786-2 SFP W788-1 RJ45 W788-2 RJ45 W788-1 M12 W788-2 M12 W748-1 RJ45 W748-1 M12	**1, 2 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15,**
W788-2 M12 EEC	**1, 2 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15**

Certification ID

The following tables show the product names and the corresponding certification ID:

Type	Number and type of the Ethernet interfaces	Number of internal antennas	Number of R-SMA sockets for external antennas	Certification ID Article number Article number US variant
W786-1 RJ-45	1 x RJ-45	-	3	**EAPN-W1-RJ-E3** 6GK5 786-1FC00-0AA0 6GK5 786-1FC00-0AB0
W786-2 RJ-45	1 x RJ-45	-	6	**EAPN-W2-RJ-E3** 6GK5 786-2FC00-0AA0 6GK5 786-2FC00-0AB0
W786-2IA RJ-45	1 x RJ-45	2	-	**EAPN-W2-RJ-I3** 6GK5 786-2HC00-0AA0 6GK5 786-2HC00-0AB0
W786-2 SFP	2 x SFP	-	6	**EAPN-W2-SFP-E3** 6GK5 786-2FE00-0AA0 6GK5 786-2FE00-0AB0

Type	Certification ID Article number: Article number US variant
W788-1 RJ-45	**RAPN-W1-RJ-E3** 6GK 5788-1FC00-0AA0 6GK 5788-1FC00-0AB0
W788-2 RJ-45	**RAPN-W2-RJ-E3** 6GK5 788-2FC00-0AA0 6GK5 788-2FC00-0AB0
W788-1 M12	**RAPN-W1-M12-E3** 6GK5 788-1GD00-0AA0 6GK5 788-1GD00-0AB0
W788-2 M12	**RAPN-W2-M12-E3** 6GK5 788-2GD00-0AA0 6GK5 788-2GD00-0AB0
W788-2 M12 EEC	**RAPN-W2-M12-E3** 6GK5 788-2GD00-0TA0 6GK5 788-2GD00-0TB0
W748-1 RJ-45	**RAPN-W1-RJ-E3** 6GK5 748-1FC00-0AA0 6GK5 748-1FC00-0AB0
W748-1 M12	**RAPN-W1-M12-E3** 6GK5 748-1GD00-0AA0 6GK5 748-1GD00-0AB0

1.2 General approvals

ATEX (explosion protection directive)

WARNING

When using SIMATIC NET products in hazardous area zone 2, make absolutely sure that the associated conditions in the following document are adhered to:

"SIMATIC NET Product Information Use of subasseblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the data medium that ships with some devices.
- on the Internet pages of Siemens Industry Online Support (http://support.automation.siemens.com/ww).

Enter the document identification number C234 as the search term.

The SIMATIC NET products meet the requirements of the EC directive 94/9/EC "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres". and as of 20.04.2016 the EC directive 2014/34/EU.

ATEX classification:

II 3 G Ex nA IIC T4 Gc

KEMA 07ATEX0145 X

The products meet the requirements of the following standards:

- EN 60079-15 (electrical apparatus for potentially explosive atmospheres; Type of protection "n")
- EN 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid ATEX certificates.

IECEx

The SIMATIC NET products meet the requirements of explosion protection according to IECEx.

IECEx classification:

Ex nA IIC T4 Gc

DEK 14.0025X

The products meet the requirements of the following standards:

- IEC 60079-15 (Explosive atmospheres - Part 15: Equipment protection by type of protection "n")
- IEC 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid IECEx certificates.

FM

The product meets the requirements of the standards:

- Factory Mutual Approval Standard Class Number 3611
- FM Hazardous (Classified) Location Electrical Equipment:
  Non Incendive / Class I / Division 2 / Groups A,B,C,D / T4 and
  Non Incendive / Class I / Zone 2 / Group IIC / T4

cULus Approval for Information Technology Equipment

cULus Listed I. T. E.

Underwriters Laboratories Inc. complying with

- UL 60950-1 (Information Technology Equipment)
- CSA C22.2 No. 60950-1-03

Report no. E115352

Note

Only devices of the SCALANCE W786-x series have this approval.

cULus Approval Hazardous Location

cULus Listed I. T. E. FOR HAZ. LOC.

Underwriters Laboratories Inc. complying with

- UL 60950-1 (Information Technology Equipment)
- ANSI/ISA 12.12.01-2007
- CSA C22.2 No. 213-M1987

Approved for use in
Cl. 1, Div. 2, GP A, B, C, D T4
Cl. 1, Zone 2, GP IIC T4

Report no. E240480

FCC approval

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.

Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

IEEE 802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

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.

Notice

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

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

To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Notice

For use of DFS channels

- Use of the RCoax Cable Antenna 6XV1875-2D is not permitted in channels which require dynamic frequency selection (DFS).
- Any installation of either a master or a client device within 35 km of a TDWR (Terminal Doppler Weather Radar) location shall be separated by at least 30 MHz (center-to-center) from the TDWR operating frequency.
  These devices shall be registered in the industry sponsored WISPA database,

  http://udia.spectrumbridge.com/udia/home.aspx
  (http://udia.spectrumbridge.com/udia/home.aspx)

  When you open this link, you get the following choices:

  – "Search" opens a window with TDWR locations and frequencies.
  – "User Signup" allows you to register as user of the database.
  – After registering you can Logon and register your WLAN location. Please fill in all required information.

For more information with respect to WISPA database and TWDR locations please consult FCC publication KDB 443999 D01.

NEMA TS2

The product meets the requirements of the standard

NEMA TS2 (Traffic Controller Assemblies with NTCIP Requirements)

SCALANCE W788-2 M12 EEC	6GK5788-2GD00-0TA0
	6GK5788-2GD00-0TB0

RSS-247 of Industry Canada for SCALANCE W786-x

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (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.

This radio transmitter (IC: 267AA-MPCIE1V1) has been approved by Industry Canada to operate with the antenna types listed in section 6.8 with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

This equipment complies with IC RSS-102 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RSS-247 of Industry Canada for SCALANCE W7x8

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (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.

This radio transmitter (IC: 267AA-MPCIE1V1) has been approved by Industry Canada to operate with the antenna types listed in section 5.4 with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

This equipment complies with IC RSS-102 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Note for USA, Canada, Puerto Rico, Peru, Bahamas, Ecuador and Columbia

When operating the SCALANCE W700 with DFS (Dynamic Frequence Selection), the IWLAN RCoax Cable 5 GHz (order number 6XV1875-2D) may not be used in the countries listed above.

Approvals in Argentina

Devices of the SCALANCE W786-x series are approved in Argentina under the following certification numbers:

Certification ID	Certification number
EAPN-W1-RJ-E3	CNC: C-11549
EAPN-W2-RJ-E3	CNC: C-11536
EAPN-W2-RJ-I3	CNC: C-11564
EAPN-W2-SFP-E3	CNC: C-11547

Devices of the SCALANCE W788-x series are approved in Argentina under the following certification numbers:

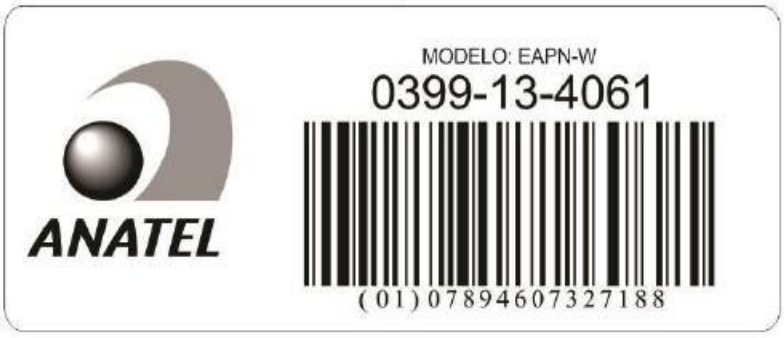
Certification ID	Certification number
RAPN-W1-RJ-E3	CNC: C-11541
RAPN-W2-RJ-E3	CNC: C-11502
RAPN-W1-M12-E3	CNC: C-11546
RAPN-W2-M12-E3	CNC: C-11548

