SIEMENS

SIMATIC NET

Industrial Wireless LAN
Approvals SCALANCE W700 802.11ax

Reference Manual

04/2024
C79000-G8976-C621-07

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

All names identified by ® are registered trademarks of Siemens Aktiengesellschaft. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

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 Aktiengesellschaft
Digital Industries
Postfach 48 48
90026 NÜRNBERG
GERMANY

Document order number: C79000-G8976-C621
Ⓟ 05/2024 Subject to change

Table of contents

Current approvals on the Internet

You will find the current approvals for the product on the Internet pages of Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

Cybersecurity notes

Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial cybersecurity measures that may be implemented, please visit
https://www.siemens.com/cybersecurity-industry (https://www.siemens.com/industrialsecurity).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under
https://new.siemens.com/cert (https://www.siemens.com/cert).

SCALANCE WxM766

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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.

1.1 Type designations

Scope of validity

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

Product	Article number	Model
Access points		
SCALANCE WAM766-1	6GK5766-1GE00-7DA0 6GK5766-1GE00-7DB0 (US) 6GK5766-1GE00-7DC0 (ME)	MSAX65-W1-M12-E2
SCALANCE WAM766-1 EEC	6GK5766-1GE00-7TA0 6GK5766-1GE00-7TB0 (US) 6GK5766-1GE00-7TC0 (ME)	MSAX65-W1-M12-E2
Client		
SCALANCE WUM766-1	6GK5766-1GE00-3DA0 6GK5766-1GE00-3DB0 (US) 6GK5766-1GE00-3DC0 (ME)	MSAX65-W1-M12-E2

1.2 EC declaration of conformity

CE

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

Siemens Aktiengesellschaft
Digital Industries
Process Automation
DE-76187 Karlsruhe
Germany

You can find the current EU declaration of conformity for these products on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

The SIMATIC NET products described in this document meet the requirements of the following EU directives:

- ATEX directive 2014/34/EU
  Directive of the European Parliament and the Council of 26 February 2014 on the approximation of the laws of the member states concerning equipment and protective systems intended for use in potentially explosive atmospheres, official journal of the EU L96, 29/03/2014, pages 309–356
- RoHS directive 2011/65/EU
  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, official journal of the EC L174, 01/07/2011, pages 88-110
- Radio equipment directive 2014/53/EU (RED, Radio Equipment Directive)
  Directive of the European Parliament and of the Council of 16 April 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

1.2.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EU Directive 2014/34/EU "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres".

1 EN IEC 60079-0
  Hazardous areas - Part 0: Equipment - General requirements
2 EN 60079-7
  Explosive atmospheres - Part 7: Equipment protection through increased safety "e"

1.2.2 RoHS

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

The SIMATIC NET product meets the requirements of the EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN IEC 63000
  Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

1.2.3 RED

1.2.3.1 Protection of health and safety

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

4 EN IEC 62311

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

5 EN IEC 62368-1

Equipment for audio, video, information and communication technology - Part 1: Safety requirements

6 EN IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

1.2.3.2 EMC

Art. 3 (1) b) - EMC

7 EN 50121-3-2

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

8 EN 50121-4

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

9 ETSI EN 301 489-1

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

10 ETSI EN 301 489-3

Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) for radio equipment and services – Part 3: Specific conditions for wireless devices with a low range (SRD) for use on frequencies between 9 kHz and 246 GHz

11 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems

12 EN 55011

Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

13 EN 55032

Electromagnetic compatibility of multimedia equipment – Emission requirements

14 EN 55035

Electromagnetic compatibility of multimedia equipment - Immunity requirements

15 EN IEC 61000-6-1

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

16 EN IEC 61000-6-2

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

17 EN IEC 61000-6-3

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

18 EN IEC 61000-6-4

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

19 EN IEC 61000-6-8

Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

1.2.3.3 Efficient use of the radio spectrum

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

20 ETSI EN 300 328

Broadband transmission systems – Data transmission equipment operating in the 2.4 GHz ISM band and using broadband modulation techniques. Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

21 ETSI EN 300 440

Electromagnetic compatibility and radio spectrum matters (ERM) – short range devices (SRD) – Radio equipment to be used in the 1 GHz to 40 GHz frequency range - Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

22 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) – 5 GHz high performance RLAN – Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

1.2.4 Other technical standards

23 CISPR 11

Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

24 CISPR 32

Electromagnetic compatibility of multimedia equipment. Emission requirements

25 CISPR 35

Electromagnetic compatibility of multimedia equipment - Immunity requirements

26 EN IEC / IEC 61000-6-1

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

27 EN IEC / IEC 61000-6-2

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

28 EN IEC / IEC 61000-6-3

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

29 EN IEC / IEC 61000-6-4

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

30 EN IEC / IEC 61000-6-8

Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

31 EN IEC / IEC 62311

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

32 EN IEC / IEC 62368-1

Audio/video, information and communication technology equipment - Part 1: Safety requirements

33 EN IEC / IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

34 NAMUR NE21

Automation engineering of modular systems in the process industry - Modelling of module services

1.2.5 Products

CE conformity

The standards applying to the product are described in ATEX (Page 10), RoHS (Page 10) and RED (Page 11).

Product	Standards
SCALANCE WAM 766-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
SCALANCE WAM 766-1 EEC	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
SCALANCE WUM 766-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

1.3 UK Declaration of Conformity

The UK declaration of conformity is available to all responsible authorities at:

Siemens Aktiengesellschaft
Digital Industries
Process Automation
DE-76187 Karlsruhe
Germany

Importer UK:
Siemens plc,
Manchester M20 2UR
United Kingdom

You can find the current UK Declaration of Conformity for these products on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

The SIMATIC NET products described in this document meet the requirements of the following directives:

- UK Regulation
  SI 2016/1107 The Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016, and related amendments
- RoHS Regulation
  SI 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, and related amendments
- Radio Equipment Regulation
  SI 2017/1206 The Radio Equipment Regulations 2017

1.3.1 Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016

Correct usage in potentially explosive atmospheres

The SIMATIC NET product meets the requirements of "Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations ".

1 EN IEC 60079-0
  Hazardous areas - Part 0: Equipment - General requirements
2 EN 60079-7
  Explosive atmospheres - Part 7: Equipment protection through increased safety "e"

1.3.2 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Restriction of the use of certain hazardous substances

The SIMATIC NET product meets the requirements of "The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012".

Applied standard:

3 EN IEC 63000

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

1.3.3 Radio Equipment Regulations 2017

1.3.3.1 Protection of health and safety

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

4 EN IEC 62311

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

5 EN IEC 62368-1

Equipment for audio, video, information and communication technology - Part 1: Safety requirements

6 EN IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

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Art. 3 (1) b) - EMC

7 EN 50121-3-2

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

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10 ETSI EN 301 489-3
Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) for radio equipment and services – Part 3: Specific conditions for wireless devices with a low range (SRD) for use on frequencies between 9 kHz and 246 GHz

11 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems

12 EN 55011

Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

13 EN 55032

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16 EN IEC 61000-6-2

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

17 EN IEC 61000-6-3

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

18 EN IEC 61000-6-4

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

19 EN IEC 61000-6-8

Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

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21 ETSI EN 300 440

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22 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) – 5 GHz high performance RLAN – Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

1.3.4 Other technical standards

Art. 3 (3) a)-i) Delegated acts for radio equipment

23 CISPR 11

Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

24 CISPR 32

Electromagnetic compatibility of multimedia equipment. Emission requirements

25 CISPR 35

Electromagnetic compatibility of multimedia equipment - Immunity requirements

26 EN IEC / IEC 61000-6-1

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27 EN IEC / IEC 61000-6-2

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28 EN IEC / IEC 61000-6-3

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29 EN IEC / IEC 61000-6-4

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

30 EN IEC / IEC 61000-6-8

Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

31 EN IEC / IEC 62311

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

32 EN IEC / IEC 62368-1

Audio/video, information and communication technology equipment - Part 1: Safety requirements

33 EN IEC / IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

34 NAMUR NE21

Automation engineering of modular systems in the process industry - Modelling of module services

1.3.5 Products

UK conformity

The standards applying to the product are described in Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Page 14), The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (Page 15) and Radio Equipment Regulations 2017 (Page 15).

Product	Standards
SCALANCE WAM766-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
SCALANCE WAM766-1 EEC	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
SCALANCE WUM766-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

1.4 General approvals

ATEX, IECEx, UKEX and CCC Ex certification

⚠ WARNING

Risk of explosion in hazardous areas

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 subassemblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/view/78381013).

The markings of the electrical devices are:

II 3G Ex ec IIC T4 Gc
DEKRA 18ATEX0026 X
IECEx DEK 18.0018X

II 3G Ex ec IIC T4 Gc
DEKRA 21UKEX0002 X
Importer UK:
Siemens plc,
Manchester, M20 2UR, UK

(Ex ec IIC T4 Gc, not on the nameplate)

The product meets the requirements of the standards:

- EN IEC/IEC 60079-0, GB/T 3836.1
- EN/IEC 60079-7, GB/T 3836.3

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

Railway approval

EEC variants of the device meet the requirements of the standards:

- EN 45545
- EN 50155
- EN 50121-3-2
- EN 50121-4

Note

When used on railway stock, a stabilized power supply must be used to comply with EN 50155.

