

# SIEMENS

SIMATIC NET

**Betriebsanleitung (kompakt)**  
**Operating Instructions (Compact)**

A5E00434665

Ausgabe/Release 02/2008

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**IWLAN/PB LINK PN IO**

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Deutsch/English

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Änderungen vorbehalten  
Subject to change

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Siemens AG  
Automation and Drives  
Industrial Communication  
Postfach 4848, D-90327 Nürnberg

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### **Haftungsausschluss**

Wir haben den Inhalt der Druckschrift auf Übereinstimmung mit der beschriebenen Hard- und Software geprüft. Dennoch können Abweichungen nicht ausgeschlossen werden, so dass wir für die vollständige Übereinstimmung keine Gewähr übernehmen. Die Angaben in dieser Druckschrift werden regelmäßig überprüft und notwendige Korrekturen sind in den nachfolgenden Auflagen enthalten. Für Verbesserungsvorschläge sind wir dankbar.

Technische Änderungen bleiben vorbehalten.

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**Disclaimer of Liability**

We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcome.

Technical data subject to change without prior notice.



Bitte beachten Sie die Warnhinweise und zusätzlichen Informationen in der Betriebsanleitung (kompakt) in Ihrer Sprache im Internet:

<http://www4.ad.siemens.de/view/cs/at/21379908>  
<http://www4.ad.siemens.de/view/cs/ch/21379908>  
<http://www4.ad.siemens.de/view/cs/de/21379908>  
<http://www4.ad.siemens.de/view/cs/li/21379908>  
<http://www4.ad.siemens.de/view/cs/lu/21379908>

Please observe the warnings and additional information in the user manual (compact) in your language in the Internet:

<http://www4.ad.siemens.de/view/cs/au/21379908>  
<http://www4.ad.siemens.de/view/cs/ca/21379908>  
<http://www4.ad.siemens.de/view/cs/gb/21379908>  
<http://www4.ad.siemens.de/view/cs/ie/21379908>  
<http://www4.ad.siemens.de/view/cs/us/21379908>  
<http://www4.ad.siemens.de/view/cs/za/21379908>

Veuillez observer les avertissements et informations supplémentaires du manuel d'utilisation (compact) dans votre langue dans l'internet:

<http://www4.ad.siemens.de/view/cs/be/21379908>  
<http://www4.ad.siemens.de/view/cs/ch/21379908>  
<http://www4.ad.siemens.de/view/cs/fr/21379908>  
<http://www4.ad.siemens.de/view/cs/lu/21379908>

Osservare le avvertenze di sicurezza e le informazioni aggiuntive nel manuale d'istruzioni (compatto) nella propria lingua in Internet:

<http://www4.ad.siemens.de/view/cs/it/21379908>

Por favor, observe las indicaciones de advertencia y las informaciones adicionales en las instrucciones de servicio (compactas) en su idioma disponibles en Internet:

<http://www4.ad.siemens.de/view/cs/cl/21379908>

<http://www4.ad.siemens.de/view/cs/es/21379908>

Berte prosím v úvahu výstražné pokyny a dodatečné informace v provozním návodu (kompakt) na internetu ve vaší řeči:

<http://www4.ad.siemens.de/view/cs/cz/21379908>

De bedes iagttage advarselsanvisningerne og de yderligere informationer i betjeningsvejledningen (kompakt) for Deres sprog på internettet:

<http://www4.ad.siemens.de/view/cs/dk/21379908>

Huomioi internetissä oman kielisessäsi käyttöohjeessa (kompakti) olevat varoitushjeet ja lisäinformaatiot:

<http://www4.ad.siemens.de/view/cs/fi/21379908>

Προσέξτε παρακαλώ τις προειδοποιητικές υποδείξεις και τις πρόσθετες πληροφορίες στις οδηγίες λειτουργίας (συνεπιτηγμένες) στη γλώσσα σας στο διαδίκτυο.

<http://www4.ad.siemens.de/view/cs/gr/21379908>

请遵守互联网上用您的语言编写的用户手册（简易版）中的警告信息和附加说明:

<http://www4.ad.siemens.de/view/cs/hk/21379908>

<http://www4.ad.siemens.de/view/cs/sg/21379908>

Kérjük, vegye figyelembe az Interneten található magyar nyelvű használati utasításban (kompakt) olvasható figyelmeztető utasításokat és a kiegészítő információkat!