Approval in Brazil

From the SCALANCE W786-x series, the following devices are approved for Brazil:

Type	Order number	EAPN number
W786-1 RJ-45	6GK5 786-1FC00-0AA0	EAPN-W1-RJ-E3
W786-2 RJ-45	6GK5 786-2FC00-0AA0	EAPN-W2-RJ-E3
W786C-2 RJ-45	6GK5 786-2FC00-1AA0	EAPN-W2-RJ-E3
W786-2IA RJ-45	6GK5 786-2HC00-0AA0	EAPN-W2-RJ-I3
W786C-2IA RJ-45	6GK5 786-2HC00-1AA0	EAPN-W2-RJ-I3
W786-2 SFP	6GK5 786-2FE00-0AA0	EAPN-W2-SFP-E3

The listed devices are approved in Brazil under the following certification numbers:

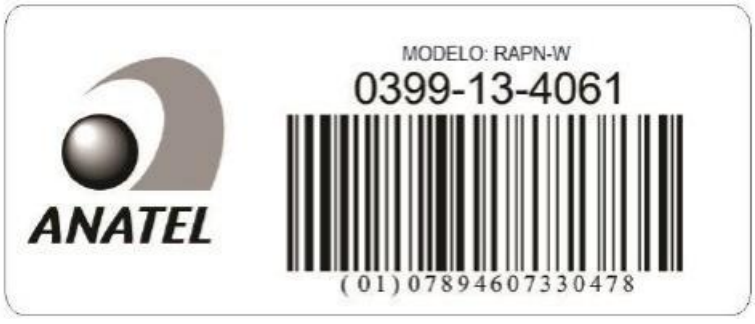


Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

From the SCALANCE W7x8 series, the following devices are approved for Brazil:

Type	Order number	RAPN number
W788-1 RJ-45	6GK 5788-1FC00-0AA0	RAPN-W1-RJ-E3
W788-2 RJ-45	6GK5 788-2FC00-0AA0	RAPN-W2-RJ-E3
W788-1 M12	6GK5 788-1GD00-0AA0	RAPN-W1-M12-E3
W788-2 M12	6GK5 788-2GD00-0AA0	RAPN-W2-M12-E3
W788-2 M12 EEC	6GK5 788-2GD00-0TA0	RAPN-W2-M12-E3
W748-1 RJ-45	6GK5 748-1FC00-0AA0	RAPN-W1-RJ-E3
W748-1 M12	6GK5 748-1GD00-0AA0	RAPN-W1-M12-E3
W788C-2 RJ-45	6GK 5788-2FC00-1AA0	RAPN-W2-RJ-E3
W788C-2 M12	6GK5 788-2GD00-1AA0	RAPN-W2-M12-E3
W788C-2 M12 EEC	6GK5788-2GD00-1TA0	RAPN-W2-M12-E3

The listed devices are approved in Brazil under the following certification numbers:



Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

KCC Statement (Republic of Korea)

사용자안내문(제5조제1항제1호관련)

기 종 별	사 용 자 안 내 문
A 급 기기급 기기 (업무용 방송통신기기)	이 기기는 업무용(A 급)으로 전자파적합등록을 한(A 급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

"당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음"

Approval for Mexico

The WLAN modules included in the devices have the following certification number:

RCPSIMP12-0751

Approval for Oman

Devices of the SCALANCE W786-x series are approved in Oman under the following certification numbers:

OMAN-TRA
R/1773/14
D090258

Devices of the SCALANCE W788-x series are approved in Oman under the following certification numbers:

OMAN-TRA
R/1772/14
D090258

NCC Warning Statement (Taiwan)

Article 12

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

Marking for the customs union

EAC (Eurasian Conformity)

Customs union of Russia, Belarus and Kazakhstan

Declaration of the conformity according to the technical regulations of the customs union (TR CU)

1.3 National approvals

The following table lists the countries in which the SCALANCE W700 product is approved. The diamond symbol (◆) identifies all countries for which there was no approval at the time these operating instructions were written.

The current status of the approvals can be found on the Internet at the following address:

http://www.siemens.com/funkzulassungen

Column	Meaning
Country	Country
Mode	IEEE 802.11 standard and the TPC and / or DFS functionality, where required
CH	Channel
MHz	Frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Use
Andorra Belgium Bosnia and Herzegovina Bulgaria Denmark Germany Estonia Finland France Greece Great Britain Ireland Iceland Italy Croatia Latvia Liechtenstein Lithuania Luxembourg Malta Macedonia Monaco Montenegro Netherlands Norway Austria Poland Portugal Romania San Marino Sweden Switzerland Slovakia Slovenia Spain Czech Republic Turkey Hungary Vatican Cyprus 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	25 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Egypt	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 64	5180 - 5320	200 mW	Indoor only
Angola	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Argentina	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	50 mW	Indoor + outdoor
	11a 11n TPC	52 - 64	5260 - 5320	250 mW	Indoor + outdoor
		100 - 120	5500 - 5600	250 mW	Indoor + outdoor
		132 - 140	5660 - 5700	250 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Australia New Zealand 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Bahrain	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor
Belarus	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TCP	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n TCP + DFS	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Brazil	11g 11n	1 - 13	2412 - 2472	4000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
Chile	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
	11a 11n DFS	149 - 165	5745 - 5825	100 mW	Indoor only
China	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor
Ivory Coast	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Guatemala	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Hong Kong	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
India	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	200 mW	Indoor + outdoor
Israel	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
Indonesia ◆	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11 - 13	2462 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Japan 	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a	8 - 16	5040 - 5080	200 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	200 mW	Indoor + outdoor
	11a	184 - 196	4920 - 4980	200 mW	Indoor + outdoor
Kazakhstan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Qatar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
Colombia	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Korea 	11g 11n	1 - 13	2412 - 2472	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	400 mW	Indoor + outdoor
Kuwait	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Macau	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	100 mW	Indoor + outdoor
Madagascar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Malaysia	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a 11n DFS	56 - 64	5280 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Morocco ◆ (only with SCALANCE W786-2IA RJ-45)	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
Mexico	11g 11n	1 - 11	2412 - 2462	500 mW	Indoor + outdoor
	11a 11n	36 - 64	5180 - 5320	1000 mW	Indoor + outdoor
		149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Mozambique	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Oman	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Pakistan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Russia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor + outdoor
Saudi Arabia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Serbia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
South Africa	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Singapore Philippines	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Taiwan 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Thailand	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Ukraine 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	200 mW	Indoor + outdoor
		132 - 136	5660 - 5680	200 mW	Indoor + outdoor
Uruguay	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n TC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Venezuela	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS	52 - 64	5260 - 5320	1000 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
United Arab Emirates	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor only
		132 - 140	5660 - 5700	1000 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
Bahamas Ecuador Canada Peru Puerto Rico USA 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Vietnam	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Approvals for SCALANCE W788C / W786C 802.11n 2

Note

Issued approvals on the type plate of the device

The specified approvals apply only when the corresponding mark is printed on the product. You can check which of the following approvals have been granted for your product by the markings on the type plate.

Range of validity

The approvals listed in this section apply to the following products:

	Article number
SCALANCE W786C-2 RJ-45	6GK5 786-2FC00-1AA0
SCALANCE W786C-2IA RJ-45	6GK5 786-2HC00-1AA0
SCALANCE W786C-2 SFP	6GK5 786-2FE00-1AA0

	Article number
SCALANCE W788C-2 RJ-45	6GK5 788-2FC00-1AA0
SCALANCE W788C-2 M12	6GK5 788-2GD00-1AA0
SCALANCE W788C-2 M12 EEC	6GK5788-2GD00-1TA0

2.1 EC declaration of conformity

The EC Declaration of Conformity is available for all responsible authorities at:

Siemens Aktiengesellschaft
Process Industries and Drives Division,
Process Automation
DE-76181 Karlsruhe
Germany

You will find the current EC declaration of conformity for these products on the Internet pages of Siemens Industry Online Support (hhttps://support.industry.siemens.com/cs/ww/en/ps/15853/cert).

