

Hardware Integration Guide SDC-MSD30AG

version 1.03

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Scope

This document describes key hardware aspects of the Summit MSD30AG 802.11a/b/g SDIO (Secure Digital Input/Output) Radio Module. This document is intended to assist device manufacturers and related parties with the integration of this radio into their host devices. Data in this document are drawn from a number of sources and includes information found in the Atheros AR6002 data sheet issued in April of 2008.

The SDC-MSDAG is currently in pre-production and as such, this document is preliminary in nature. The information in this document is subject to change. Please contact Summit or visit the Summit website at www.summitdatacom.com to obtain the most recent version of this document.

The device is labeled with all applicable regulatory information in a manner that's compliant with all regulatory standards. Regulatory operational requirements are included with this document and are to be incorporated into the operating manual of any device into which the SDC-MSD30AG installed. The SDC-MSD30AG is designed for installation into mobile devices such as vehicle mount data terminals which typically operate at distances greater than 20 cm from the human body and portable devices such as handheld data terminals which typically operate at distances less than 20 cm from the human body. See "Documentation Requirements" for more information.

Specifications

Feature	Description	
System Interface	4-bit Secure Digital I/O Molex 54722-0607 60-pin connector (mates to Molex 55560-0607 60-pin connector)	
Antenna Interface	2 Hirose U.FL connectors for dual-band antenna diversity on Wi-Fi	
Chip Set	Atheros AR6002	
Input Power Requirements	3.3 VDC +/- 10%	
Current Consumption (At maximum transmit power setting)	802.11a Transmit: 381 mA (1257 mW) Receive: 116 mA (383 mW) Standby: 3 mA (10 mW) 802.11b/g Transmit: 324 mA (1069 mW) Receive: 93 mA (307 mW) Standby: 2 mA (7 mW)	
Operating Temperature	-25° to 75°C (-13° to 167°F)	
Operating Humidity	10 to 90% (non-condensing)	
Storage Temperature	-30° to 85°C (-22° to 185°F)	
Storage Humidity	10 to 90% (non-condensing)	
Length	32 mm (1.26 in.)	
Width	22 mm (0.87 in.)	



Feature	Description	
Thickness	4.5 mm (0.18 in.) Note: With the mating connector, the thickness is 5.1 mm above the board it plugs into.	
Weight	10 g (0.35 oz.)	
Mounting	60-pin connector 3 mounting holes (2.36 mm, 0.093 in.)	
Wi-Fi Wireless Media	Direct Sequence-Spread Spectrum (DSSS) Orthogonal Frequency Divisional Multiplexing (OFDM)	
Wi-Fi Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)	
Network Architecture Types	Infrastructure and ad hoc	
Network Standards	IEEE 802.11a, 802.11b, 802.11d, 802.11e, 802.11g, 802.11h, 802.11i	
Wi-Fi Data Rates Supported	802.11a (OFDM) 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b (DSSS) 1, 2, 5.5, 11 Mbps 802.11g (OFDM) 6, 9, 12, 18, 24, 36, 48, 54 Mbps	
Wi-Fi Modulation	BPSK @ 1, 6, and 9 Mbps QPSK @ 2, 12, and 18 Mbps CCK @ 5.5 and 11 Mbps 16-QAM @ 24 and 36 Mbps 64-QAM @ 48 and 54 Mbps	
Regulatory Domain Support	FCC (Americas, Parts of Asia, and Middle East) ETSI (Europe, Middle East, Africa, and Parts of Asia) TELEC (Japan) KCC (Korea)	
2.4 GHz Frequency Bands	ETSI 2.4 GHz to 2.483 GHz FCC 2.4 GHz to 2.473 GHz TELEC 2.4 GHz to 2.495 GHz KCC 2.4 GHz to 2.483 GHz	
5 GHz Frequency Bands	ETSI 5.15 GHz to 5.35 GHz 5.47 GHz to 5.725 GHz FCC 5.15 GHz to 5.35 GHz 5.47 GHz to 5.725 GHz 5.725 GHz to 5.82 GHz TELEC 5.15 GHz to 5.35 GHz KCC 5.15 GHz to 5.25 GHz 5.725 GHz to 5.82 GHz	