<http://www4.ad.siemens.de/view/cs/hu/21379908>

Vinsamlegast athugið varúðarábendingar og viðbótarupplýsingar í notenda-handbókinni (stytt útgáfa) á Netinu:

<http://www4.ad.siemens.de/view/cs/is/21379908>

以下のインターネットアドレスでお客様の言語による取扱説明書 (コンパクト版) をご覧 <http://www4.ad.siemens.de/view/cs/jp/21379908>

いただけます。同取扱説明書内に記載された警告事項および補足情報にご注意ください。

인터넷 <http://www4.ad.siemens.de/view/cs/kr/21379908> 에서 귀하의

사용 언어로 된 사용자 설명서(컴팩트)의 경고 및 추가 정보를 확인하십시오.

برجاء مراعاة إرشادات التحذير والمعلومات الإضافية  
الملحقة بدليل التشغيل (المدمج) وباللغة التي تتحدث  
ذلك عن طريق شبكة الإنترنت و

<http://www4.ad.siemens.de/view/cs/kw/21379908>

Neem de waarschuwingen en de bijkomende informatie in acht, te vinden in de handleiding (compact) in uw taal in het internet:

<http://www4.ad.siemens.de/view/cs/be/21379908>

<http://www4.ad.siemens.de/view/cs/nl/21379908>

Betriebsanleitung (kompakt) IWLAN/PB LINK PN IO  
A5E00434665-05

Vennligst se advarsler og ytterligere opplysninger i driftsveiledningen (kompakt) på ditt språk i Internett:

<http://www4.ad.siemens.de/view/cs/no/21379908>

Por favor observe as advertências e as informações adicionais no manual de instruções (compacto) na sua língua na internet:

<http://www4.ad.siemens.de/view/cs/pt/21379908>

Var vänlig observera varningarna och tilläggsinformationerna i bruksanvisningen (kompakt) på ditt språk på Internet:

<http://www4.ad.siemens.de/view/cs/se/21379908>

Lütfen internette sizin dilinizde sunulan işletme kılavuzundaki (yoğunlaştırılmış) uyarı bilgilerine ve ek bilgilere dikkat ediniz:

<http://www4.ad.siemens.de/view/cs/tr/21379908>



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# 1 Safety instructions

## 1.1 Classification of safety-related notices



### **Warning**

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

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### **Caution**

with a warning triangle indicates that minor personal injury can result if proper precautions are not taken.

---

### **Caution**

without a warning triangle indicates that damage to property can result if proper precautions are not taken.

---

### **Notice**

indicates that an undesirable result or status can occur if the relevant notice is ignored.

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**Note**

highlights important information on the product, using the product, or part of the documentation that is of particular importance and that will be of benefit to the user.

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## 1.2 General safety instructions for the IWLAN/PB Link PN IO

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**Warning**

Before installation and startup, read the information in the Operating Instructions (compact) IWLAN/PB LINK PN IO.

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**Warning**

Antennas installed outdoors must be within the area covered by a lightning protection system. Make sure that all conducting systems entering from outdoors can be protected by a lightning protection potential equalization system.

When implementing your lightning protection concept, make sure you adhere to the VDE 0182 or IEC 62305 standard.

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### **Warning**

The IWLAN/PB LINK PN IO devices are designed for operation with a directly connected safety extra-low voltage. Therefore only safety extra-low voltage (SELV) with limited power source (LPS) complying with IEC950/EN60950/VDE0805 may be connected to the power supply terminals.

Take measures to prevent transient voltage surges of more than 40% of the rated voltage. This is the case if you only operate devices with SELV (safety extra-low voltage).

The power supply unit to supply the IWLAN/PB LINK PN IO must comply with NEC Class 2 (requirements of class 2 for power supply units of the "National Electrical Code, table 11 (b)") or SELV with LPS (Limited Power Source) EN 60950-1 (voltage range 20.4 – 28.8 V, current consumption 0.3 A). If the device is connected to a redundant power supply (two separate power supplies), both must meet these requirements.