The SIMATIC NET products described in these Operating Instructions meet the requirements of the following EC directives:

- 94/9/EC

  Directive of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres (until 19.04.2016).

- 2014/34/EU

  Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres official journal of the EU L96, 29/03/2014, pages. 309–356 (as of 20.04.2016)

- 1999/5/EC

  Directive of the European Parliament and of the Council of 1999 March 1999 on Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity (until 12.06.2016).

- 2014/53/EU

  Directive of the European Parliament and of the Council of April 16, 2014 on the harmonization of the laws of the member states relating to placing radio equipment on the market.; official journal of the EU L153, 22/05/2014, pages. 62–106 (as of 13.06.2016)

- 2011/65/EU (RoHS)

  RoHS directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

- 1999/519/EC
  Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

2.1.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EC directive:94/9/EC (until 19.04.2016) and 2014/34/EU (as of 20.04.2016) "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres" according to the standards listed in the section Products (Page 43):

Applied standard:

1 EN 60079-0 + A11
Hazardous areas - Part 0: Equipment - General requirements

2 EN 60079-15
Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

2.1.2 RoHS

RoHS directive (restriction of the use of certain hazardous substances)

The SIMATIC NET products described in these operating instructions meet the requirements of the EC directive 2011/65/EC for the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN 50581
Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

2.1.3 R&TTE / RED

2.1.3.1 Protection of health and safety

Article 3 (1) a) protection of health and safety

4 EN 60950-1+A1+A2+A11+A12
Information technology equipment - Safety - Part 1: General requirements

5 EN 62311
Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)

2.1.3.2 Efficient use of the radio spectrum

Art. 3 (2) Efficient use of the radio spectrum

14 ETSI EN 301 328

Electromagnetic compatibility and radio spectrum matters (ERM) - wideband transmission systems - data transmission equipment operating in the 2.4 GHz ISM band and using wideband modulation techniques. Harmonized EN containing the essential requirements according to Article 3.2 of the R&TTE directive.

15 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) - 5 GHz high performance RLAN - Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

2.1.3.3 EMC

Art. 3 (1) b - EMC

6 EN 50121-3-2+AC

Railway applications - Electromagnetic compatibility - part 3-2: Railway Vehicles - Devices

7 EN 50121-4+AC

Railway applications - Electromagnetic compatibility - part 4: Interference emissions and immunity of signal telecommunications equipment

8 ETSI EN 301 489-1

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 1 : Common technical requirements

9 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17 :

10 EN 61000-6-1

Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

11 EN 61000-6-2+AC

Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

12 EN 61000-6-3+A1+AC

Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

13 EN 61000-6-4+A1

Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

2.1.4 Products

Product designation and standards

The standards that apply to the product are described in RoHS (Page 41), ATEX (Page 41) and R&TTE / RED (Page 41).

Product name	Standards
W786C-2 RJ45 W786C-2IA RJ45 W786-2 SFP W788C-2 RJ45 W788C-2 M12	**1, 2 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16**
W788C-2 M12 EEC	**1, 2 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16**

Certification ID

The following tables show the product names and the corresponding certification ID:

Type	Number and type of the Ethernet interfaces	Number of internal antennas	Number of R-SMA sockets for external antennas	Certification ID Article number Article number US variant
W786C-2 RJ-45	1 x RJ-45	-	6	**EAPN-W2-RJ-E3** 6GK5 786-2FC00-1AA0
W786C-2IA RJ-45	1 x RJ-45	2	-	**EAPN-W2-RJ-I3** 6GK5 786-2HC00-1AA0
W786-2 SFP	2 x SFP	-	6	**EAPN-W2-SFP-E3** 6GK5 786-2FE00-1AA0

Type	Certification ID Article number:
W788C-2 RJ-45	**RAPN-W2-RJ-E3** 6GK 5788-2FC00-1AA0
W788C-2 M12	**RAPN-W2-M12-E3** 6GK5 788-2GD00-1AA0
W788C-2 M12 EEC	**RAPN-W2-M12-E3** 6GK5788-2GD00-1TA0

2.2 General approvals

ATEX (explosion protection directive)

WARNING

When using SIMATIC NET products in hazardous area zone 2, make absolutely sure that the associated conditions in the following document are adhered to:

"SIMATIC NET Product Information Use of subasseblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the data medium that ships with some devices.
- on the Internet pages of Siemens Industry Online Support (http://support.automation.siemens.com/ww).

Enter the document identification number C234 as the search term.

The SIMATIC NET products meet the requirements of the EC directive 94/9/EC "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres". and as of 20.04.2016 the EC directive 2014/34/EU.

ATEX classification:

II 3 G Ex nA IIC T4 Gc

KEMA 07ATEX0145 X

The products meet the requirements of the following standards:

- EN 60079-15 (electrical apparatus for potentially explosive atmospheres; Type of protection "n")
- EN 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid ATEX certificates.

IECEx

The SIMATIC NET products meet the requirements of explosion protection according to IECEx.

IECEx classification:

Ex nA IIC T4 Gc

DEK 14.0025X

The products meet the requirements of the following standards:

- IEC 60079-15 (Explosive atmospheres - Part 15: Equipment protection by type of protection "n")
- IEC 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid IECEx certificates.

FM

The product meets the requirements of the standards:

- Factory Mutual Approval Standard Class Number 3611
- FM Hazardous (Classified) Location Electrical Equipment:
  Non Incendive / Class I / Division 2 / Groups A,B,C,D / T4 and
  Non Incendive / Class I / Zone 2 / Group IIC / T4

cULus Approval Hazardous Location

cULus Listed I. T. E. FOR HAZ. LOC.

Underwriters Laboratories Inc. complying with

- UL 60950-1 (Information Technology Equipment)
- ANSI/ISA 12.12.01-2007
- CSA C22.2 No. 213-M1987

Approved for use in
Cl. 1, Div. 2, GP A, B, C, D T4
Cl. 1, Zone 2, GP IIC T4

Report no. E240480

FCC approval

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.

Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

IEEE 802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

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.

Notice

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

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

To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Notice

For use of DFS channels

- Use of the RCoax Cable Antenna 6XV1875-2D is not permitted in channels which require dynamic frequency selection (DFS).
- Any installation of either a master or a client device within 35 km of a TDWR (Terminal Doppler Weather Radar) location shall be separated by at least 30 MHz (center-to-center) from the TDWR operating frequency.
  These devices shall be registered in the industry sponsored WISPA database,

  http://udia.spectrumbridge.com/udia/home.aspx
  (http://udia.spectrumbridge.com/udia/home.aspx)

  When you open this link, you get the following choices:

  – "Search" opens a window with TDWR locations and frequencies.
  – "User Signup" allows you to register as user of the database.
  – After registering you can Logon and register your WLAN location. Please fill in all required information.

For more information with respect to WISPA database and TWDR locations please consult FCC publication KDB 443999 D01.

NEMA TS2

The product meets the requirements of the standard

NEMA TS2 (Traffic Controller Assemblies with NTCIP Requirements)

SCALANCE W788C-2 M12 EEC	6GK5788-2GD00-1TA0

RSS-247 of Industry Canada for SCALANCE W786-x

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (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.

This radio transmitter (IC: 267AA-MPCIE1V1) has been approved by Industry Canada to operate with the antenna types listed in section 6.8 with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

This equipment complies with IC RSS-102 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RSS-247 of Industry Canada for SCALANCE W7x8

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (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.