E1

The device meets the requirements of the ECE R10 directive.

Test number 10 R - 069572

FM

The product meets the requirements of the standards:

- FM Class 3600, FM Class 3611, FM Class 3810
- ANSI/UL 121201, ANSI/UL 61010-1
- 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 62368-1
- CSA C22.2 No. 62368-1

Report no. E115352

cULus approval for industrial control equipment

cULus Listed PROG-CNTLR.

Underwriters Laboratories Inc. complying with

- UL 61010-1
- UL 61010-2-201
- CSA C22.2 NO 61010-1
- CSA C22.2 NO 61010-2-201

Report no. E115352

cULus Approval Hazardous Location

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

Underwriters Laboratories Inc. complying with

- UL 121201 (Non Incendive electrical equipment) approved for use in Class I, Division 2, Groups A, B, C, D, T4.
- UL CSA C22.2 NO 213 (Non Incendive electrical equipment) approved for use in Class I, Zone 2, Group IIC, T4.

1.5 Country-specific notes

1.5.1 Note for Australia and New Zealand

You will find the current document, Supplier's declaration of conformity, for these products on the Internet pages of Siemens Industry Online Support: (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert)

1.5.2 Notices for Canada

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device..

This radio transmitter 267AA-MSAX65V1 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.
Approved Antennas: (Page 43)

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.

Operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems. 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 the device.

This equipment complies with ISED 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 and your body.

1.5.3 Notes for Mexico

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

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

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

Este equipo ha sido diseñado para operar con las antenas enlistadas en el manual de instrucciones en el capítulo "Antenas (Page 43)" y para una ganancia máxima de antena de 14.2 dBi. Con este equipo no está permitido usar antenas que no figuren en las instrucciones de servicio o tengan una ganancia de más de 14.2 dBi. La impedancia requerida de la antena es de 50 Ω.

1.5.4 Notes for Taiwan

For LP0002

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

For WiFi 5G

應避免影響附近雷達系統之操作。

高增益指向性天線只得應用於固定式點對點系統。

設備名稱：SCALANCE WxM766-1 型號（型式）：MSAX65-W1-M12-E2						
單元 Unit	限用物質及其化學符號					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
Mechanical Assembly (plastic parts)	○	○	○	○	○	○
Assembled printed circuit board (APCB)	超出 0.1 wt %	○	○	○	○	○
Mechanical Assembly (metal parts)	超出 0.1 wt %	○	○	○	○	○

Other components	○	○	○	○	○	○

備考 1.〝超出 0.1 wt %〞及〝超出 0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。

Note 1："Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考 2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2："○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考 3.〝－〞係指該項限用物質為排除項目。

Note 3：The "–" indicates that the restricted substance corresponds to the exemption.

1.5.5 Notes for the USA (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.

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

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.

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.

1.6 Overview of country approvals

The following table lists the countries in which the SCALANCE WxM766-1 product is approved.

All countries or frequency ranges in which only time-limited approval applies are marked with the rhombus symbol (♦). This marking is for information purposes. Time-limited approvals are usually extended by Siemens in the time between delivery release and product phase-out of the devices.

Depending on the antenna settings in use, a special regulation of the transmit power may be required in some countires.

The current status of the approvals can be found on the Internet at the following address: Approvals (https://www.siemens.com/wireless-approvals).

Column	Meaning
Country	Country
Mode	IEEE 802.11 standard and the DFS functionality, where required
CH	IEEE 802.11 channel
MHz	IEEE 802.11 frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Max. permitted gain	Maximum permissible antenna gain with [3] or without [4] additional attenuation
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Albania Andorra Austria Belgium Bosnia and Herzegovina Bulgaria Croatia Denmark Germany Estonia Finland France Greece Ireland Iceland Italy Latvia Liechtenstein Lithuania Luxembourg Malta Monaco Montenegro Netherlands Norway Poland Portugal Romania San Marino Sweden Switzerland Slovakia Slovenia Spain Czech Republic Hungary Vatican Cyprus 	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 173	5745 - 5865	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Egypt [7]	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
Angola ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Argentina ♦	11ax 11g 11n	1 - 13	2412 - 2472	36 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	52 - 64	5260 - 5320	30 dBm	-	Indoor + Outdoor
		100 - 116	5500 - 5580	30 dBm	-	Indoor + Outdoor
		132 - 144	5660 - 5720	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	36 dBm	-	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Australia	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 116 [1]	5500 - 5580	30 dBm	-	Indoor + Outdoor
		132 - 144 [1]	5660 - 5720	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Bahrain ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Brazil ♦ [5]	11ax 11g 11n	1 - 13	2412 - 2472	29 dBm	6 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	26 dBm	9 dBi [4]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	26 dBm	9 dBi [4]	Indoor only
		100 - 140 [1]	5500 - 5700	26 dBm	9 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm	7 dBi [4]	Indoor + Outdoor
Chile	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor + Outdoor
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
China ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	33 dBm	-	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Costa Rica	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Ecuador [5]	11ax 11g 11n	1 - 11	2412 - 2462	30 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 144 [1]	5500 - 5720	29 dBm	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	36 dBm [2]	14 dBi [4]	Indoor + Outdoor
Ivory Coast ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Guatemala	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Hong Kong [5]	11ax 11g 11n	1 - 11	2412 - 2462	30 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	36 dBm [2]	14 dBi [4]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
India [5]	11ax 11g 11n	1 - 11	2412 - 2462	30 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	30 dBm [2]	14 dBi [4]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5640	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	36 dBm [2]	14 dBi [4]	Indoor + Outdoor
Israel [7]	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
Japan	11ax 11g 11n	1 - 13	2412 - 2472	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	-	Indoor only
		100 - 144 [1]	5500 - 5720	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	184 - 196 [8] [9]	4920 - 4980	30 dBm	-	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Canada [5]	11ax 11g 11n	1 - 11	2412 - 2462	30 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	14 dBi [4]	Indoor only
		149 - 165	5745 - 5825	36 dBm [2]	14 dBi [4]	Indoor + Outdoor
Qatar	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor only
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor only
Colombia	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Korea, Republic of	11ax 11g 11n	1 - 13	2412 - 2472	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 44	5180 - 5220	23 dBm	-	Indoor + Outdoor
		48	5240	17 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	-	Indoor + Outdoor
		100 - 144 [1]	5500 - 5720	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	23 dBm	-	Indoor + Outdoor
Kuwait ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
Macau, China	11ax 11g 11n	1 - 13	2412 - 2472	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	-	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm	-	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Madagascar	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Malaysia ♦ [5]	11ax 11g 11n	1 - 11	2412 - 2462	27 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	30 dBm [2]	14 dBi [4]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64[1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 128 [1]	5500 - 5640	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm [2]	14 dBi [4]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Mexico	11ax 11g 11n	1 - 13	2412 - 2472	30 dBm	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	52 - 64	5260 - 5320	30 dBm	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n DFS	100 - 116 [10]	5500 - 5580	30 dBm	14 dBi [4]	Indoor + Outdoor
		132 - 140 [10]	5660 - 5700	30 dBm	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	36 dBm	14 dBi [4]	Indoor + Outdoor
Mozambique ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
New Zealand	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
North Macedonia	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Oman	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Pakistan	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 128 [1]	5500 - 5640	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n	132 - 140	5660 - 5700	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 173	5745 - 5865	30 dBm	-	Indoor + Outdoor
Philippines [5]	11ax 11g 11n	1 - 11	2412 - 2462	30 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	30 dBm [2]	14 dBi [4]	Indoor + Outdoor
		149 - 165	5745 - 5825	36 dBm [2]	14 dBi [4]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Russian Federation	11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 64	5180 - 5320	23 dBm	-	Indoor only
		132 - 144	5660 - 5720	23 dBm	-	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	23 dBm	-	Indoor only
Saudi Arabia ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Serbia ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Singapore ♦	11ax 11g 11n	1 - 13	2412 - 2472	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm	-	Indoor + Outdoor
South Africa	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Thailand	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm	-	Indoor + Outdoor
Turkey	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 173	5745 - 5865	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Uruguay ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	20 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	20 dBm	-	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	20 dBm	-	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
USA [5) 6)]	11ax 11g 11n	1 - 11	2412 - 2462	30 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	30 dBm [2)]	14 dBi [4)]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1)]	5260 - 5320	29 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
		100 - 144 [1)]	5500 - 5720	29 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	36 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
United Arab Emirates ♦	11ax 11g 11n	1 - 11	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1)]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
		100 - 140 [1)]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3)] 13 dBi (1 Tx) [3)]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
United Kingdom	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) 3) 14 dBi (1 Tx) 3)	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 1)	5260 - 5320	23 dBm	11 dBi (2 Tx) 3) 14 dBi (1 Tx) 3)	Indoor only
		100 - 144 1)	5500 - 5720	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	23 dBm	11 dBi (2 Tx) 3) 14 dBi (1 Tx) 3)	Indoor + Outdoor
Vietnam ♦	11ax 11g 11n	1 - 13	2412 - 2472	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 1)	5260 - 5320	23 dBm	-	Indoor + Outdoor
		100 - 140 1)	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm	-	Indoor + Outdoor

1) In this country, the use of 80 MHz channel width is not permitted in the channels 52 ... 140/144.