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**Caution**

There must be no potential difference between the following parts otherwise there is a risk that the device will be destroyed:

- Ground potential of the power supply and ground potential of the antenna ground.
- Ground potential of the power supply and a grounded housing.
- Ground potential of the power supply and the ground potential of the device connected to PROFIBUS (for example PC, AS-300, AS-400; ET 200S etc.)

Connect both grounds to the same foundation earth or use an equipotential bonding cable.

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**Note**

The correct country setting is mandatory for operation complying with the approvals. Selecting a country different from the country of use can lead to legal prosecution!

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## **Warnings relating to operation in hazardous areas (zone 2)**

WARNING - EXPLOSION HAZARD  
SUBSTITUTION OF COMPONENTS MAY  
IMPAIR SUITABILITY FOR CLASS I, DIVISION 2  
OR ZONE 2.

WARNING - EXPLOSION HAZARD  
DO NOT OPEN WHEN WHEN ENERGIZED.

WARNING - WHEN USED IN HAZARDOUS  
ENVIRONMENTS CORRESPONDING TO  
CLASS I, DIVISION 2 OR CLASS I, ZONE 2,  
THE DEVICE MUST BE INSTALLED IN A  
CABINET OR SUITABLE ENCLOSURE. TO  
COMPLY WITH ATEX95 (EN60079-15), THIS  
ENCLOSURE MUST MEET THE  
REQUIREMENTS OF AT LEAST IP54 IN  
COMPLIANCE WITH EN 60529.

WARNING - EXPLOSION HAZARD  
DO NOT DISCONNECT EQUIPMENT WHEN A  
FLAMMABLE OR COMBUSTIBLE  
ATMOSPHERE IS PRESENT.



## 2 Introduction

### Information on the operating instructions (compact) IWLAN/PB Link PN IO

These Operating Instructions (compact) cover the following product:

IWLAN/PB LINK PN IO hardware version 03

Order number    6GK1 417-5AB00  
                      6GK1 417-5AB01 (US variant)

These Operating Instructions (compact) apply to the following software version:

IWLAN/PB LINK firmware as of version 1.2.23

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#### **Note**

For the precise product name and order number, please refer to the printed label on the packaging or on the device.

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**Notice**

Make sure that you read the explanations and instructions in the README.TXT file.

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## 3 Description

### Components of the product

The following parts ship with an IWLAN/PB LINK PN IO:

- IWLAN/PB LINK PN IO
- 1 connector for power supply (4-pin)
- 1 sealing plug for the R-SMA socket
- 1 SIMATIC NET Industrial Wireless LAN CD
- These operating instructions for the IWLAN/PB LINK PN IO

Please check that the consignment you have received is complete. If it is not complete, please contact your supplier or your local Siemens office.



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## 4 Technical specifications

### Data transfer

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Wireless transmission rate	1 ... 54 Mbps
Wireless standards supported	802.11a 802.11b 802.11g 802.11h 802.11i
PROFIBUS transmission rate	9.6 Kbps 19.2 Kbps 45.45 Kbps 93.75 Kbps 187.5 Kbps 500 Kbps 1.5 Mbps 3 Mbps 6 Mbps 12 Mbps

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**Segment length**

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Maximum segment length for PROFIBUS	20 m
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Note:  
if the specified length is exceeded, a repeater is required.

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**Interfaces**

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Industrial Wireless LAN	R-SMA antenna socket
PROFIBUS	9-pin D-sub socket

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**Electrical data**

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Power supply	2 power supplies for +20.4 V to 28.8 V DC The power supply is electrically isolated; there is a high-resistance connection (>700 kilohms) with the contact spring for installation of the housing on a DIN rail).
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Current consumption from external 24 V DC	approx. 0.3 A (typical at 24 V)
Maximum current consumption on the PROFIBUS interface when network components are connected (for example optical network components)	100 mA at 5 V
Power loss	6.5 W

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### Construction

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Module format	Compact module
Dimensions (W x H x D) in mm	90 x 132 x 75
Weight	approx. 300 g

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### Permitted ambient conditions

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Operating temperature	0° C to +60° C
Transport/storage temperature	-40° C to +70° C
Relative humidity	max. 95% at +25° C
Operating altitude	up to 2000 m above sea level

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## **5 Approvals**

### **5.1 Approvals for the IWLAN/PB LINK PN IO**

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#### **Note**

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.