This radio transmitter (IC: 267AA-MPCIE1V1) has been approved by Industry Canada to operate with the antenna types listed in section 5.4 with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

This equipment complies with IC RSS-102 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Note for USA, Canada, Puerto Rico, Peru, Bahamas, Ecuador and Columbia

When operating the SCALANCE W700 with DFS (Dynamic Frequence Selection), the IWLAN RCoax Cable 5 GHz (order number 6XV1875-2D) may not be used in the countries listed above.

Approvals in Argentina

Devices of the SCALANCE W786-x series are approved in Argentina under the following certification numbers:

Certification ID	Certification number
EAPN-W1-RJ-E3	CNC: C-11549
EAPN-W2-RJ-E3	CNC: C-11536
EAPN-W2-RJ-I3	CNC: C-11564
EAPN-W2-SFP-E3	CNC: C-11547

Devices of the SCALANCE W788-x series are approved in Argentina under the following certification numbers:

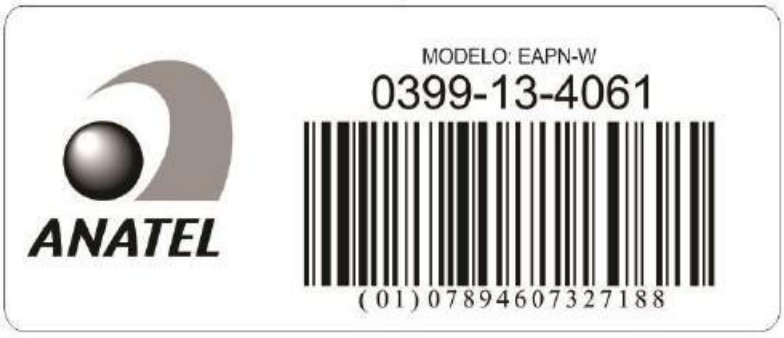
Certification ID	Certification number
RAPN-W1-RJ-E3	CNC: C-11541
RAPN-W2-RJ-E3	CNC: C-11502
RAPN-W1-M12-E3	CNC: C-11546
RAPN-W2-M12-E3	CNC: C-11548

Approval in Brazil

From the SCALANCE W786-x series, the following devices are approved for Brazil:

Type	Order number	EAPN number
W786-1 RJ-45	6GK5 786-1FC00-0AA0	EAPN-W1-RJ-E3
W786-2 RJ-45	6GK5 786-2FC00-0AA0	EAPN-W2-RJ-E3
W786C-2 RJ-45	6GK5 786-2FC00-1AA0	EAPN-W2-RJ-E3
W786-2IA RJ-45	6GK5 786-2HC00-0AA0	EAPN-W2-RJ-I3
W786C-2IA RJ-45	6GK5 786-2HC00-1AA0	EAPN-W2-RJ-I3
W786-2 SFP	6GK5 786-2FE00-0AA0	EAPN-W2-SFP-E3

The listed devices are approved in Brazil under the following certification numbers:

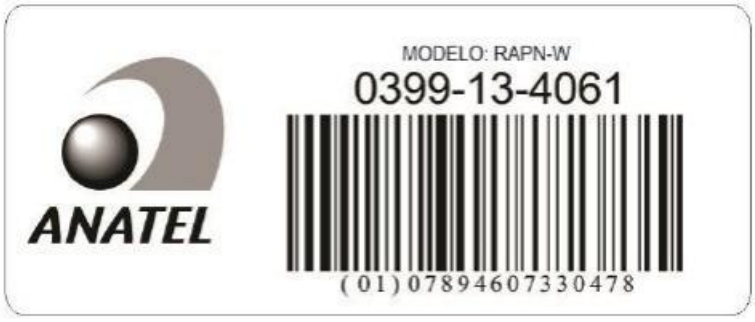


Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

From the SCALANCE W7x8 series, the following devices are approved for Brazil:

Type	Order number	RAPN number
W788-1 RJ-45	6GK 5788-1FC00-0AA0	RAPN-W1-RJ-E3
W788-2 RJ-45	6GK5 788-2FC00-0AA0	RAPN-W2-RJ-E3
W788-1 M12	6GK5 788-1GD00-0AA0	RAPN-W1-M12-E3
W788-2 M12	6GK5 788-2GD00-0AA0	RAPN-W2-M12-E3
W788-2 M12 EEC	6GK5 788-2GD00-0TA0	RAPN-W2-M12-E3
W748-1 RJ-45	6GK5 748-1FC00-0AA0	RAPN-W1-RJ-E3
W748-1 M12	6GK5 748-1GD00-0AA0	RAPN-W1-M12-E3
W788C-2 RJ-45	6GK 5788-2FC00-1AA0	RAPN-W2-RJ-E3
W788C-2 M12	6GK5 788-2GD00-1AA0	RAPN-W2-M12-E3
W788C-2 M12 EEC	6GK5788-2GD00-1TA0	RAPN-W2-M12-E3

The listed devices are approved in Brazil under the following certification numbers:



Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

Approval for Mexico

The WLAN modules included in the devices have the following certification number:

RCPSIMP12-0751

Approval for Oman

Devices of the SCALANCE W786-x series are approved in Oman under the following certification numbers:

OMAN-TRA
R/1773/14
D090258

Devices of the SCALANCE W788-x series are approved in Oman under the following certification numbers:

OMAN-TRA
R/1772/14
D090258

Marking for the customs union

EAC (Eurasian Conformity)

Customs union of Russia, Belarus and Kazakhstan

Declaration of the conformity according to the technical regulations of the customs union (TR CU)

2.3 National approvals

The national approval of the controller-based access points depends on the controller on which they are operated. The controllers are available in the following country-specific versions:

- Version for the USA and Canada (NAM)

  Article no. 6GK5 711-0XC00-1AB0

  These countries are indicated in the table (NAM).
- Version for the Japan (JP)

  Article no. 6GK5 711-0XC00-1AD0
- Version for countries outside Japan and NAM (RoW)

  Article no. 6GK5 711-0XC00-1AA0

The diamond symbol (◆) identifies all countries for which there was no approval at the time these operating instructions were written.

The current status of the approvals can be found on the Internet at the following address:

`http://www.siemens.com/funkzulassungen`

Column	**Meaning**
Country	Country
Mode	IEEE 802.11 standard and the TPC and / or DFS functionality, where required
CH	Channel
MHz	Frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Use
Andorra Belgium Bulgaria Denmark Germany Estonia Finland France Greece Great Britain Ireland Iceland Italy Croatia Latvia Liechtenstein Lithuania Luxembourg Malta Macedonia Monaco Montenegro Netherlands Norway Austria Poland Portugal Romania San Marino Sweden Switzerland Serbia Slovakia Slovenia Spain Czech Republic Turkey Hungary Vatican Cyprus CE	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Egypt	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 64	5180 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
Angola	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Argentina	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	50 mW	Indoor + outdoor
		52 - 64	5260 - 5320	250 mW	Indoor + outdoor
		100 - 120	5500 - 5600	250 mW	Indoor + outdoor
		132 - 140	5660 - 5700	250 mW	Indoor + outdoor
		149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Australia New Zealand 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n TPC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Bahrain	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n TPC	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor
Belarus	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TCP	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n TCP + DFS	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Brazil	11g 11n	1 - 13	2412 - 2472	4000 mW	Indoor + outdoor
	11a 11n TPC	36 - 64	5180 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	1000 mW	Indoor + outdoor
		149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
Chile	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
		149 - 165	5745 - 5825	100 mW	Indoor only
China	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Ivory Coast	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Guatemala	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Hong Kong	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
India	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	200 mW	Indoor + outdoor
Indonesia ◆	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11 - 13	2462 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Japan 	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a TPC	8	5040	200 mW	Indoor + outdoor
		12	5060		
		16	5080		
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5799	200 mW	Indoor + outdoor
	11a TPC	184 - 196	4920 - 4980	200 mW	Indoor + outdoor
Qatar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor only
Kazakhstan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Colombia (NAM)	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
		149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Korea	11g 11n	1 - 13	2412 - 2472	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	400 mW	Indoor + outdoor
Kuwait	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
Macau	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Madagascar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Malaysia	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11h 11n DFS + TPC	56 - 64	5280 - 5320	200 mW	Indoor only
	11a 11n TPC	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Mexico (NAM)	11g 11n	1 - 11	2412 - 2462	500 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5180 - 5320	1000 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Mozambique	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Oman	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n TPC	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Pakistan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Russia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	100 mW	Indoor + outdoor
Saudi Arabia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Singapore Philippines ◆	11b 11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
South Africa 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Taiwan ◆ 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 165	5500 - 5825		