2) The maximum permitted EIRP (Effective Isotropic Radiated Power) may only be reached with at least one 6 dBi antenna.

3) Maximum permissible gain: Antenna and additional attenuation elements

4) Maximum permissible gain of the antenna without additional attenuation elements

5) Certain antennas are not permitted to be used in this country. Observe the overview of antennas in the following section.

6) Use US device version

7) Use ME device version

8) In this country, the use of 40 MHz and 80 MHz channel width is not permitted in the channels 184...196.

9) Approval or license from the local authorities is required to use these channels.

10) In this country, the use of 80 MHz channel width is not permitted in the channels 100 ... 140/144.

1.7 Overview of antennas

1.7.1 Use of attenuation elements

The minimum transmit power of the SCALANCE W device is 1 dBm (1 TX) or 4 dBm (2 TX). When using antennas with a very high antenna gain, the maximum permitted EIRP (equivalent isotropic radiated power) of the device is often exceeded even at minimum transmit power. In this case, additional attenuation elements such as attenuators or connecting cables must be used between the device and the antennas.
Additional restrictions on the antenna gain apply in some countries. These are listed in the "Max. permitted gain" column in the Overview of country approvals (Page 24). If the antenna gain of the antennas to be connected exceeds the maximum permissible value, you must compensate for the difference by using attenuation elements.

The following table provides an overview of possible attenuation elements and their attenuation values:

Name	Attenuation	Article number
Attenuator	10 dB	6GK5798-0AP00-4CA0
Antenna connecting cable, 1 m long	1.0 dB	6XV1875-5xH10
Antenna connecting cable, 2 m long	1.8 dB	6XV1875-5xH20
Antenna connecting cable, 5 m long	4.3 dB	6XV1875-5xH50

Example

The antenna ANT793-8DL is used.

- Typical antenna gain: 14 dBi
- Maximum permissible gain for channel 36 in Germany: 11 dBi

In this case the typical antenna gain exceeds the maximum permissible gain by 3 dBi. This means you must use an attenuation element with at least 3 dB. This can be a connecting cable, for example, with a length of 5 meters.

1.7.2 Omnidirectional antennas

The following table provides an overview of the omnidirectional antennas that are approved for the SCALANCE WxM766-1 depending on the country.

Country	ANT 792-6MN	ANT 795-4MC	ANT 795-4MD	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Egypt	✓	✓	✓	✓	✓	✓	✓	✓
Albania	✓	✓	✓	✓	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓	✓	✓	✓
Angola	✓	✓	✓	✓	✓	✓	✓	✓
Argentina	✓	✓	✓	✓	✓	✓	✓	✓
Australia	✓	✓	✓	✓	✓	✓	✓	✓
Bahrain	✓	✓	✓	✓	✓	✓	✓	✓

Country	ANT 792-6MN	ANT 795-4MC	ANT 795-4MD	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Belgium	✓	✓	✓	✓	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓	✓
Brazil	✓	✓	✓	✓	✓	✓	---	---
Bulgaria	✓	✓	✓	✓	✓	✓	✓	✓
Chile	✓	✓	✓	✓	✓	✓	✓	✓
China	✓	✓	✓	✓	✓	✓	---	---
Costa Rica	✓	✓	✓	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓	✓	✓	✓
Ecuador	✓	✓	✓	✓	✓	✓	---	---
Ivory Coast	✓	✓	✓	✓	✓	✓	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓	✓
Guatemala	✓	✓	✓	✓	✓	✓	✓	✓
Hong Kong	✓	✓	✓	✓	✓	✓	---	---
India	✓	✓	✓	✓	✓	✓	---	---
Ireland	✓	✓	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	✓	✓	✓	✓	✓
Israel	✓	✓	✓	✓	✓	✓	✓	✓
Italy	✓	✓	✓	✓	✓	✓	✓	✓
Japan	✓	✓	✓	✓	✓	✓	---	✓
Canada	✓	✓	✓	✓	✓	✓	---	---
Qatar	✓	✓	✓	✓	✓	✓	✓	✓
Colombia	✓	✓	✓	✓	✓	✓	✓	✓
Korea, Republic of	✓	✓	---	✓	✓	✓	---	---
Croatia	✓	✓	✓	✓	✓	✓	✓	✓
Kuwait	✓	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓	✓	✓	✓	✓
Macau	✓	✓	✓	✓	✓	✓	✓	✓
Madagascar	✓	✓	✓	✓	✓	✓	✓	✓
Malaysia	✓	✓	✓	✓	✓	✓	---	---
Malta	✓	✓	✓	✓	✓	✓	✓	✓
Mexico	✓	✓	✓	✓	✓	✓	✓	---

Country	ANT 792-6MN	ANT 795-4MC	ANT 795-4MD	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Monaco	✓	✓	✓	✓	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓	✓	✓	✓	✓
Mozambique	✓	✓	✓	✓	✓	✓	✓	✓
New Zealand	✓	✓	✓	✓	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓	✓	✓	✓	✓
North Macedonia	✓	✓	✓	✓	✓	✓	✓	✓
Norway	✓	✓	✓	✓	✓	✓	✓	✓
Oman	✓	✓	✓	✓	✓	✓	✓	✓
Austria	✓	✓	✓	✓	✓	✓	✓	✓
Pakistan	✓	✓	✓	✓	✓	✓	✓	✓
Philippines	✓	✓	✓	✓	✓	✓	---	---
Poland	✓	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓	✓
Russian Federation	✓	✓	✓	✓	✓	✓	✓	✓
San Marino	✓	✓	✓	✓	✓	✓	✓	✓
Saudi Arabia	✓	✓	✓	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓	✓	✓	✓	✓
Serbia	✓	✓	✓	✓	✓	✓	✓	✓
Singapore	✓	✓	✓	✓	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓	✓	✓	✓
South Africa	✓	✓	✓	✓	✓	✓	✓	✓
Thailand	✓	✓	✓	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	✓	✓	✓
Turkey	✓	✓	✓	✓	✓	✓	✓	✓
Hungary	✓	✓	✓	✓	✓	✓	✓	✓
Uruguay	✓	✓	✓	✓	✓	✓	✓	✓
Vatican	✓	✓	✓	✓	✓	✓	✓	✓
United Arab Emirates	✓	✓	✓	✓	✓	✓	✓	✓
United States of America	✓	✓	✓	✓	✓	✓	---	---

Country	ANT 792-6MN	ANT 795-4MC	ANT 795-4MD	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
United Kingdom	✓	✓	✓	✓	✓	✓	✓	---
Vietnam	✓	✓	✓	✓	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓	✓

1.7.3 Directional antennas

The following table provides an overview of the directional antennas that are approved for the SCALANCE WxM766-1 depending on the country.

Country	ANT792-8DN	ANT793-6DG	ANT793-8DJ	ANT793-8DK	ANT793-8DL	ANT793-8DP	ANT795-6DC
Egypt	✓	✓	✓	✓	✓	✓	✓
Albania	✓	✓	✓	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓	✓	✓
Angola	✓	✓	✓	✓	✓	✓	✓
Argentina	✓	✓	✓	✓	✓	✓	✓
Australia	✓	✓	✓	✓	✓	✓	✓
Bahrain	✓	✓	✓	✓	✓	✓	✓
Belgium	✓	✓	✓	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓
Brazil	---	✓	---	---	---	---	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✓
Chile	✓	✓	✓	✓	✓	✓	✓
China	✓	✓	✓	✓	✓	✓	✓
Costa Rica	✓	✓	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓	✓	✓
Ecuador	✓	✓	✓	✓	---	✓	✓
Ivory Coast	✓	✓	✓	✓	✓	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓
Guatemala	✓	✓	✓	✓	✓	✓	✓
Hong Kong	✓	✓	✓	✓	---	✓	✓
India	✓	✓	✓	✓	---	✓	✓
Ireland	✓	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	✓	✓	✓	✓
Israel	✓	✓	✓	✓	✓	✓	✓
Italy	✓	✓	✓	✓	✓	✓	✓
Japan	✓	✓	✓	✓	✓	✓	✓

Country	ANT792-8DN	ANT793-6DG	ANT793-8DJ	ANT793-8DK	ANT793-8DL	ANT793-8DP	ANT795-6DC
Canada	✓	✓	✓	✓	---	✓	✓
Qatar	✓	✓	✓	✓	✓	✓	✓
Colombia	✓	✓	✓	✓	✓	✓	✓
Korea, Republic of	---	✓	✓	---	✓	✓	✓
Croatia	✓	✓	✓	✓	✓	✓	✓
Kuwait	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓	✓	✓	✓
Macau	✓	✓	✓	✓	✓	✓	✓
Madagascar	✓	✓	✓	✓	✓	✓	✓
Malaysia	✓	✓	✓	✓	---	✓	✓
Malta	✓	✓	✓	✓	✓	✓	✓
Mexico	✓	✓	✓	✓	✓	✓	✓
Monaco	✓	✓	✓	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓	✓	✓	✓
Mozambique	✓	✓	✓	✓	✓	✓	✓
New Zealand	✓	✓	✓	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓	✓	✓	✓
North Macedonia	✓	✓	✓	✓	✓	✓	✓
Norway	✓	✓	✓	✓	✓	✓	✓
Oman	✓	✓	✓	✓	✓	✓	✓
Austria	✓	✓	✓	✓	✓	✓	✓
Pakistan	✓	✓	✓	✓	✓	✓	✓
Philippines	✓	✓	✓	✓	---	✓	✓
Poland	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓
Russian Federation	✓	✓	✓	✓	✓	✓	✓
San Marino	✓	✓	✓	✓	✓	✓	✓
Saudi Arabia	✓	✓	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓	✓	✓	✓
Serbia	✓	✓	✓	✓	✓	✓	✓
Singapore	✓	✓	✓	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓	✓	✓
South Africa	✓	✓	✓	✓	✓	✓	✓