Feature	Description	
2.4 GHz Operating Channels	ETSI: 13 (3 non-overlapping) FCC: 11 (3 non-overlapping)	
	TELEC 14 (4 non-overlapping)	
	KCC: 13 (3 non-overlapping)	
5 GHz Operating Channels	ETSI: 19 non-overlapping	
	FCC: 23 non-overlapping	
	TELEC: 8 non-overlapping	
	KCC: 8 non-overlapping	
Wi-Fi Transmit Power Settings	802.11a	
	15 dBm (30 mW) 13 dBm (20 mW)	
Note: Maximum transmit power	10 dBm (10 mW)	
varies according to	802.11b	
individual country regulations. All values	18 dBm (63 mW)	
nominal, +/-2 dBm	17 dBm (50 mW) 15 dBm (30 mW)	
	13 dBm (20 mW)	
	10 dBm (10 mW)	
	7 dBm (5 mW)	
	0 dBm (1 mW)	
	802.11g	
	18 dBm (63 mW) 17 dBm (50 mW)	
	15 dBm (30 mW)	
	13 dBm (20 mW)	
	10 dBm (10 mW)	
	7 dBm (5 mW) 0 dBm (1 mW)	
Typical Receiver Sensitivity	802.11a:	
Typical Receiver Conclusing	6 Mbps -85 dBm	
Note: All values nominal.	12 Mbps -83 dBm	
+/-3 dBm.	18 Mbps -81 dBm 24 Mbps -75 dBm	
	36 Mbps -73 dBm	
	48 Mbps -68 dBm	
	54 Mbps -67 dBm (PER <= 10%)	
	802.11b: 1 Mbps -95 dBm	
	2 Mbps -94 dBm	
	5.5 Mbps -93 dBm	
	11 Mbps -89 dBm (PER <= 10%)	
	802.11g:	
	6 Mbps -93 dBm 12 Mbps -88 dBm	
	18 Mbps -85 dBm	
	24 Mbps -83 dBm	
	36 Mbps -77 dBm	
	48 Mbps -74 dBm	
	54 Mbps -72 dBm (PER <= 10%)	
L	OT MOPO -12 UDIT (Γ LIX >= 10 /0)	



Feature	Description	
Wi-Fi Delay Spread	600 ns @ 1 Mbps 500 ns @ 2 Mbps 400 ns @ 5.5 Mbps 400 ns @ 6 Mbps 400 ns @ 9 Mbps 200 ns @ 11 Mbps 350 ns @ 12 Mbps 350 ns @ 18 Mbps 250 ns @ 24 Mbps 250 ns @ 36 Mbps 150 ns @ 48 Mbps 150 ns @ 54 Mbps	
Operating Systems Supported		
Security	Standards Wireless Equivalent Privacy (WEP) Wi-Fi Protected Access (WPA) IEEE 802.11i (WPA2) Encryption Wireless Equivalent Privacy (WEP, RC4 Algorithm) Temporal Key Integrity Protocol (TKIP, RC4 Algorithm) Advanced Encryption Standard (AES, Rijndael Algorithm) Encryption Key Provisioning Static (40-bit and 128-bit lengths) Pre-Shared (PSK) Dynamic 802.1X Extensible Authentication Protocol Types EAP-FAST EAP-TLS EAP-TLS PEAP-GTC PEAP-MSCHAPv2 PEAP-TLS LEAP	



Feature	Description		
Compliance	ETSI Regulatory Domain EN 300 328 EN 301 489-1 EN 301 489-17 EN 301 893 EN 60950-1 EU 2002/95/EC (RoHS)		
	FCC Regulatory Domain Part 15.247 Subpart C Initial Grant Test Report Part 15.407 Subpart E Initial Grant Test Report DTS Test Report		
	Industry Canada RSS-210 Initial Grant Test Report RSS-Gen Issue 2 Initial Grant Test Report DTS Test Report		
	TELEC Regulatory Domain Article 2 Item 19, Category WW (2.4GHz Channels 1-13) Article 2 Item 19-2, Category GZ (2.4GHz Channel 14)		
Certifications	Wi-Fi Alliance 802.11a, 802.11b, 802.11g WPA Enterprise WPA2 Enterprise Cisco Compatible Extensions (Version 4)	uluiju cisco	
Warranty	Limited Lifetime	Compatible	
	All specifications are subject to change without notice		



Pin Definitions and Interface Notes

Pin Definitions

Note: In regards to **GND** (Ground) pins, only one must be tied down. The remaining pins identified as **GND** can either be tied down or floated, depending on individual radio board design needs.

Pin Number	Pin Name	Туре	Description	Note
1	GND		Ground	
2	No Connect		Not Used. Leave Open (Float)	
3	BT_PRIORITY		Bluetooth Priority	See <u>Bluetooth</u> <u>Coexistence</u>
4	BT_FREQ		Bluetooth Frequency	
5	No Connect		Not Used. Leave Open (Float)	
6	No Connect		Not Used. Leave Open (Float)	
7	No Connect		Not Used. Leave Open (Float)	
8	Wake on Wireless		Wake on Wireless LAN	See Pin 8
9	No Connect		Not Used. Leave Open (Float)	
10	CLK_32K		32k Ext Sleep Clock	
11	No Connect		Not Used. Leave Open (Float)	
12	No Connect		Not Used. Leave Open (Float)	
13	VCC3_3		3.3V Module Power	
14	No Connect		Not Used. Leave Open (Float)	
15	No Connect		Not Used. Leave Open (Float)	
16	No Connect		Not Used. Leave Open (Float)	
17	No Connect		Not Used. Leave Open (Float)	
18	No Connect		Not Used. Leave Open (Float)	
19	No Connect		Not Used. Leave Open (Float)	
20	No Connect		Not Used. Leave Open (Float)	
21	VDD_IO		3.3/1.8V I/O Power	
22	No Connect		Not Used. Leave Open (Float)	
23	No Connect		Not Used. Leave Open (Float)	
24	No Connect		Not Used. Leave Open (Float)	