Country	Mode	CH	MHz	PWR (EIRP)	Use
Thailand	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Ukraine	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	200 mW	Indoor + outdoor
		132 - 136	5660 - 5680	200 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Uruguay	11g	1 - 11	2412 - 2462	100 mW - 200 mW	Indoor + outdoor
	11a	36 - 48	5180 - 5240	200 mW	Indoor only
	11a	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
	11n 11g	1 - 11	2412 - 2462	100 mW - 200 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Venezuela	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	1000 mW	Indoor only
	11a 11n TPC	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
United Arab Emirates	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor only
		132 - 140	5660 - 5700	1000 mW	Indoor only
Bahamas (NAM) Ecuador Canada (NAM) Peru Puerto Rico (NAM) USA (NAM) 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Vietnam	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11h 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n TPC	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Approvals for SCALANCE W770/W730 802.11n

3

Note

Issued approvals on the type plate of the device

The specified approvals apply only when the corresponding mark is printed on the product. You can check which of the following approvals have been granted for your product by the markings on the type plate.

Range of validity

The approvals listed in this section apply to the following products:

	Article number	Article number of the US version
Access points		
SCALANCE W774-1 RJ-45	6GK5774-1FX00-0AA0	6GK5774-1FX00-0AB0
SCALANCE W774-1 M12 EEC	6GK5774-1FY00-0TA0	6GK5774-1FY00-0TB0
SCALANCE W778-1 M12	6GK5778-1GY00-0AA0	6GK5778-1GY00-0AB0
Client module		
SCALANCE W734-1 RJ-45	6GK5734-1FX00-0AA0	6GK5734-1FX00-0AB0
SCALANCE W738-1 M12	6GK5738-1GY00-0AA0	6GK5738-1GY00-0AB0

3.1 EC declaration of conformity

CE

The EC Declaration of Conformity is available for all responsible authorities at:

Siemens Aktiengesellschaft
Process Industries and Drives Division,
Process Automation
DE-76181 Karlsruhe
Germany

You will find the current EC declaration of conformity for these products on the Internet pages of Siemens Industry Online Support (hhttps://support.industry.siemens.com/cs/ww/en/ps/15853/cert).

The SIMATIC NET products described in these Operating Instructions meet the requirements of the following EC directives:

- 94/9/EC

  Directive of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres (until 19.04.2016).

- 2014/34/EU

  Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres official journal of the EU L96, 29/03/2014, pages. 309–356 (as of 20.04.2016)

- 1999/5/EC

  Directive of the European Parliament and of the Council of 1999 March 1999 on Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity (until 12.06.2016).

- 2014/53/EU

  Directive of the European Parliament and of the Council of April 16, 2014 on the harmonization of the laws of the member states relating to placing radio equipment on the market.; official journal of the EU L153, 22/05/2014, pages. 62–106 (as of 13.06.2016)

- 2011/65/EU (RoHS)

  RoHS directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

- 1999/519/EC
  Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

3.1.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EC directive:94/9/EC (until 19.04.2016) and 2014/34/EU (as of 20.04.2016) "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres" according to the standards listed in the section Products W770/W730 (Page 73):

Applied standard:

1 EN 60079-0 + A11
Hazardous areas - Part 0: Equipment - General requirements

2 EN 60079-15
Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

3.1.2 RoHS

RoHS directive (restriction of the use of certain hazardous substances)

The SIMATIC NET products described in these operating instructions meet the requirements of the EC directive 2011/65/EC for the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN 50581
Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

3.1.3 R&TTE / RED

3.1.3.1 Protection of health and safety

Article 3 (1) a) protection of health and safety

4 EN 60950-1+A1+A2+A11+A12
Information technology equipment - Safety - Part 1: General requirements

5 EN 62311
Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)

3.1.3.2 EMC

Art. 3 (1) b - EMC

6 EN 50121-3-2+AC

Railway applications - Electromagnetic compatibility - part 3-2: Railway Vehicles - Devices

7 EN 50121-4+AC

Railway applications - Electromagnetic compatibility - part 4: Interference emissions and immunity of signal telecommunications equipment

8 ETSI EN 301 489-1

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 1 : Common technical requirements

9 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17 :

10 EN 61000-6-1

Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

11 EN 61000-6-2+AC

Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

12 EN 61000-6-3+A1+AC

Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

13 EN 61000-6-4+A1

Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

3.1.3.3 Efficient use of the radio spectrum

Art. 3 (2) Efficient use of the radio spectrum

14 ETSI EN 301 328

Electromagnetic compatibility and radio spectrum matters (ERM) - wideband transmission systems - data transmission equipment operating in the 2.4 GHz ISM band and using wideband modulation techniques. Harmonized EN containing the essential requirements according to Article 3.2 of the R&TTE directive.

15 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) - 5 GHz high performance RLAN - Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

3.1.4 Products W770/W730

CE conformity

The standards that apply to the product are described in ATEX (Page 71), RoHS (Page 71) and R&TTE / RED (Page 71)

Product name	Standards
W774-1 RJ45 W734-1 RJ45	**1, 2 ,3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15**
W774-1 M12 EEC	**1, 2 ,3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15**
W778-1 M12 W738-1 M12	**3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15**

Certification ID

The following table shows the product names and the corresponding certification ID:

Type	Certification ID Article number Article number US variant
W774-1 RJ-45	**MSN-W1-RJ-E2** 6GK5774-1FX00-0AA0 6GK5774-1FX00-0AB0
W774-1 M12 EEC	**MSN-W1-M12-E2** 6GK5774-1FY00-0TA0 6GK5774-1FY00-0TB0
W734-1 RJ-45	**MSN-W1-RJ-E2** 6GK5734-1FX00-0AA0 6GK5734-1FX00-0AB0
W778-1 M12	**MSN65-W1-M12-E2** 6GK5778-1GY00-0AA0 6GK5778-1GY00-0AB0
W738-1 M12	**MSN65-W1-M12-E2** 6GK5738-1GY00-0AA0 6GK5738-1GY00-0AB0

3.2 General approvals

ATEX (explosion protection directive)

WARNING

When using SIMATIC NET products in hazardous area zone 2, make absolutely sure that the associated conditions in the following document are adhered to:

"SIMATIC NET Product Information Use of subasseblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the data medium that ships with some devices.
- on the Internet pages of Siemens Industry Online Support (http://support.automation.siemens.com/ww).

Enter the document identification number C234 as the search term.

The SIMATIC NET products meet the requirements of the EC directive 94/9/EC "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres". and as of 20.04.2016 the EC directive 2014/34/EU.

ATEX classification:

II 3 G Ex nA IIC T4 Gc

KEMA 07ATEX0145 X

The products meet the requirements of the following standards:

- EN 60079-15 (electrical apparatus for potentially explosive atmospheres; Type of protection "n")
- EN 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid ATEX certificates.

IECEx

The SIMATIC NET products meet the requirements of explosion protection according to IECEx.

IECEx classification:

Ex nA IIC T4 Gc

DEK 14.0025X

The products meet the requirements of the following standards:

- IEC 60079-15 (Explosive atmospheres - Part 15: Equipment protection by type of protection "n")
- IEC 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid IECEx certificates.