Country	ANT792-8DN	ANT793-6DG	ANT793-8DJ	ANT793-8DK	ANT793-8DL	ANT793-8DP	ANT795-6DC
Thailand	✓	✓	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	✓	✓
Turkey	✓	✓	✓	✓	✓	✓	✓
Hungary	✓	✓	✓	✓	✓	✓	✓
Uruguay	✓	✓	✓	✓	✓	✓	✓
Vatican	✓	✓	✓	✓	✓	✓	✓
United Arab Emirates	✓	✓	✓	✓	✓	✓	✓
United States of America	✓	✓	✓	✓	---	✓	✓
United Kingdom	✓	✓	✓	✓	✓	✓	✓
Vietnam	✓	✓	✓	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓

1.7.4 RCoax antennas

The following table provides an overview of the RCoax antennas that are approved for the SCALANCE WxM766-1 depending on the country.

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Egypt	✓	✓	✓	✓
Albania	✓	✓	✓	✓
Andorra	✓	✓	✓	✓
Angola	✓	✓	✓	✓
Argentina	✓	✓	✓	✓
Australia	✓	✓	✓	✓
Bahrain	✓	✓	✓	✓
Belgium	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓
Brazil	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓
Chile	✓	✓	✓	✓
China	✓	✓	✓	✓
Costa Rica	✓	✓	✓	✓
Denmark	✓	✓	✓	✓
Germany	✓	✓	✓	✓
Ecuador	---	---	---	---
Ivory Coast	✓	✓	✓	✓
Estonia	✓	✓	✓	✓

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Finland	✓	✓	✓	✓
France	✓	✓	✓	✓
Greece	✓	✓	✓	✓
Guatemala	✓	✓	✓	✓
Hong Kong	---	---	---	---
India	---	---	---	---
Ireland	✓	✓	✓	✓
Iceland	✓	✓	✓	✓
Israel	✓	✓	✓	✓
Italy	✓	✓	✓	✓
Japan	✓	✓	✓	✓
Canada	---	---	---	✓*
Qatar	✓	✓	✓	✓
Colombia	✓	✓	✓	✓
Korea, Republic of	✓	✓	✓	✓
Croatia	✓	✓	✓	✓
Kuwait	✓	✓	✓	✓
Latvia	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓
Macau	✓	✓	✓	✓
Madagascar	✓	✓	✓	✓
Malaysia	---	---	---	---
Malta	✓	✓	✓	✓
Mexico	✓	✓	✓	✓
Monaco	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓
Mozambique	✓	✓	✓	✓
New Zealand	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓
North Macedonia	✓	✓	✓	✓
Norway	✓	✓	✓	✓
Oman	✓	✓	✓	✓
Austria	✓	✓	✓	✓
Pakistan	✓	✓	✓	✓
Philippines	---	---	---	---
Poland	✓	✓	✓	✓
Portugal	✓	✓	✓	✓
Romania	✓	✓	✓	✓
Russian Federation	✓	✓	✓	✓
San Marino	✓	✓	✓	✓

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Saudi Arabia	✓	✓	✓	✓
Sweden	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓
Serbia	✓	✓	✓	✓
Singapore	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓
Spain	✓	✓	✓	✓
South Africa	✓	✓	✓	✓
Thailand	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓
Turkey	✓	✓	✓	✓
Hungary	✓	✓	✓	✓
Uruguay	✓	✓	✓	✓
Vatican	✓	✓	✓	✓
United Arab Emirates	✓	✓	✓	✓
United States of America	---	---	---	✓*
United Kingdom	✓	✓	✓	✓
Vietnam	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓

*) In this country, the use of RCoax Cable is not permitted in the channels 52 ... 140/144.

SCALANCE WxM763

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.

2.1 Type designations

Scope of validity

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

Product	Article number	Model
Access points		
SCALANCE WAM763-1	6GK5763-1AL00-7DA0 (DI/DO) 6GK5763-1AL00-7DB0 (US) (DI/DO) 6GK5763-1AL00-7DC0 (ME) (DI/DO)	MSAX-W1-RJ-E2
Client		
SCALANCE WUM763-1	6GK5763-1AL00-3AA0 6GK5763-1AL00-3AB0 (US)	MSAX-W1-RJ-E2-NO
	6GK5763-1AL00-3DA0 (DI/DO) 6GK5763-1AL00-3DB0 (US) (DI/DO)	MSAX-W1-RJ-E2

2.2 EC declaration of conformity

CE

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

Siemens Aktiengesellschaft
Digital Industries
Process Automation
DE-76187 Karlsruhe
Germany

You can find the current EU declaration of conformity for these products on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

The SIMATIC NET products described in this document meet the requirements of the following EU directives:

- ATEX directive 2014/34/EU
  Directive of the European Parliament and the Council of 26 February 2014 on the approximation of the laws of the member states concerning equipment and protective systems intended for use in potentially explosive atmospheres, official journal of the EU L96, 29/03/2014, pages 309–356
- RoHS directive 2011/65/EU
  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, official journal of the EC L174, 01/07/2011, pages 88-110
- Radio equipment directive 2014/53/EU (RED, Radio Equipment Directive)
  Directive of the European Parliament and of the Council of 16 April 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

2.2.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EU Directive 2014/34/EU "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres".

1 EN IEC 60079-0
  Hazardous areas - Part 0: Equipment - General requirements
2 EN 60079-7
  Explosive atmospheres - Part 7: Equipment protection through increased safety "e"

2.2.2 RoHS

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

The SIMATIC NET product meets the requirements of the EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN IEC 63000
  Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

2.2.3 RED

2.2.3.1 Protection of health and safety

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

4 EN IEC 62311

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

5 EN IEC 62368-1

Equipment for audio, video, information and communication technology - Part 1: Safety requirements

6 EN IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

2.2.3.2 EMC

Art. 3 (1) b) - EMC

7 EN 50121-3-2

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

8 EN 50121-4

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

9 ETSI EN 301 489-1

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

10 ETSI EN 301 489-3

Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) for radio equipment and services – Part 3: Specific conditions for wireless devices with a low range (SRD) for use on frequencies between 9 kHz and 246 GHz

11 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems

12 EN 55011

Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

13 EN 55032

Electromagnetic compatibility of multimedia equipment – Emission requirements

14 EN 55035

Electromagnetic compatibility of multimedia equipment - Immunity requirements

15 EN IEC 61000-6-1

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

16 EN IEC 61000-6-2

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

17 EN IEC 61000-6-3

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

18 EN IEC 61000-6-4

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

19 EN IEC 61000-6-8

Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

2.2.3.3 Efficient use of the radio spectrum

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

20 ETSI EN 300 328

Broadband transmission systems – Data transmission equipment operating in the 2.4 GHz ISM band and using broadband modulation techniques. Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

21 ETSI EN 300 440

Electromagnetic compatibility and radio spectrum matters (ERM) – short range devices (SRD) – Radio equipment to be used in the 1 GHz to 40 GHz frequency range - Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

22 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) – 5 GHz high performance RLAN – Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

2.2.4 Other technical standards

23 CISPR 11

Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

24 CISPR 32

Electromagnetic compatibility of multimedia equipment. Emission requirements

25 CISPR 35

Electromagnetic compatibility of multimedia equipment - Immunity requirements

26 EN IEC / IEC 61000-6-1

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

27 EN IEC / IEC 61000-6-2

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

28 EN IEC / IEC 61000-6-3

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

29 EN IEC / IEC 61000-6-4

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

30 EN IEC / IEC 61000-6-8

Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

31 EN IEC / IEC 62311

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

32 EN IEC / IEC 62368-1

Audio/video, information and communication technology equipment - Part 1: Safety requirements

33 EN IEC / IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

34 NAMUR NE21

Automation engineering of modular systems in the process industry - Modelling of module services

2.2.5 Products

CE conformity

The standards applying to the product are described in ATEX (Page 52), RoHS (Page 52) and RED (Page 53).

Product	Standards
SCALANCE WAM763-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27, 28,29,30,31,32,33,34
SCALANCE WUM763-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27, 28, 29,30,31,32,33,34

2.3 UK Declaration of Conformity

The UK declaration of conformity is available to all responsible authorities at:

Siemens Aktiengesellschaft
Digital Industries
Process Automation
DE-76187 Karlsruhe
Germany

Importer UK:
Siemens plc,
Manchester M20 2UR
United Kingdom

You can find the current UK Declaration of Conformity for these products on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

The SIMATIC NET products described in this document meet the requirements of the following directives:

- UK Regulation
  SI 2016/1107 The Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016, and related amendments
- RoHS Regulation
  SI 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, and related amendments
- Radio Equipment Regulation
  SI 2017/1206 The Radio Equipment Regulations 2017

2.3.1 Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016

Correct usage in potentially explosive atmospheres

The SIMATIC NET product meets the requirements of "Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations ".