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#### **CE conformity**

The IWLAN/PB LINK PN IO product in the version put into circulation by Siemens A&D conforms to the regulations of the following European directive:

#### **99/5/EC**

Directive of the European Parliament and of the Council relating to Radio Equipment and Telecommunications Terminal Equipment and the Mutual Recognition of their Conformity.



Conformity with the essential requirements of the directive is attested by adherence to the following standards:

**EN 60950-1**

Safety of information technology equipment

**EN 301489-1**

Electromagnetic compatibility for radio equipment and services

**EN 301489-17**

Specific requirements for broadband data transmission systems and for equipment in local high-performance wireless networks (HIPERLAN)

**EN 300328**

Electromagnetic compatibility and radio spectrum issues

**EN 301893**

Broadband radio access networks (BRAN) – 5 GHz high-performance RLAN

**EN 50371**

Compliance of low power electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)

**1999/519/EC**

Council recommendation on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

Devices connected to the system must meet the relevant safety regulations.

The EC Declaration of Conformity is available for the responsible authorities according to the above-mentioned EC Directive at the following address:

Siemens AG  
Automation and Drives  
Industrial Communication  
Postfach 4848, D-90327 Nuremberg

This declaration certifies compliance with the directives named above, but does not guarantee any specific properties.

## **ATEX, cULus and FM approvals**

The product

SIMATIC NET IWLAN/PB LINK PN IO

has the following approvals

- **UL Approval**  
UL LISTED I.T.E. (Information Technology Equipment)  
Underwriters Laboratories Inc. complying with  
UL 60950-1
- **CSA Approval**  
CSA Certification Mark  
Canadian Standard Association complying with  
CSA C22.2 No. 60950-1-03
- **cULus Approval**  
cULus LISTED I. T. E. (Information Technology Equipment)  
Underwriters Laboratories Inc. complying with  
UL 60950-1  
CSA C22.2 No. 60950-1-03

- cULus Approval  
cULus LISTED IND. CONT. EQ. (Industrial Control Equipment)  
Underwriters Laboratories Inc. complying with  
UL 508  
CSA C22.2 No. 14
- cULus Approval for Hazardous Location  
cULus LISTED I. T. E. FOR HAZ. LOC.  
Underwriters Laboratories Inc. complying with  
UL 60950-1  
CSA C22.2 No. 60950-1-03  
UL 1604 and UL 2279 Pt.15 (Hazardous Location)  
Approved for use in  
Cl. 1, Div. 2, GP. A, B, C, D T\*  
Cl. 1, Zone 2, GP. IIC T\*  
Cl. 1, Zone 2, Aex nC IIC T\*
- cULus Approval for Hazardous Location  
cULus LISTED Ind. Cont. Eq. FOR HAZ. LOC.  
Underwriters Laboratories Inc. complying with  
UL 508  
CSA C22.2 No. 14  
UL 1604 and UL 2279 Pt.15 (Hazardous Location)  
Approved for use in  
Cl. 1, Div. 2, GP. A, B, C, D T\*  
Cl. 1, Zone 2, GP. IIC T\*  
Cl. 1, Zone 2, Aex nC IIC T\*

- FM Approval  
Factory Mutual Approval Standard Class Number 3611  
Approved for use in  
Class I, Division 2, Group A, B, C, D T\*  
Class I, Zone 2, Group IIC T\*
- ATEX Approval  
European Union Directive 94/7/EC (ATEX 100a)  
EN 60079-15, EN50021  
Approved for use in  
Class I, Zone 2, Group IIC T\*  
Cat. 3 G, Group II T\*

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**Note**

T\* = For concrete information on the temperature class, refer to the type plate.

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**Note**

When used under hazardous conditions (zone 2), the IWLAN/PB LINK PN IO product must be installed in an enclosure. To meet the requirements of ATEX100a, the enclosure must have at least IP54 in compliance with EN 60529.

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**Note**

The specified approvals apply only when the corresponding mark is printed on the product.

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**Warning**

Do not disconnect equipment when a flammable or combustible atmosphere is present.