FM

The product meets the requirements of the standards:

- Factory Mutual Approval Standard Class Number 3611
- FM Hazardous (Classified) Location Electrical Equipment:
  Non Incendive / Class I / Division 2 / Groups A,B,C,D / T4 and
  Non Incendive / Class I / Zone 2 / Group IIC / T4

cULus Approval Hazardous Location

cULus Listed I. T. E. FOR HAZ. LOC.

Underwriters Laboratories Inc. complying with

- UL 60950-1 (Information Technology Equipment)
- ANSI/ISA 12.12.01-2007
- CSA C22.2 No. 213-M1987

Approved for use in
Cl. 1, Div. 2, GP A, B, C, D T4
Cl. 1, Zone 2, GP IIC T4

Report no. E240480

FCC approval

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.

Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

IEEE 802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

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.

Notice

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

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

To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Notice

For use of DFS channels

- Use of the RCoax Cable Antenna 6XV1875-2D is not permitted in channels which require dynamic frequency selection (DFS).
- Any installation of either a master or a client device within 35 km of a TDWR (Terminal Doppler Weather Radar) location shall be separated by at least 30 MHz (center-to-center) from the TDWR operating frequency.
  These devices shall be registered in the industry sponsored WISPA database,

  http://udia.spectrumbridge.com/udia/home.aspx
  (http://udia.spectrumbridge.com/udia/home.aspx)

  When you open this link, you get the following choices:

  – "Search" opens a window with TDWR locations and frequencies.
  – "User Signup" allows you to register as user of the database.
  – After registering you can Logon and register your WLAN location. Please fill in all required information.

For more information with respect to WISPA database and TWDR locations please consult FCC publication KDB 443999 D01.

Notice
In order to comply with FCC/ISED/MIC RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

CSA Information Technology Equipment

CSA Certification Mark

Canadian Standard Association CSA C22.2 No. 60950-1-03

RSS-247 of Industry Canada

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (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.

This radio transmitter (IC: 267AA-ELN1V1 for W760/W720 802.11n and IC: 267AA-MSN1V1 for W774/W734 802.11n) has been approved by Industry Canada to operate with the antenna types listed in section 5.6 with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment.

In order to comply with FCC/ISED/MIC RF Exposure requirements, this device must be installed to provide at least 20 cm separation from the human body at all times.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Afin de se conformer aux exigences d'exposition RF MIC / FCC / ISED, cet appareil doit être installé pour fournir au moins 20 cm de séparation du corps humain en tout temps

RCM

The product meets the requirements of the AS/NZS 2064 standard (Class A).

Approvals for Argentina

Devices of the SCALANCE W760/W720 series are approved in Argentina under the following certification number:

Certification ID	Certification number
ELN-W1-RJ-E1	CNC: C-13172

Devices of the SCALANCE W770/W730 series are approved in Argentina under the following certification numbers:

Certification ID	Certification number
MSN-W1-RJ-E2	CNC: C-13164
MSN-W1-M12-E2	CNC: C-13163

Approval for Brazil

Devices of the SCALANCE W760/W720 series are approved in Brazil under the following certification numbers:

Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

Devices of the SCALANCE W770/W730 series are approved in Brazil under the following certification numbers:

Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

KCC Statement (Republic of Korea)

사용자안내문(제5조제1항제1호관련)

기 종 별	사 용 자 안 내 문
A 급 기기급 기기 (업무용 방송통신기기)	이 기기는 업무용(A 급)으로 전자파적합등록을 한(A 급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

"당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음"

Marking for the customs union

EAC

EAC (Eurasian Conformity)

Customs union of Russia, Belarus and Kazakhstan

Declaration of the conformity according to the technical regulations of the customs union (TR CU)

Railway approval for the SCALANCE W774-1 M12 EEC

The SCALANCE W774-1 M12 EEC device meets the requirements of the railway standard EN 50155:2007 "Railway Applications - Electronic equipment used on rolling stock".

3.3 SCALANCE W774/734 national approvals

The following table lists the countries in which the SCALANCE W700 product is approved. The diamond symbol (◆) identifies all countries for which there was no approval at the time these operating instructions were written.

The current status of the approvals can be found on the Internet at the following address:

`http://www.siemens.com/funkzulassungen`

Column	**Meaning**
Country	Country
Mode	IEEE 802.11 standard and the TPC and / or DFS functionality, where required
CH	Channel
MHz	Frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Use
Andorra Belgium Bosnia and Herzegovina Bulgaria Denmark Germany Estonia Finland France Greece Great Britain Ireland Iceland Italy Croatia Latvia Liechtenstein Lithuania Luxembourg Malta Macedonia Monaco Montenegro Netherlands Norway Austria Poland Portugal Romania San Marino Sweden Switzerland Slovakia Slovenia Spain Czech Republic Turkey Hungary Vatican Cyprus CE	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	25 mW	Indoor + outdoor
Egypt	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 64	5180 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
Angola	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Argentina	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	50 mW	Indoor + outdoor
	11a 11n TPC	52 - 64	5260 - 5320	250 mW	Indoor + outdoor
		100 - 120	5500 - 5600	250 mW	Indoor + outdoor
		132 - 140	5660 - 5700	250 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Australia New Zealand 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Bahrain	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor
Belarus	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TCP	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n TCP + DFS	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Brazil	11g 11n	1 - 13	2412 - 2472	4000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
Chile	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
	11a 11n DFS	149 - 165	5745 - 5825	100 mW	Indoor only
China	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Ivory Coast	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Guatemala	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Hong Kong	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
India	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	200 mW	Indoor + outdoor
Indonesia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Japan 	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a	8 - 16	5040 - 5080	200 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	200 mW	Indoor + outdoor
	11a	184 - 196	4920 - 4980	200 mW	Indoor + outdoor
Kazakhstan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Qatar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor only
Colombia	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Korea 	11g 11n	1 - 13	2412 - 2472	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	400 mW	Indoor + outdoor
Kuwait	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
Macau	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	100 mW	Indoor + outdoor
Madagascar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Malaysia	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a 11n DFS	56 - 64	5280 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Mexico	11g 11n	1 - 11	2412 - 2462	500 mW	Indoor + outdoor
	11a 11n	36 - 64	5180 - 5320	1000 mW	Indoor + outdoor
		149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Pakistan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Russia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Saudi Arabia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Serbia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
South Africa 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Singapore Philippines	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Taiwan 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Venezuela	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS	52 - 64	5260 - 5320	1000 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
United Arab Emirates	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor only
		132 - 140	5660 - 5700	1000 mW	Indoor only
Bahamas Canada Colombia Peru Puerto Rico Thailand USA Uruguay FC	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Vietnam	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

3.4 SCALANCE W778/738 national approvals

The following table lists the countries in which the SCALANCE W700 product is approved. The diamond symbol (◆) identifies all countries for which there was no approval at the time these operating instructions were written.

The current status of the approvals can be found on the Internet at the following address:

`http://www.siemens.com/funkzulassungen`

Column	**Meaning**
Country	Country
Mode	IEEE 802.11 standard and the TPC and / or DFS functionality, where required
CH	Channel
MHz	Frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Use
Andorra Belgium Bosnia and Herzegovina Bulgaria Denmark Germany Estonia Finland France Greece Great Britain Ireland Iceland Italy Croatia Latvia Liechtenstein Lithuania Luxembourg Malta Macedonia Monaco Montenegro Netherlands Norway Austria Poland Portugal Romania San Marino Sweden Switzerland Serbia ◆ Slovakia Slovenia Spain Czech Republic Turkey Hungary Vatican Cyprus CE	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	25 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Egypt ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 64	5180 - 5320	200 mW	Indoor only
Australia ◆ New Zealand ◆ 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Bahrain ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Brazil ◆	11g 11n	1 - 13	2412 - 2472	4000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
Chile ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor only
	11a 11n DFS	149 - 165	5745 - 5825	100 mW	Indoor only
China ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
India ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	200 mW	Indoor + outdoor
Indonesia ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	400 mW	Indoor + outdoor
Japan ◆ 	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a	8 - 16	5040 - 5080	200 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	200 mW	Indoor + outdoor
	11a	184 - 196	4920 - 4980	200 mW	Indoor + outdoor
Korea ◆ 	11g 11n	1 - 13	2412 - 2472	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Kuwait ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
Mexico ◆	11g 11n	1 - 11	2412 - 2462	500 mW	Indoor + outdoor
	11a 11n	36 - 64	5180 - 5320	1000 mW	Indoor + outdoor
		149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
South Africa ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Singapore ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Taiwan ◆ 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Canada ◆ Peru ◆ Thailand ◆ USA ◆ 	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Approvals for SCALANCE W760/W720 802.11n

4

Note

Issued approvals on the type plate of the device

The specified approvals apply only when the corresponding mark is printed on the product. You can check which of the following approvals have been granted for your product by the markings on the type plate.