1 EN IEC 60079-0
  Hazardous areas - Part 0: Equipment - General requirements
2 EN 60079-7
  Explosive atmospheres - Part 7: Equipment protection through increased safety "e"

2.3.2 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Restriction of the use of certain hazardous substances

The SIMATIC NET product meets the requirements of "The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012".

Applied standard:

3 EN IEC 63000

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

2.3.3 Radio Equipment Regulations 2017

2.3.3.1 Protection of health and safety

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

4 EN IEC 62311

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

5 EN IEC 62368-1

Equipment for audio, video, information and communication technology - Part 1: Safety requirements

6 EN IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

2.3.3.2 EMC

Art. 3 (1) b) - EMC

7 EN 50121-3-2

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

8 EN 50121-4

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

9 ETSI EN 301 489-1

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

10 ETSI EN 301 489-3
Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) for radio equipment and services – Part 3: Specific conditions for wireless devices with a low range (SRD) for use on frequencies between 9 kHz and 246 GHz

11 ETSI EN 301 489-17
Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems

12 EN 55011
Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

13 EN 55032
Electromagnetic compatibility of multimedia equipment – Emission requirements

14 EN 55035
Electromagnetic compatibility of multimedia equipment - Immunity requirements

15 EN IEC 61000-6-1
Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

16 EN IEC 61000-6-2
Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

17 EN IEC 61000-6-3
Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

18 EN IEC 61000-6-4
Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

19 EN IEC 61000-6-8
Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

2.3.3.3 Efficient use of the radio spectrum

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

20 ETSI EN 300 328

Broadband transmission systems – Data transmission equipment operating in the 2.4 GHz ISM band and using broadband modulation techniques. Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

21 ETSI EN 300 440

Electromagnetic compatibility and radio spectrum matters (ERM) – short range devices (SRD) – Radio equipment to be used in the 1 GHz to 40 GHz frequency range - Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

22 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) – 5 GHz high performance RLAN – Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

2.3.4 Other technical standards

Art. 3 (3) a)-i) Delegated acts for radio equipment

23 CISPR 11

Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

24 CISPR 32

Electromagnetic compatibility of multimedia equipment. Emission requirements

25 CISPR 35

Electromagnetic compatibility of multimedia equipment - Immunity requirements

26 EN IEC / IEC 61000-6-1

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

27 EN IEC / IEC 61000-6-2

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

28 EN IEC / IEC 61000-6-3

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

29 EN IEC / IEC 61000-6-4

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

30 EN IEC / IEC 61000-6-8

Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

31 EN IEC / IEC 62311

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

32 EN IEC / IEC 62368-1

Audio/video, information and communication technology equipment - Part 1: Safety requirements

33 EN IEC / IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

34 NAMUR NE21

Automation engineering of modular systems in the process industry - Modelling of module services

UK conformity

The standards applying to the product are described in Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Page 56), Radio Equipment Regulations 2017 (Page 57) and The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (Page 57).

Product	Standards
SCALANCE WAM763-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27, 28,29,30,31,32,33,34
SCALANCE WUM763-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27, 28, 29,30,31,32,33,34

2.4 General approvals

ATEX, IECEx, UKEX and CCC Ex certification

WARNING

Risk of explosion in hazardous areas

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 subassemblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/view/78381013).

The markings of the electrical devices are:

II 3G Ex ec IIC T4 Gc
DEKRA 18ATEX0026 X
IECEx DEK 18.0018X

II 3G Ex ec IIC T4 Gc
DEKRA 21UKEX0002 X
Importer UK:
Siemens plc,
Manchester, M20 2UR, UK

(Ex ec IIC T4 Gc, not on the nameplate)

The product meets the requirements of the standards:

- EN IEC/IEC 60079-0, GB/T 3836.1
- EN/IEC 60079-7, GB/T 3836.3

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

FM

The product meets the requirements of the standards:

- FM Class 3600, FM Class 3611, FM Class 3810
- ANSI/UL 121201, ANSI/UL 61010-1
- 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 62368-1
- CSA C22.2 No. 62368-1

Report no. E115352

cULus approval for industrial control equipment

cULus Listed PROG-CNTLR.

Underwriters Laboratories Inc. complying with

- UL 61010-1
- UL 61010-2-201
- CSA C22.2 NO 61010-1
- CSA C22.2 NO 61010-2-201

Report no. E115352

cULus Approval Hazardous Location

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

Underwriters Laboratories Inc. complying with

- UL 121201 (Non Incendive electrical equipment) approved for use in Class I, Division 2, Groups A, B, C, D, T4.
- UL CSA C22.2 NO 213 (Non Incendive electrical equipment) approved for use in Class I, Zone 2, Group IIC, T4.

2.5 Country-specific notes

2.5.1 Note for Australia and New Zealand

You will find the current document, Supplier's declaration of conformity, for these products on the Internet pages of Siemens Industry Online Support: (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert)

2.5.2 Notices for Canada

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device..

This radio transmitter 267AA-MSAXV1 has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.
Approved Antennas: (Page 73)

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.

Operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems. 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 the device.

This equipment complies with ISED 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 and your body.

2.5.3 Notes for Mexico

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

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

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

Este equipo ha sido diseñado para operar con las antenas enlistadas en el manual de instrucciones en el capítulo "Antenas (Page 43)" y para una ganancia máxima de antena de 14.2 dBi. Con este equipo no está permitido usar antenas que no figuren en las instrucciones de servicio o tengan una ganancia de más de 14.2 dBi. La impedancia requerida de la antena es de 50 Ω.

2.5.4 Notes for the USA (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.

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

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.

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.

2.6 Overview of country approvals

The following table lists the countries in which the SCALANCE WxM763-1 product is approved.

Depending on the antenna settings in use, a special regulation of the transmit power may be required in some countires.

The current status of the approvals can be found on the Internet at the following address: Approvals (https://www.siemens.com/wireless-approvals).

Column	Meaning
Country	Country
Mode	IEEE 802.11 standard and the DFS functionality, where required
CH	IEEE 802.11 channel
MHz	IEEE 802.11 frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Max. permitted gain	Maximum permissible antenna gain with [3] or without [4] additional attenuation
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Albania Andorra Austria Belgium Bosnia and Herzegovina Bulgaria Croatia Denmark Germany Estonia Finland France Greece Ireland Iceland Italy Latvia Liechtenstein Lithuania Luxembourg Malta Monaco Montenegro Netherlands Norway Poland Portugal Romania San Marino Sweden Switzerland Slovakia Slovenia Spain Czech Republic Hungary Vatican Cyprus 	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 173 [8]	5745 - 5865	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Egypt [10]	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
Chile	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor + Outdoor
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
China [5] [9] ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	-	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	33 dBm	-	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Israel [10]	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
Japan	11ax 11g 11n	1 - 13	2412 - 2472	23 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	-	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	-	Indoor only
		100 - 144 [1]	5500 - 5720	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	184 - 196 [11] [12]	4920 - 4980	30 dBm	-	Indoor + Outdoor
Canada [5] [7] [9]	11ax 11g 11n	1 - 11	2412 - 2462	28 dBm [2]	14 dBi [4]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	21 dBm	14 dBi [4]	Indoor only
		149 - 165	5745 - 5825	35 dBm [2]	14 dBi [4]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Qatar [5) 9)]	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor only
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1)]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
		100 - 140 [1)]	5500 - 5700	30 dBm	-	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3)] 13 dBi (1 Tx) [3)]	Indoor only
Colombia [9)]	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm [2)]	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor + Outdoor
	11a 11ac 11ax 11n DFS	52 - 64 [1)]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
		100 - 140 [1)]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3)] 13 dBi (1 Tx) [3)]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Oman	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Russian Federation	11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 64	5180 - 5320	23 dBm	-	Indoor only
		132 - 144	5660 - 5720	23 dBm	-	Indoor only
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	23 dBm	-	Indoor only
Saudi Arabia [9] ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Serbia ♦	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165 [8]	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
South Africa	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Thailand	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	30 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor
Turkey	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3] 14 dBi (1 Tx) [3]	Indoor only
		100 - 140 [1]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 173 [8]	5745 - 5865	14 dBm	10 dBi (2 Tx) [3] 13 dBi (1 Tx) [3]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
USA [5) 6) 7)]	11ax 11g 11n	1 - 11	2412 - 2462	28 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	30 dBm [2)]	9 dBi [4)]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1)]	5260 - 5320	29 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
		100 - 144 [1)]	5500 - 5720	29 dBm [2)]	14 dBi [4)]	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 165	5745 - 5825	35 dBm [2)]	9 dBi [4)]	Indoor + Outdoor
United Kingdom	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
	11a 11ac 11ax 11n DFS	52 - 64 [1)]	5260 - 5320	23 dBm	11 dBi (2 Tx) [3)] 14 dBi (1 Tx) [3)]	Indoor only
		100 - 140 [1)]	5500 - 5700	30 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	149 - 173 [8)]	5745 - 5865	14 dBm	10 dBi (2 Tx) [3)] 13 dBi (1 Tx) [3)]	Indoor + Outdoor

1) In this country, the use of 80 MHz channel width is not permitted in the channels 52 ... 140/144.