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**Declaration of Conformity**

Manufacturer / responsible person: Dietmar Herian  
 Address: Siemens AG  
A&D PT 2  
Östliche Rheinbrückenstr. 50  
76187 Karlsruhe

Declares that the product:  
 type: IWLAN PB LINK PNIO  
 model: \_\_\_\_\_

Intended use: Wireless Communication

Complies with the essential requirements of Article 3 of the R&TTE 1999/5/EC Directive, if used for its intended use and that the following standards have been applied:

1. Safety (Article 3.1.a of the R&TTE Directive)  
 Applied standard(s) issue

EN 60950 2000

2. Electromagnetic compatibility (Article 3.1.b of the R&TTE Directive)  
 Applied standard(s) issue

EN 301489-1 V1.4.1 2002-08

EN 301489-17 V1.2.1 2002-08

3. efficient use of the radio frequency spectrum (Article 3.2 of the R&TTE Directive)  
 Applied standard(s) issue

EN 300 328-2 V1.2.1 2001-12

EN 301 893 V1.2.3 2003-08

4. Health (Article 3.1a of the R&TTE Directive)  
 Applied standard(s) issue

EN 50 392 2002

1999/519/EC

Nuremberg, 7.03.2005  
 (Place and Date)

  
 (Name and Signature)

## **FCC approval**

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.

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.

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### **Notice**

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

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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.



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If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

---

### **Notice**

#### **FCC radiation exposure statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 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.

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## ETIQUETA ANATEL



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

## 사용자안내문(제5조제1항제1호관련)

기종별	사용자안내문
A급 기기 (업무용 정보통신기기)	이 기기는 업무용으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며 만약 잘못 판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다.
B급 기기 (가정용 정보통신기기)	이 기기는 가정용으로 전자파적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

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


## 5.2 National approvals


The following table lists the countries in which the IWLAN/PB LINK PN IO is approved. The diamond symbol (◆) identifies all countries for which there was no approval at the time these operating instructions were written.


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

<http://www.siemens.com/simatic-net/ik-info>

Country	Mode	CH	MHz	PWR (EIRP)	Use
Argentina ◆	11b	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
	11a TPC	56	5280	50 mW	Indoor + outdoor
		60	5300		
		64	5320		
149		5745	1000 mW	Indoor + outdoor	
-	-				
161	5805				



Country	Mode	CH	MHz	PWR (EIRP)	Use
Australia ♦ 	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		- 13	- 2472		
	11a TPC	36	5180	200 mW	Indoor only
		- 64	- 5320		
		149 - 165	5745 - 5825		
	11a Turbo TPC	42	5210	50 mW	Indoor only
		50 58	5250 5290	200 mW	Indoor only
		152 160	5760 5800	1000 mW	Indoor + outdoor


Country	Mode	CH	MHz	PWR (EIRP)	Use
Belgium 	11b 11g g-Turbo	1	2412	100 mW	Indoor only
		-	-		
		13	2472		
	11a TPC	36	5180	200 mW	Indoor only
		-	-		
		48	5240		
11h DFS+TPC	36	5180	200 mW	Indoor only	
	-	-			
	64	5320	1000 mW	Indoor + outdoor	
	100	5500			
-	-				
140	5700				
Brazil ♦	11b 11g 11g-Turbo	1	2412	1000 mW	Indoor + outdoor
		-	-		
		13	2472		
	11a TPC	36	5180	200 mW	Indoor only
		-	-		
		48	5240		
	11h DFS+TPC	36	5180	200 mW	Indoor only
		-	-		
		64	5320	1000 mW	Indoor + outdoor
		149	5745		
-		-			
165	5825				

Country	Mode	CH	MHz	PWR (EIRP)	Use
Bulgaria 	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		- 13	- 2472		
	11h DFS+TPC	36	5180	200 mW	Indoor only
		- 56	- 5280		
		100	5500	1000 mW	Indoor + outdoor
		- 140	- 5700		