Pin Number	Pin Name	Туре	Description	Note
25	No Connect		Not Used. Leave Open (Float)	
26	SYS_RST_L		Reset	
27	SDIO_DATA_2		SDIO Data 2	
28	WLAN_ACTIVE		Bluetooth coexistence wireless LAN active signal.	See <u>Bluetooth</u> <u>Coexistence</u>
29	VCC3_3		3.3V Module Power	See Pin 29
30	GND		Ground	
31	GND		Ground	
32	No Connect		Not Used. Leave Open (Float)	
33	No Connect		Not Used. Leave Open (Float)	
34	No Connect		Not Used. Leave Open (Float)	
35	No Connect		Not Used. Leave Open (Float)	
36	BT_ACTIVE		Bluetooth coexistence Bluetooth active signal.	See <u>Bluetooth</u> <u>Coexistence</u>
37	No Connect		Not Used. Leave Open (Float)	
38	No Connect		Not Used. Leave Open (Float)	
39	No Connect		Not Used. Leave Open (Float)	
40	No Connect		Not Used. Leave Open (Float)	
41	No Connect		Not Used. Leave Open (Float)	
42	Slot0_nLED		WLAN LED activity indicator	
43	No Connect		Not Used. Leave Open (Float)	
44	No Connect		Not Used. Leave Open (Float)	
45	No Connect		Not Used. Leave Open (Float)	
46	No Connect		Not Used. Leave Open (Float)	
47	No Connect		Not Used. Leave Open (Float)	
48	CHIP_PWD_L		Power Down	
49	No Connect		Not Used. Leave Open (Float)	
50	No Connect		Not Used. Leave Open (Float)	
51	No Connect		Not Used. Leave Open (Float)	
52	No Connect		Not Used. Leave Open (Float)	



Pin Number	Pin Name	Туре	Description	Note
53	No Connect		Not Used. Leave Open (Float)	
54	No Connect		Not Used. Leave Open (Float)	
55	SDIO_CMD		SDIO Command	
56	SDIO_CLK		SDIO Clock	
57	SDIO_DATA_0		SDIO Data 0	
58	SDIO_DATA_3		SDIO Data 3	
59	SDIO_DATA_1		SDIO Data 1	
60	GND		Ground	

Interface Notes

- Bluetooth coexistence BT coexistence can be turned on or off in the SROM using the Summit Manufacturing Utility, or SMU. BT coexistence is through a three-wire interface with one additional reserved wire:
 - **Pin 22: WLAN_ACTIVE** Driven by the Summit radio and is asserted when the transmitter of the Summit radio is active.
 - Pin 36: BT_ACTIVE An input to the Summit radio. The Summit radio does not transmit if BT_ACTIVE is asserted. The Summit radio expects the Bluetooth radio to assert (raise high) BT_ACTIVE when it is transmitting and to refrain from transmitting when WLAN_ACTIVE is asserted.
 - **Pin 3: BT_Priority -** When high, Bluetooth is transmitting or receiving high priority packets.
 - **Pin 4: BT_Frequency** Asserted (logic high) when the Bluetooth transceiver hops into the restricted channels defined by the coexistence mechanism.

A Summit customer must provide any "glue" logic between the Summit radio and the Bluetooth radio to make sure that the interface is utilized properly.

- **Pin 8:** Although the pin is present, Wake on Wireless is not currently supported in the software.
- Pin 29: The VCC Slot0 pin will appear with the ES5 samples and production versions.

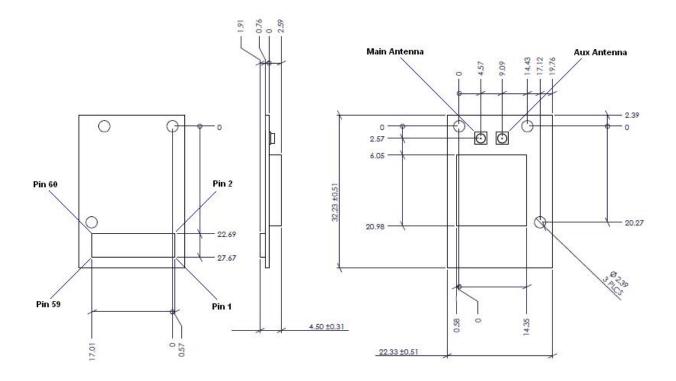


Mechanical Specifications

Connector Overview

MSD30AG connector: Molex 54722-0607 60-pin connector

Mating connector (on board): Molex 55560-0607 60-pin connector



Mounting

Three through-hole mounting with a 60-pin connector. Summit recommends non-metallic screws and a 0.05 mm non-metallic bushing.