2) The maximum permitted EIRP (Effective Isotropic Radiated Power) may only be reached with at least one 6 dBi antenna.

3) Maximum permissible gain: Antenna and additional attenuation elements

4) Maximum permissible gain of the antenna without additional attenuation elements

5) Certain antennas are not permitted to be used in this country. Observe the overview of antennas in the following section.

6) Use US device version

7) The antennas ANT792-8DN, ANT795-6DC, ANT792-6MN, ANT793-6DG and ANT795-6MN may only be used together with a flexible connecting cable with a length of ≥ 2m.

8) Installation with the connectors facing downwards (e.g. rotated by 90° with DIN rail mounting adapter) is not allowed in this frequency range.

9) In this country, the device variant 6GK5763-1AL00-3AA0 is not approved.

10) Use ME device variant

11) In this country, the use of 40 MHz and 80 MHz channel width is not permitted in the channels 184...196.

12) Approval or license from the local authorities is required to use these channels.

2.7 Overview of antennas

2.7.1 Use of attenuation elements

The minimum transmit power of the SCALANCE W device is 1 dBm (1 TX) or 4 dBm (2 TX). When using antennas with a very high antenna gain, the maximum permitted EIRP (equivalent isotropic radiated power) of the device is often exceeded even at minimum transmit power. In this case, additional attenuation elements such as attenuators or connecting cables must be used between the device and the antennas.
Additional restrictions on the antenna gain apply in some countries. These are listed in the "Max. permitted gain" column in the Overview of country approvals (Page 64). If the antenna gain of the antennas to be connected exceeds the maximum permissible value, you must compensate for the difference by using attenuation elements.

The following table provides an overview of possible attenuation elements and their attenuation values:

Name	Attenuation	Article number
Attenuator	10 dB	6GK5798-0AP00-4CA0
Antenna connecting cable, 1 m long	1.0 dB	6XV1875-5xH10
Antenna connecting cable, 2 m long	1.8 dB	6XV1875-5xH20
Antenna connecting cable, 5 m long	4.3 dB	6XV1875-5xH50

Example

The antenna ANT793-8DL is used.

- Typical antenna gain: 14 dBi
- Maximum permissible gain for channel 36 in Germany: 11 dBi

In this case the typical antenna gain exceeds the maximum permissible gain by 3 dBi. This means you must use an attenuation element with at least 3 dB. This can be a connecting cable, for example, with a length of 5 meters.

2.7.2 Omnidirectional antennas

The following table provides an overview of the omnidirectional antennas that are approved for the SCALANCE WxM763-1 depending on the country.

Country	ANT 792-6MN	ANT 795-4MA	ANT 795-4MB	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Egypt	✓	✓	✓	✓	✓	✓	✓	✓
Albania	✓	✓	✓	✓	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓	✓	✓	✓

Country	ANT 792-6MN	ANT 795-4MA	ANT 795-4MB	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Belgium	✓	✓	✓	✓	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✓	✓
Chile	✓	✓	✓	✓	✓	✓	✓	✓
China	✓	✓	✓	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓	✓	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓	✓
Ireland	✓	✓	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	✓	✓	✓	✓	✓
Israel	✓	✓	✓	✓	✓	✓	✓	✓
Italy	✓	✓	✓	✓	✓	✓	✓	✓
Japan	✓	✓	✓	✓	✓	✓	✓	✓
Canada	✓	✓	✓	✓	✓	✓	---	---
Qatar	✓	✓	✓	✓	✓	✓	✓	✓
Colombia	✓	✓	✓	✓	✓	✓	✓	✓
Croatia	✓	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓	✓	✓	✓	✓
Malta	✓	✓	✓	✓	✓	✓	✓	✓
Monaco	✓	✓	✓	✓	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓	✓	✓	✓	✓
Norway	✓	✓	✓	✓	✓	✓	✓	✓
Oman	✓	✓	✓	✓	✓	✓	✓	✓
Austria	✓	✓	✓	✓	✓	✓	✓	✓
Poland	✓	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓	✓
Russian Federation	✓	✓	✓	✓	✓	✓	✓	✓
San Marino	✓	✓	✓	✓	✓	✓	✓	✓

Country	ANT 792-6MN	ANT 795-4MA	ANT 795-4MB	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Saudi Arabia	✓	✓	✓	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓	✓	✓	✓	✓
Serbia	✓	✓	✓	✓	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓	✓	✓	✓
South Africa	✓	✓	✓	✓	✓	✓	✓	✓
Thailand	✓	✓	✓	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	✓	✓	✓
Turkey	✓	✓	✓	✓	✓	✓	✓	✓
Hungary	✓	✓	✓	✓	✓	✓	✓	✓
Vatican	✓	✓	✓	✓	✓	✓	✓	✓
United States of America	✓	✓	✓	✓	✓	✓	---	---
United Kingdom	✓	✓	✓	✓	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓	✓

2.7.3 Directional antennas

The following table provides an overview of the directional antennas that are approved for the SCALANCE WxM763-1 depending on the country.

Country	ANT792-8DN	ANT793-6DG	ANT793-8DJ	ANT793-8DK	ANT793-8DL	ANT793-8DP	ANT795-6DC
Egypt	✓	✓	✓	✓	✓	✓	✓
Albania	✓	✓	✓	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓	✓	✓
Belgium	✓	✓	✓	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✓
Chile	✓	✓	✓	✓	✓	✓	✓
China	✓	✓	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓

Country	ANT792-8DN	ANT793-6DG	ANT793-8DJ	ANT793-8DK	ANT793-8DL	ANT793-8DP	ANT795-6DC
Ireland	✓	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	✓	✓	✓	✓
Israel	✓	✓	✓	✓	✓	✓	✓
Italy	✓	✓	✓	✓	✓	✓	✓
Japan	✓	✓	✓	✓	✓	✓	✓
Canada	✓	✓	✓	✓	---	✓	✓
Qatar	-	✓	-	-	-	-	✓
Colombia	✓	✓	✓	✓	✓	✓	✓
Croatia	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓	✓	✓	✓
Malta	✓	✓	✓	✓	✓	✓	✓
Monaco	✓	✓	✓	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓	✓	✓	✓
Norway	✓	✓	✓	✓	✓	✓	✓
Oman	✓	✓	✓	✓	✓	✓	✓
Austria	✓	✓	✓	✓	✓	✓	✓
Poland	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓
Russian Federation	✓	✓	✓	✓	✓	✓	✓
San Marino	✓	✓	✓	✓	✓	✓	✓
Saudi Arabia	✓	✓	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓	✓	✓	✓
Serbia	✓	✓	✓	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓	✓	✓
South Africa	✓	✓	✓	✓	✓	✓	✓
Thailand	✓	✓	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	✓	✓
Turkey	✓	✓	✓	✓	✓	✓	✓
Hungary	✓	✓	✓	✓	✓	✓	✓
Vatican	✓	✓	✓	✓	✓	✓	✓
United States of America	✓	✓	✓	✓	---	✓	✓

Country	ANT792-8DN	ANT793-6DG	ANT793-8DJ	ANT793-8DK	ANT793-8DL	ANT793-8DP	ANT795-6DC
United Kingdom	✓	✓	✓	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓

2.7.4 RCoax antennas

The following table provides an overview of the RCoax antennas that are approved for the SCALANCE WxM763-1 depending on the country.

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Egypt	✓	✓	✓	✓
Albania	✓	✓	✓	✓
Andorra	✓	✓	✓	✓
Belgium	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓
Chile	✓	✓	✓	✓
China	✓	✓	✓	✓
Denmark	✓	✓	✓	✓
Germany	✓	✓	✓	✓
Estonia	✓	✓	✓	✓
Finland	✓	✓	✓	✓
France	✓	✓	✓	✓
Greece	✓	✓	✓	✓
Ireland	✓	✓	✓	✓
Iceland	✓	✓	✓	✓
Israel	✓	✓	✓	✓
Italy	✓	✓	✓	✓
Japan	✓	✓	✓	✓
Canada	---	---	---	---
Qatar	✓	✓	✓	✓
Colombia	✓	✓	✓	✓
Croatia	✓	✓	✓	✓
Latvia	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓
Malta	✓	✓	✓	✓
Monaco	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Norway	✓	✓	✓	✓
Oman	✓	✓	✓	✓
Austria	✓	✓	✓	✓
Poland	✓	✓	✓	✓
Portugal	✓	✓	✓	✓
Romania	✓	✓	✓	✓
Russian Federation	✓	✓	✓	✓
San Marino	✓	✓	✓	✓
Saudi Arabia	✓	✓	✓	✓
Sweden	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓
Serbia	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓
Spain	✓	✓	✓	✓
South Africa	✓	✓	✓	✓
Thailand	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓
Turkey	✓	✓	✓	✓
Hungary	✓	✓	✓	✓
Vatican	✓	✓	✓	✓
United States of America	---	---	---	---
United Kingdom	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓

SCALANCE WxB762

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.