Country	Mode	CH	MHz	PWR (EIRP)	Use
Chile ♦	11b	1	2412	100 mW	Indoor only
		-	-		
		13	2472		
	11h DFS+TPC	36	5180	100 mW	Indoor only
		-	-		
		48	5240	100 mW	Indoor + outdoor
		-	-		
		52	5260	100 mW	Indoor + outdoor
		64	5320		
	149	5745	100 mW	Indoor only	
-		-			
165	5825	100 mW	Indoor only		
	-			-	
11h Turbo	42	5210	100 mW	Indoor only	
	50	5250	100 mW	Indoor + outdoor	
		58			5290
	152	5760	100 mW	Indoor only	
		160			5800
	China ♦	11b 11g g-Turbo	1	2412	100 mW
-			-		
13			2472		
11a TPC		149	5745	500 mW	Indoor + outdoor
		-	-		
		165	5825		



Country	Mode	CH	MHz	PWR (EIRP)	Use
Denmark	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
Germany		-	-		
Finland		13	2472		
Greece	11a TPC	36	5180	200 mW	Indoor only
United King- dom		-	-		
Ireland		48	5240		
Iceland	11h DFS+TPC	36	5180	200 mW	Indoor only
Italy		-	-		
Liechtenstein		64	5320		
Luxembourg		100	5500	1000 mW	Indoor + outdoor
The Nether- lands		-	-		
Norway		140	5700		
Austria					
Poland					
Portugal					
Rumania					
Sweden					
Switzerland					
Slovakia					
Slovenia					
Spain					
Hungary					
 					

Country	Mode	CH	MHz	PWR (EIRP)	Use
France 	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		7	2442		
	11b 11g g-Turbo	8	2447	100 mW	Indoor only
		-	-		
		13	2472		
	11a TPC	36	5180	200 mW	Indoor only
		-	-		
		48	5240		
11h DFS+TPC	36	5180	200 mW	Indoor only	
	-	-			
	64	5320			
11h DFS+TPC	100	5500	1000 mW	Indoor + outdoor	
	-	-			
	140	5700			

Country	Mode	CH	MHz	PWR (EIRP)	Use	
Hong Kong ♦	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor	
		-	-			
		13	2472			
	11a TPC	36	5180	200 mW	Indoor + outdoor	
		-	-			
		64	5320			
		149	5745			
	11a Turbo TPC	-	-	1000 mW	Indoor + outdoor	
		165	5825			
42		5210	50 mW			Indoor + outdoor
50		5250	200 mW			Indoor + outdoor
58		5290	1000 mW			Indoor + outdoor
India ♦	11b 11g g-Turbo	1	2412	100 mW	Indoor only	
		-	-			
		13	2472			
	11h DFS+TPC	36	5180	100 mW	Indoor only	
		-	-			
		64	5320			
		149	5745			
			-	-	100 mW	Indoor only
			165	5825		

Country	Mode	CH	MHz	PWR (EIRP)	Use
Japan ◆ 	11b 11g	1	2412	100 mW	Indoor + outdoor
		-	-		
		14	2484		
	11a TPC	184	4920	200 mW	Indoor + outdoor
		-	-		
		196	4980		
		8	5040		
		12	5060		
11a TPC	16	5080	200 mW	Indoor + outdoor	
	36	5180			
	-	-			
Japan ◆ (previous)	11b 11g	1	2412	100 mW	Indoor + outdoor
		-	-		
		14	2484		
	11a TPC	184	4920	200 mW	Indoor + outdoor
		-	-		
		196	4980		
		8	5040		
		12	5060		
11a TPC	16	5080	200 mW	Indoor + outdoor	
	34	5170			
	-	-			
11a TPC	46	5230	200 mW	Indoor only	
	-	-			


Country	Mode	CH	MHz	PWR (EIRP)	Use
Canada ♦	11b 11g g-Turbo	1	2412	500 mW	Indoor + outdoor
		2	2417	1000 mW	Indoor + outdoor
		-	-		
		10	2457		
	11a TPC	11	2462	500 mW	Indoor + outdoor
		36	5180	200 mW	Indoor only
		-	-		
		48	5240		
	11a Turbo TPC	149	5745	1000 mW	Indoor + outdoor
		-	-		
		165	5825		
		42	5210	200 mW	Indoor only
152	160	5760	1000 mW	Indoor + outdoor	
		5800			