Range of validity

The approvals listed in this section apply to the following products:

	Article number	Article number of the US version	Article number of the Israel version
Access point			
SCALANCE W761-1 RJ-45	6GK5761-1FC00-0AA0	6GK5761-1FC00-0AB0	-
Ethernet client modules			
SCALANCE W722-1 RJ-45 (iFeatures)	6GK5722-1FC00-0AA0	6GK5722-1FC00-0AB0	6GK5722-1FC00-0AC0
SCALANCE W721-1 RJ-45	6GK5721-1FC00-0AA0	6GK5721-1FC00-0AB0	-

4.1 EC declaration of conformity

The EC Declaration of Conformity is available for all responsible authorities at:

Siemens Aktiengesellschaft
Process Industries and Drives Division,
Process Automation
DE-76181 Karlsruhe
Germany

You will find the current EC declaration of conformity for these products on the Internet pages of Siemens Industry Online Support (hhttps://support.industry.siemens.com/cs/ww/en/ps/15853/cert).

The SIMATIC NET products described in these Operating Instructions meet the requirements of the following EC directives:

- 94/9/EC

  Directive of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres (until 19.04.2016).

- 2014/34/EU

  Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres official journal of the EU L96, 29/03/2014, pages. 309–356 (as of 20.04.2016)

- 1999/5/EC

  Directive of the European Parliament and of the Council of 1999 March 1999 on Radio Equipment and Telecommunications Terminal Equipment and the mutual recognition of their conformity (until 12.06.2016).

- 2014/53/EU

  Directive of the European Parliament and of the Council of April 16, 2014 on the harmonization of the laws of the member states relating to placing radio equipment on the market.; official journal of the EU L153, 22/05/2014, pages. 62–106 (as of 13.06.2016)

- 2011/65/EU (RoHS)

  RoHS directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

- 1999/519/EC
  Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

4.1.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EC directive:94/9/EC (until 19.04.2016) and 2014/34/EU (as of 20.04.2016) "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres" according to the standards listed in the section AUTOHOTSPOT:

Applied standard:

1 EN 60079-0 + A11
Hazardous areas - Part 0: Equipment - General requirements

2 EN 60079-15
Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

4.1.2 RoHS

RoHS directive (restriction of the use of certain hazardous substances)

The SIMATIC NET products described in these operating instructions meet the requirements of the EC directive 2011/65/EC for the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN 50581
Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

4.1.3 R&TTE / RED

4.1.3.1 Protection of health and safety

Article 3 (1) a) protection of health and safety

4 EN 60950-1+A1+A2+A11+A12
Information technology equipment - Safety - Part 1: General requirements

5 EN 62311
Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)

4.1.3.2 EMC

Art. 3 (1) b - EMC

6 EN 50121-3-2+AC

Railway applications - Electromagnetic compatibility - part 3-2: Railway Vehicles - Devices

7 EN 50121-4+AC

Railway applications - Electromagnetic compatibility - part 4: Interference emissions and immunity of signal telecommunications equipment

8 ETSI EN 301 489-1

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 1 : Common technical requirements

9 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17 :

10 EN 61000-6-1

Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

11 EN 61000-6-2+AC

Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

12 EN 61000-6-3+A1+AC

Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

13 EN 61000-6-4+A1

Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

4.1.3.3 Efficient use of the radio spectrum

Art. 3 (2) Efficient use of the radio spectrum

14 ETSI EN 301 328

Electromagnetic compatibility and radio spectrum matters (ERM) - wideband transmission systems - data transmission equipment operating in the 2.4 GHz ISM band and using wideband modulation techniques. Harmonized EN containing the essential requirements according to Article 3.2 of the R&TTE directive.

15 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) - 5 GHz high performance RLAN - Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

4.1.4 Products

CE conformity

The standards that apply to the product are described in RoHS (Page 105), ATEX (Page 105) and R&TTE / RED (Page 105).

Product name	Standards
W761-1 RJ45 W722-1 RJ45 W721-1 RJ45 W774-1 RJ45 W734-1 RJ45	**1, 2 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15**
W774-1 M12 EEC	**1, 2 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15**

Certification ID

The following table shows the product names and the corresponding certification ID:

Type	Certification ID Order number Order number US variant
W761-1 RJ-45	**ELN-W1-RJ-E1** 6GK5761-1FC00-0AA0 6GK5761-1FC00-0AB0
W722-1 RJ-45	**ELN-W1-RJ-E1** 6GK5722-1FC00-0AA0 6GK5722-1FC00-0AB0
W721-1 RJ-45	**ELN-W1-RJ-E1** 6GK5721-1FC00-0AA0 6GK5721-1FC00-0AB0

4.2 General approvals

ATEX (explosion protection directive)

WARNING

When using SIMATIC NET products in hazardous area zone 2, make absolutely sure that the associated conditions in the following document are adhered to:

"SIMATIC NET Product Information Use of subasseblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the data medium that ships with some devices.
- on the Internet pages of Siemens Industry Online Support (http://support.automation.siemens.com/ww).

Enter the document identification number C234 as the search term.

The SIMATIC NET products meet the requirements of the EC directive 94/9/EC "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres". and as of 20.04.2016 the EC directive 2014/34/EU.

ATEX classification:

II 3 G Ex nA IIC T4 Gc

KEMA 07ATEX0145 X

The products meet the requirements of the following standards:

- EN 60079-15 (electrical apparatus for potentially explosive atmospheres; Type of protection "n")
- EN 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid ATEX certificates.

IECEx

The SIMATIC NET products meet the requirements of explosion protection according to IECEx.

IECEx classification:

Ex nA IIC T4 Gc

DEK 14.0025X

The products meet the requirements of the following standards:

- IEC 60079-15 (Explosive atmospheres - Part 15: Equipment protection by type of protection "n")
- IEC 60079-0 (Explosive atmospheres - Part 0: Equipment - General requirements)

You will find the current versions of the standards in the currently valid IECEx certificates.

FM

The product meets the requirements of the standards:

- Factory Mutual Approval Standard Class Number 3611
- FM Hazardous (Classified) Location Electrical Equipment:
  Non Incendive / Class I / Division 2 / Groups A,B,C,D / T4 and
  Non Incendive / Class I / Zone 2 / Group IIC / T4

cULus Approval Hazardous Location

cULus Listed I. T. E. FOR HAZ. LOC.

Underwriters Laboratories Inc. complying with

- UL 60950-1 (Information Technology Equipment)
- ANSI/ISA 12.12.01-2007
- CSA C22.2 No. 213-M1987

Approved for use in
Cl. 1, Div. 2, GP A, B, C, D T4
Cl. 1, Zone 2, GP IIC T4

Report no. E240480

FCC approval

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.

Notice

Changes or modifications made to this equipment not expressly approved by SIEMENS may void the FCC authorization to operate this equipment.

IEEE 802.11b or g operation of this product in the USA is firmware-limited to channels 1 through 11.

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.

Notice

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

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

To comply with FCC part 15 rules in the United States, the system must be professionally installed to ensure compliance with the Part 15 certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States. The use of the system in any other combination (such as co-located antennas transmitting the same information) is expressly forbidden.