3.1 Type designations

Scope of validity

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

Product	Article number	Model
Access points		
SCALANCE WAB762-1	6GK5762-1AJ00-6AA0	ELAX-W1-RJ-E1
Client		
SCALANCE WUB762-1	6GK5762-1AJ00-1AA0	ELAX-W1-RJ-E1
	6GK5762-1AJ00-2AA0 (iFeatures)	ELAX-W1-RJ-E1

3.2 EC declaration of conformity

CE

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

Siemens Aktiengesellschaft
Digital Industries
Process Automation
DE-76187 Karlsruhe
Germany

You can find the current EU declaration of conformity for these products on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

The SIMATIC NET products described in this document meet the requirements of the following EU directives:

- ATEX directive 2014/34/EU
  Directive of the European Parliament and the Council of 26 February 2014 on the approximation of the laws of the member states concerning equipment and protective systems intended for use in potentially explosive atmospheres, official journal of the EU L96, 29/03/2014, pages 309–356
- RoHS directive 2011/65/EU
  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, official journal of the EC L174, 01/07/2011, pages 88-110
- Radio equipment directive 2014/53/EU (RED, Radio Equipment Directive)
  Directive of the European Parliament and of the Council of 16 April 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

3.2.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EU Directive 2014/34/EU "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres".

1 EN IEC 60079-0
  Hazardous areas - Part 0: Equipment - General requirements
2 EN 60079-7
  Explosive atmospheres - Part 7: Equipment protection through increased safety "e"

3.2.2 RoHS

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

The SIMATIC NET product meets the requirements of the EU Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

3 EN IEC 63000
  Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

3.2.3 RED

3.2.3.1 Protection of health and safety

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

4 EN IEC 62311

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

5 EN IEC 62368-1

Equipment for audio, video, information and communication technology - Part 1: Safety requirements

6 EN IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

3.2.3.2 EMC

Art. 3 (1) b) - EMC

7 EN 50121-3-2

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

8 EN 50121-4

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

9 ETSI EN 301 489-1

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

10 ETSI EN 301 489-3

Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) for radio equipment and services – Part 3: Specific conditions for wireless devices with a low range (SRD) for use on frequencies between 9 kHz and 246 GHz

11 ETSI EN 301 489-17

Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems

12 EN 55011

Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

13 EN 55032

Electromagnetic compatibility of multimedia equipment – Emission requirements

14 EN 55035

Electromagnetic compatibility of multimedia equipment - Immunity requirements

15 EN IEC 61000-6-1

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

16 EN IEC 61000-6-2

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

17 EN IEC 61000-6-3

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

18 EN IEC 61000-6-4

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

19 EN IEC 61000-6-8

Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

3.2.3.3 Efficient use of the radio spectrum

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

20 ETSI EN 300 328

Broadband transmission systems – Data transmission equipment operating in the 2.4 GHz ISM band and using broadband modulation techniques. Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

21 ETSI EN 300 440

Electromagnetic compatibility and radio spectrum matters (ERM) – short range devices (SRD) – Radio equipment to be used in the 1 GHz to 40 GHz frequency range - Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

22 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) – 5 GHz high performance RLAN – Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

3.2.4 Other technical standards

23 CISPR 11

Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

24 CISPR 32

Electromagnetic compatibility of multimedia equipment. Emission requirements

25 CISPR 35

Electromagnetic compatibility of multimedia equipment - Immunity requirements

26 EN IEC / IEC 61000-6-1

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

27 EN IEC / IEC 61000-6-2

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

28 EN IEC / IEC 61000-6-3

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

29 EN IEC / IEC 61000-6-4

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

30 EN IEC / IEC 61000-6-8

Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

31 EN IEC / IEC 62311

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

32 EN IEC / IEC 62368-1

Audio/video, information and communication technology equipment - Part 1: Safety requirements

33 EN IEC / IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

34 NAMUR NE21

Automation engineering of modular systems in the process industry - Modelling of module services

3.2.5 Products

CE conformity

The standards applying to the product are described in ATEX (Page 80), RoHS (Page 80) and RED (Page 81).

Product	Standards
SCALANCE WAB762-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
SCALANCE WUB762-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

3.3 UK Declaration of Conformity

UK CA

The UK declaration of conformity is available to all responsible authorities at:

Siemens Aktiengesellschaft
Digital Industries
Process Automation
DE-76187 Karlsruhe
Germany

Importer UK:
Siemens plc,
Manchester M20 2UR
United Kingdom

You can find the current UK Declaration of Conformity for these products on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/ps/28575/cert).

The SIMATIC NET products described in this document meet the requirements of the following directives:

- UK Regulation
  SI 2016/1107 The Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016, and related amendments
- RoHS Regulation
  SI 2012/3032 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, and related amendments
- Radio Equipment Regulation
  SI 2017/1206 The Radio Equipment Regulations 2017

3.3.1 Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016

Correct usage in potentially explosive atmospheres

The SIMATIC NET product meets the requirements of "Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations ".

1 EN IEC 60079-0
  Hazardous areas - Part 0: Equipment - General requirements
2 EN 60079-7
  Explosive atmospheres - Part 7: Equipment protection through increased safety "e"

3.3.2 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Restriction of the use of certain hazardous substances

The SIMATIC NET product meets the requirements of "The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012".

Applied standard:

3 EN IEC 63000

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

3.3.3 Radio Equipment Regulations 2017

3.3.3.1 Protection of health and safety

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

4 EN IEC 62311

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

5 EN IEC 62368-1

Equipment for audio, video, information and communication technology - Part 1: Safety requirements

6 EN IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

3.3.3.2 EMC

Art. 3 (1) b) - EMC

7 EN 50121-3-2

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

8 EN 50121-4

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

9 ETSI EN 301 489-1

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

10 ETSI EN 301 489-3
Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) for radio equipment and services – Part 3: Specific conditions for wireless devices with a low range (SRD) for use on frequencies between 9 kHz and 246 GHz

11 ETSI EN 301 489-17
Electromagnetic compatibility and radio spectrum matters (ERM) - Electromagnetic compatibility for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems

12 EN 55011
Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement

13 EN 55032
Electromagnetic compatibility of multimedia equipment – Emission requirements

14 EN 55035
Electromagnetic compatibility of multimedia equipment - Immunity requirements

15 EN IEC 61000-6-1
Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

16 EN IEC 61000-6-2
Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

17 EN IEC 61000-6-3
Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

18 EN IEC 61000-6-4
Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

19 EN IEC 61000-6-8
Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

3.3.3.3 Efficient use of the radio spectrum

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

20 ETSI EN 300 328

Broadband transmission systems – Data transmission equipment operating in the 2.4 GHz ISM band and using broadband modulation techniques. Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

21 ETSI EN 300 440

Electromagnetic compatibility and radio spectrum matters (ERM) – short range devices (SRD) – Radio equipment to be used in the 1 GHz to 40 GHz frequency range - Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

22 ETSI EN 301 893

Broadband Radio Access Networks (BRAN) – 5 GHz high performance RLAN – Harmonized EN covering the essential requirements of article 3.2 of the EU Directive 2014/53/EU

3.3.4 Other technical standards

Art. 3 (3) a)-i) Delegated acts for radio equipment

23 CISPR 11

Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement

24 CISPR 32

Electromagnetic compatibility of multimedia equipment. Emission requirements

25 CISPR 35

Electromagnetic compatibility of multimedia equipment - Immunity requirements

26 EN IEC / IEC 61000-6-1

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

27 EN IEC / IEC 61000-6-2

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

28 EN IEC / IEC 61000-6-3

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

29 EN IEC / IEC 61000-6-4

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

30 EN IEC / IEC 61000-6-8

Electromagnetic compatibility (EMC) - Part 6-8: Generic standards - Emission standard for professional equipment in commercial and light-industrial locations

31 EN IEC / IEC 62311

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

32 EN IEC / IEC 62368-1

Audio/video, information and communication technology equipment - Part 1: Safety requirements

33 EN IEC / IEC 62368-3

Equipment for audio, video, information and communication technology - Safety - Part 3: DC power transfer through information technology communication cabling

34 NAMUR NE21

Automation engineering of modular systems in the process industry - Modelling of module services

3.3.5 Products

UK conformity

The standards applying to the product are described in Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Page 84), The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (Page 85) and Radio Equipment Regulations 2017 (Page 85).

Product	Standards
SCALANCE WAB762-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34
SCALANCE WUB762-1	1,2,3,4,5,6,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34

3.4 General approvals

ATEX, IECEx, UKEX and CCC Ex certification

WARNING

Risk of explosion in hazardous areas

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 subassemblies/modules in a Zone 2 Hazardous Area".

You will find this document

- on the Internet pages under Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/view/78381013).

The markings of the electrical devices are:

II 3G Ex ec IIC T4 Gc
DEKRA 18ATEX0026 X
IECEx DEK 18.0018X

II 3G Ex ec IIC T4 Gc
DEKRA 21UKEX0002 X
Importer UK:
Siemens plc,
Manchester, M20 2UR, UK

(Ex ec IIC T4 Gc, not on the nameplate)

The product meets the requirements of the standards:

- EN IEC/IEC 60079-0, GB/T 3836.1
- EN/IEC 60079-7, GB/T 3836.3

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

FM

The product meets the requirements of the standards:

- FM Class 3600, FM Class 3611, FM Class 3810
- ANSI/UL 121201, ANSI/UL 61010-1
- 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 62368-1
- CSA C22.2 No. 62368-1

Report no. E115352

cULus approval for industrial control equipment

cULus Listed PROG-CNTLR.