Country	Mode	CH	MHz	PWR (EIRP)	Use
Columbia ♦	11b 11g g-Turbo	1	2412	500 mW	Indoor + outdoor
		-	-		
		11	2462		
	11a TPC	36	5180	50 mW	Indoor only
		-	-		
		48	5240		
11b 11g g Turbo	149	5745	1000 mW	Indoor + outdoor	
	-	-			
	165	5825			
Kuwait ♦	11b 11g g Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
Malaysia ♦	11b 11g	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
	11a TPC	56	5280	200 mW	Indoor only
		60	5300		
		64	5320		
11b 11g g Turbo	149	5745	1000 mW	Indoor + outdoor	
	-	-			
	165	5825			


Country	Mode	CH	MHz	PWR (EIRP)	Use
Mexico ♦	11b 11g g-Turbo	1	2412	500 mW	Indoor + outdoor
		-	-		
		11	2462		
	11a TPC	36	5180	50 mW	Indoor only
		-	-		
		48	5240		
		149	5745		
	11a Turbo TPC	-	-	1000 mW	Indoor + outdoor
165		5825			
152		5760			
160		5800			

Country	Mode	CH	MHz	PWR (EIRP)	Use
Russia ♦	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
	11a TPC	36	5180	50 mW	Indoor + outdoor
		-	-		
		48	5240	250 mW	Indoor + outdoor
		52	5260		
		-	-		
		64	5320	1000 mW	Indoor + outdoor
		72	5360		
-		-			
140	5700	1000 mW	Indoor + outdoor		
149	5745				
-	-				
165	5825				
Saudi Arabia ♦	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		



Country	Mode	CH	MHz	PWR (EIRP)	Use
Singapore ♦	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
	11h DFS+TPC	36	5180	100 mW	Indoor + outdoor
		-	-		
		64	5320	100 mW	Indoor + outdoor
		149	5745		
	-	-	100 mW	Indoor + outdoor	
	165	5825			
	11h Turbo DFS+TPC	42	5210	100 mW	Indoor + outdoor
50		5250			
58		5290			
152		5760	100 mW	Indoor + outdoor	
160	5800				
South Africa ♦ 	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
	11a TPC	36	5180	60 mW	Indoor only
		-	-		
		48	5240		
	11h DFS+TPC	36	5180	200 mW	Indoor only
		-	-		
		64	5320	1000 mW	Indoor + outdoor
		100	5500		
-	-	1000 mW	Indoor + outdoor		
140	5700				

Country	Mode	CH	MHz	PWR (EIRP)	Use
South Korea ◆ 	11b 11g	1	2412	100 mW	Indoor + outdoor
		- 13	- 2472		
Czech Re- public	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		- 13	- 2472		
	11a TPC	36 48	5180 5240	200 mW	Indoor only
Turkey ◆	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		- 13	- 2472		
	11a TPC	36 48	5180 5240	60 mW	Indoor only
	11h DFS+TPC	36 64	5180 5320	200 mW	Indoor only
		- 64	- 5320		

Country	Mode	CH	MHz	PWR (EIRP)	Use
United Arab Emirates ♦	11b 11g g-Turbo	1	2412	100 mW	Indoor + outdoor
		-	-		
		13	2472		
United States of America ♦  	11b 11g g-Turbo	1	2412	500 mW	Indoor + outdoor
		2	2417	1000 mW	Indoor + outdoor
		-	-		
		10	2457		
		11	2462	500 mW	Indoor + outdoor
		11a TPC	36	5180	200 mW
	-		-		
	48		5240	1000 mW	Indoor + outdoor
	149		5745		
	-	-	1000 mW	Indoor + outdoor	
	165	5825			
	11a Turbo TPC	152	5760	1000 mW	Indoor + outdoor
		160	5800		
	11h DFS+TPC	36	5180	200 mW	Indoor only
		-	-		
48		5240	200 mW	Indoor + outdoor	
52		5260			
-	-	200 mW	Indoor + outdoor		
64	5320				

Country	Mode	CH	MHz	PWR (EIRP)	Use
	11h DFS+TPC	100 - 140	5500 - 5700	200 mW	Indoor + outdoor
		149 - 165	5745 - 5825	1000 mW	Indoor + outdoor