Notice

For use of DFS channels

- Use of the RCoax Cable Antenna 6XV1875-2D is not permitted in channels which require dynamic frequency selection (DFS).
- Any installation of either a master or a client device within 35 km of a TDWR (Terminal Doppler Weather Radar) location shall be separated by at least 30 MHz (center-to-center) from the TDWR operating frequency.
  These devices shall be registered in the industry sponsored WISPA database,

  http://udia.spectrumbridge.com/udia/home.aspx
  (http://udia.spectrumbridge.com/udia/home.aspx)

  When you open this link, you get the following choices:

  – "Search" opens a window with TDWR locations and frequencies.
  – "User Signup" allows you to register as user of the database.
  – After registering you can Logon and register your WLAN location. Please fill in all required information.

For more information with respect to WISPA database and TWDR locations please consult FCC publication KDB 443999 D01.

CSA Information Technology Equipment

CSA Certification Mark

Canadian Standard Association CSA C22.2 No. 60950-1-03

RSS-247 of Industry Canada

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions: (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.

This radio transmitter (IC: 267AA-ELN1V1 for W760/W720 802.11n and IC: 267AA-MSN1V1 for W774/W734 802.11n) has been approved by Industry Canada to operate with the antenna types listed in section 5.6 with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

That the device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

Users should also be cautioned to take note that high power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

This equipment complies with IC RSS-102 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RCM

The product meets the requirements of the AS/NZS 2064 standard (Class A).

Approvals for Argentina

Devices of the SCALANCE W760/W720 series are approved in Argentina under the following certification number:

Certification ID	Certification number
ELN-W1-RJ-E1	CNC: C-13172

Devices of the SCALANCE W770/W730 series are approved in Argentina under the following certification numbers:

Certification ID	Certification number
MSN-W1-RJ-E2	CNC: C-13164
MSN-W1-M12-E2	CNC: C-13163

Approval for Brazil

Devices of the SCALANCE W760/W720 series are approved in Brazil under the following certification numbers:

Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

Devices of the SCALANCE W770/W730 series are approved in Brazil under the following certification numbers:

Este equipamento opera em caráter secundário, isto, ist é, não tem direito à proteção contra interferência prejudicial, mesmo de estações do mesmo tipo e não pode causar interferência a sistemas operando em caráter primário.

KCC Statement (Republic of Korea)

사용자안내문(제5조제1항제1호관련)

기 종 별	사 용 자 안 내 문
A 급 기기급 기기 (업무용 방송통신기기)	이 기기는 업무용(A 급)으로 전자파적합등록을 한(A 급)으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서 사용하는 것을 목적으로 합니다.

"당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음"

Marking for the customs union

EAC (Eurasian Conformity)

Customs union of Russia, Belarus and Kazakhstan

Declaration of the conformity according to the technical regulations of the customs union (TR CU)

Railway approval for the SCALANCE W774-1 M12 EEC

The SCALANCE W774-1 M12 EEC device meets the requirements of the railway standard EN 50155:2007 "Railway Applications - Electronic equipment used on rolling stock".

4.3 National approvals

The following table lists the countries in which the SCALANCE W700 product is approved. The diamond symbol (◆) identifies all countries for which there was no approval at the time these operating instructions were written.

The current status of the approvals can be found on the Internet at the following address:

`http://www.siemens.com/funkzulassungen`

Column	**Meaning**
Country	Country
Mode	IEEE 802.11 standard and the TPC and / or DFS functionality, where required
CH	Channel
MHz	Frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Use
Andorra Belgium Bosnia and Herzegovina Bulgaria Denmark Germany Estonia Finland France Greece Great Britain Ireland Iceland Italy Croatia Latvia Liechtenstein Lithuania Luxembourg Malta Macedonia Monaco Montenegro Netherlands Norway Austria Poland Portugal Romania San Marino Sweden Switzerland Serbia Slovakia Slovenia Spain Czech Republic Turkey Hungary Vatican Cyprus 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Egypt	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 64	5180 - 5320	200 mW	Indoor only
Angola	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Argentina	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	50 mW	Indoor + outdoor
	11a 11n TPC	52 - 64	5260 - 5320	250 mW	Indoor + outdoor
		100 - 120	5500 - 5600	250 mW	Indoor + outdoor
		132 - 140	5660 - 5700	250 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Australia New Zealand 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Bahrain	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor
Belarus	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TCP	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n TCP + DFS	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Brazil	11g 11n	1 - 13	2412 - 2472	4000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n TPC	52 - 64	5260 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
		100 - 140	5500 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
Chile	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor only
	11a 11n DFS+TPC	52 - 64	5260 - 5320	100 mW	Indoor only
	11a 11n DFS	149 - 165	5745 - 5825	100 mW	Indoor only
China	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS+TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	2000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Ivory Coast	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
Guatemala	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Hong Kong	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
India	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	200 mW	Indoor + outdoor
Indonesia ◆	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	400 mW	Indoor + outdoor
Israel	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Use
Japan 	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a	8 - 16	5040 - 5080	200 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 140	5500 - 5700	200 mW	Indoor + outdoor
	11a	184 - 196	4920 - 4980	200 mW	Indoor + outdoor
Kazakhstan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Qatar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor only
Korea 	11g 11n	1 - 13	2412 - 2472	400 mW	Indoor + outdoor
	11a 11n TPC	149 - 161	5745 - 5805	400 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Kuwait	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
Macau	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 161	5745 - 5805	100 mW	Indoor + outdoor
Madagascar	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Malaysia	11g 11n	1 - 13	2412 - 2472	200 mW	Indoor + outdoor
	11a 11n DFS	56 - 64	5280 - 5320	200 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Mexico	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor
	11a 11n	36 - 64	5180 - 5320	1000 mW	Indoor only
		149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
Pakistan	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	100 mW	Indoor + outdoor
Russia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	100 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	100 mW	Indoor + outdoor
		132 - 140	5660 - 5700	100 mW	Indoor + outdoor
Saudi Arabia	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 112	5500 - 5560	200 mW	Indoor + outdoor
		116 - 140	5580 - 5700	200 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Singapore Philippines	11b 11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor + outdoor
	11a 11n DFS + TPC	52 - 64	5260 - 5320	200 mW	Indoor + outdoor
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	1000 mW	Indoor + outdoor
South Africa ICASA	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS+TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Taiwan ◆ 	11g 11n	1	2412	100 mW	Indoor + outdoor
		2 - 10	2417 - 2457	200 mW	Indoor + outdoor
		11	2462	100 mW	Indoor + outdoor
	11a 11n DFS+TPC	52 - 64	5260 - 5320	400 mW	Indoor only
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Venezuela	11g 11n	1 - 13	2412 - 2472	1000 mW	Indoor + outdoor
	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS	52 - 64	5260 - 5320	1000 mW	Indoor only
	11a 11n	149 - 165	5745 - 5825	4000 mW	Indoor + outdoor
United Arab Emirates	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS+TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor only
		132 - 140	5660 - 5700	1000 mW	Indoor only
Bahamas Canada	11g 11n	1 - 11	2412 - 2462	100 mW	Indoor + outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Use
Colombia Peru Puerto Rico Thailand USA Uruguay 	11a 11n	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS + TPC	52 - 64	5260 - 5320	400 mW	Indoor + outdoor
		100 - 116	5500 - 5580	400 mW	Indoor + outdoor
		132 - 140	5660 - 5700	400 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor
Vietnam	11g 11n	1 - 13	2412 - 2472	100 mW	Indoor + outdoor
	11a 11n TPC	36 - 48	5180 - 5240	200 mW	Indoor only
	11a 11n DFS+TPC	52 - 64	5260 - 5320	200 mW	Indoor only
		100 - 116	5500 - 5580	1000 mW	Indoor + outdoor
		132 - 140	5660 - 5700	1000 mW	Indoor + outdoor
	11a 11n	149 - 165	5745 - 5825	400 mW	Indoor + outdoor