Underwriters Laboratories Inc. complying with

- UL 61010-1
- UL 61010-2-201
- CSA C22.2 NO 61010-1
- CSA C22.2 NO 61010-2-201

Report no. E115352

cULus Approval Hazardous Location

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

Underwriters Laboratories Inc. complying with

- UL 121201 (Non Incendive electrical equipment) approved for use in Class I, Division 2, Groups A, B, C, D, T4.
- UL CSA C22.2 NO 213 (Non Incendive electrical equipment) approved for use in Class I, Zone 2, Group IIC, T4.

3.5 Country-specific notes

3.5.1 Notes for the USA (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.

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

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.

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.

3.6 Overview of country approvals

The following table lists the countries in which the SCALANCE WxB762-1 product is approved.

Depending on the antenna settings in use, a special regulation of the transmit power may be required in some countires.

The current status of the approvals can be found on the Internet at the following address: Approvals (https://www.siemens.com/wireless-approvals).

Column	Meaning
Country	Country
Mode	IEEE 802.11 standard and the DFS functionality, where required
CH	IEEE 802.11 channel
MHz	IEEE 802.11 frequency
PWR (EIRP)	Maximum permitted effective isotropic radiated power
Max. permitted gain	Maximum permissible antenna gain [2)]
Use	Permitted use indoors and / or outdoors

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Albania Andorra Austria Belgium Bosnia and Herzegovina Bulgaria Croatia Denmark Germany Estonia Finland France Greece Ireland Iceland Italy Latvia Liechtenstein Lithuania Luxembourg Malta Monaco Montenegro Netherlands Norway Poland Portugal Romania San Marino Sweden Switzerland Slovakia Slovenia Spain Czech Republic Hungary Vatican Cyprus 	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	14 dBi [2)]	Indoor only
	11a 11ac 11ax 11n	149 - 173	5745 - 5865	14 dBm	12 dBi [2)]	Indoor + Outdoor

Country	Mode	CH	MHz	PWR (EIRP)	Max. permitted gain	Use
Turkey	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	14 dBi 2)	Indoor only
	11a 11ac 11ax 11n	149 - 173	5745 - 5865	14 dBm	12 dBi 2)	Indoor + Outdoor
United Kingdom	11ax 11g 11n	1 - 13	2412 - 2472	20 dBm	-	Indoor + Outdoor
	11a 11ac 11ax 11n	36 - 48	5180 - 5240	23 dBm	14 dBi 2)	Indoor only
	11a 11ac 11ax 11n	149 - 173	5745 - 5865	14 dBm	12 dBi 2)	Indoor + Outdoor

1) In this country the use of 80 MHz channel width is not permitted in the channels 52 to 140.

2) Maximum permissible gain: Antenna and additional attenuation elements

3.7 Overview of antennas

3.7.1 Use of attenuation elements

The minimum transmit power of the SCALANCE W device is 1 dBm (1 TX) or 4 dBm (2 TX). When using antennas with a very high antenna gain, the maximum permitted EIRP (equivalent isotropic radiated power) of the device is often exceeded even at minimum transmit power. In this case, additional attenuation elements such as attenuators or connecting cables must be used between the device and the antennas.
Additional restrictions on the antenna gain apply in some countries. These are listed in the "Max. permitted gain" column in the Overview of country approvals (Page 91). If the antenna gain of the antennas to be connected exceeds the maximum permissible value, you must compensate for the difference by using attenuation elements.

The following table provides an overview of possible attenuation elements and their attenuation values:

Name	Attenuation	Article number
Attenuator	10 dB	6GK5798-0AP00-4CA0
Antenna connecting cable, 1 m long	1.0 dB	6XV1875-5xH10

Name	Attenuation	Article number
Antenna connecting cable, 2 m long	1.8 dB	6XV1875-5xH20
Antenna connecting cable, 5 m long	4.3 dB	6XV1875-5xH50

Example

The antenna ANT793-8DL is used.

- Typical antenna gain: 14 dBi
- Maximum permissible gain for channel 36 in Germany: 11 dBi

In this case the typical antenna gain exceeds the maximum permissible gain by 3 dBi. This means you must use an attenuation element with at least 3 dB. This can be a connecting cable, for example, with a length of 5 meters.

3.7.2 Omnidirectional antennas

The following table provides an overview of the omnidirectional antennas that are approved for the SCALANCE WxB762-1 depending on the country.

Country	ANT 792-6MN	ANT 795-4MA	ANT 795-4MB	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Albania	✓	✓	✓	✓	✓	✓	✓	✓
Andorra	✓	✓	✓	✓	✓	✓	✓	✓
Belgium	✓	✓	✓	✓	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✓	✓
Denmark	✓	✓	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓	✓	✓	✓	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓	✓	✓
Greece	✓	✓	✓	✓	✓	✓	✓	✓
Ireland	✓	✓	✓	✓	✓	✓	✓	✓
Iceland	✓	✓	✓	✓	✓	✓	✓	✓
Italy	✓	✓	✓	✓	✓	✓	✓	✓
Croatia	✓	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓	✓	✓	✓	✓
Malta	✓	✓	✓	✓	✓	✓	✓	✓
Monaco	✓	✓	✓	✓	✓	✓	✓	✓

Country	ANT 792-6MN	ANT 795-4MA	ANT 795-4MB	ANT 795-4MX	ANT 795-6MN	ANT 795-6MP	ANT 897-4ME	ANT 897-5PN
Montene-gro	✓	✓	✓	✓	✓	✓	✓	✓
Nether-lands	✓	✓	✓	✓	✓	✓	✓	✓
Norway	✓	✓	✓	✓	✓	✓	✓	✓
Austria	✓	✓	✓	✓	✓	✓	✓	✓
Poland	✓	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓	✓
San Marino	✓	✓	✓	✓	✓	✓	✓	✓
Sweden	✓	✓	✓	✓	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓	✓	✓	✓	✓
Spain	✓	✓	✓	✓	✓	✓	✓	✓
Czech Re-public	✓	✓	✓	✓	✓	✓	✓	✓
Turkey	✓	✓	✓	✓	✓	✓	✓	✓
Hungary	✓	✓	✓	✓	✓	✓	✓	✓
Vatican	✓	✓	✓	✓	✓	✓	✓	✓
United Kingdom	✓	✓	✓	✓	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓	✓

3.7.3 Directional antennas

The following table provides an overview of the directional antennas that are approved for the SCALANCE WxB762-1 depending on the country.

Country	ANT793-6DG	ANT795-6DC
Albania	✓	✓
Andorra	✓	✓
Belgium	✓	✓
Bosnia and Herzegovina	✓	✓
Bulgaria	✓	✓
Denmark	✓	✓
Germany	✓	✓
Estonia	✓	✓
Finland	✓	✓
France	✓	✓
Greece	✓	✓
Ireland	✓	✓

Country	ANT793-6DG	ANT795-6DC
Iceland	✓	✓
Italy	✓	✓
Croatia	✓	✓
Latvia	✓	✓
Liechtenstein	✓	✓
Lithuania	✓	✓
Luxembourg	✓	✓
Malta	✓	✓
Monaco	✓	✓
Montenegro	✓	✓
Netherlands	✓	✓
Norway	✓	✓
Austria	✓	✓
Poland	✓	✓
Portugal	✓	✓
Romania	✓	✓
San Marino	✓	✓
Sweden	✓	✓
Switzerland	✓	✓
Slovakia	✓	✓
Slovenia	✓	✓
Spain	✓	✓
Czech Republic	✓	✓
Turkey	✓	✓
Hungary	✓	✓
Vatican	✓	✓
United Kingdom	✓	✓
Cyprus	✓	✓

3.7.4 RCoax antennas

The following table provides an overview of the RCoax antennas that are approved for the SCALANCE WxB762-1 depending on the country.

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Albania	✓	✓	✓	✓
Andorra	✓	✓	✓	✓
Belgium	✓	✓	✓	✓
Bosnia and Herzegovina	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓
Denmark	✓	✓	✓	✓

Country	ANT792-4DN	ANT793-4MN	RCoax Cable 1/2" 2,4 GHz	RCoax Cable 1/2" 5 GHz
Germany	✓	✓	✓	✓
Estonia	✓	✓	✓	✓
Finland	✓	✓	✓	✓
France	✓	✓	✓	✓
Greece	✓	✓	✓	✓
Ireland	✓	✓	✓	✓
Iceland	✓	✓	✓	✓
Italy	✓	✓	✓	✓
Croatia	✓	✓	✓	✓
Latvia	✓	✓	✓	✓
Liechtenstein	✓	✓	✓	✓
Lithuania	✓	✓	✓	✓
Luxembourg	✓	✓	✓	✓
Malta	✓	✓	✓	✓
Monaco	✓	✓	✓	✓
Montenegro	✓	✓	✓	✓
Netherlands	✓	✓	✓	✓
Norway	✓	✓	✓	✓
Austria	✓	✓	✓	✓
Poland	✓	✓	✓	✓
Portugal	✓	✓	✓	✓
Romania	✓	✓	✓	✓
San Marino	✓	✓	✓	✓
Sweden	✓	✓	✓	✓
Switzerland	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓
Slovenia	✓	✓	✓	✓
Spain	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓
Turkey	✓	✓	✓	✓
Hungary	✓	✓	✓	✓
Vatican	✓	✓	✓	✓
United Kingdom	✓	✓	✓	✓
Cyprus	✓	✓	✓	✓

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