Regulatory

Certified Antennas

The SDC-MSD30AG provides two Hirose U.FL type antenna connectors to support transmit and receive diversity. For single antenna, non-diversity applications, OEMs are advised to use the Main (not Aux) antenna connector and should disable transmit and receive diversity from the Global tab of the Summit Client Utility (SCU) software utility.

The SDC-MSD30AG has been tested to the regulatory standards defined in the "Certifications" section of the Specifications table above. These tests were conducted with the following antennas:

AIR-ANT 4941 (click for datasheet)

Form Factor: Whip

Type: Dipole

Maximum 2.4 GHz Gain: 2.2 dBi

Radiall Larson Dipole (click for datasheet)

• Form Factor: Whip

Type: Dipole

Maximum 2.4 GHz Gain: 1.6 dBi (not used during testing)

Maximum 5 GHz Gain: 5 dBi

HUBER+SUHNER (click for datasheet)

Form Factor: WhipType: Monopole

Maximum 2.4 GHz Gain: 3 dBi
 Maximum 5 GHz Gain: 6.5 dBi

Antennas of differing types and higher gains may be integrated as well. If necessary, with the Summit Manufacturing Utility software utility, OEMs may reduce the transmit power of the SDC-MSD30AG to account for higher antenna gain. In some cases, OEMs may be able to reduce certification efforts by using antennas that are of like type and equal or lesser gain to the above listed antennas.

Documentation Requirements

In order to maintain regulatory compliance, when integrating the SDC-MSD30AG into a host device and leveraging Summit's grants and certifications, it is necessary to meet the documentation requirements set forth by the applicable regulatory agencies. The following sections (FCC, Industry Canada, and European Union) outline the information that must be included in the user's guide and external labels for the host devices into which the SDC-MSD30AG is integrated.



FCC

User's Guide Requirements

As outlined in the Operational Description, the SDC-MSD30AG complies with <u>FCC Part 15 Rules</u> for a Limited Modular Approval. To leverage Summit's grant, the two conditions below must be met for the host device into which the SDC-MSD30AG is integrated:

- 1. The antenna is installed with 20 cm maintained between the antenna and users.
- 2. The transmitter module is not co-located with any other transmitter or antenna that is capable of simultaneous operation.

As long as the two conditions above are met, further *transmitter* testing is typically not required. However, the OEM integrator is still responsible for testing its end-product for any additional compliance requirements required with this module installed, such as (but not limited to) digital device emissions and PC peripheral requirements.

IMPORTANT!

In the event that the two conditions above *cannot be met* (for example certain device configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID *cannot* be used on the final product. In these circumstances, the OEM integrator will be responsible for reevaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

When using Summit's FCC grant for the SDC-MSD30AG, the integrator must include specific information in the user's guide for the device into which the SDC-MSD30AG is integrated. The integrator must not provide information to the end user regarding how to install or remove this RF module in the user's manual of the device into which the SDC-MSD30AG is integrated. The following FCC statements must be added in their entirety and without modification into a prominent place in the user's guide for the device into which the SDC-MSD30AG is integrated:

"IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or



television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

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

This 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.

IMPORTANT NOTE: 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 20cm between the radiator & your body.

Labeling Requirements

The final end product must be labeled in a visible area with the following notice:

Contains FCC ID: TWG-SDCMSD30AG

Industry Canada

User's Guide Requirements

As outlined in the Operational Description, the SDC-MSD30AG complies with Industry Canada (IC) rules for a Limited Modular Approval. To leverage Summit's grant, the two conditions below must be met for the host device into which the SDC-MSD30AG is integrated:

- 1. The antenna is installed with 20 cm maintained between the antenna and users.
- 2. The transmitter module is not co-located with any other transmitter or antenna that is capable of simultaneous operation.

As long as the two conditions above are met, further *transmitter* testing is typically not required. However, the OEM integrator is still responsible for testing its end-product for any additional



compliance requirements required with this module installed, such as (but not limited to) digital device emissions and PC peripheral requirements.

IMPORTANT!

In the event that the two conditions above *cannot be met* (for example certain device configurations or co-location with another transmitter), then the IC authorization is no longer considered valid and the IC ID *cannot* be used on the final product. In these circumstances, the OEM integrator will be responsible for reevaluating the end product (including the transmitter) and obtaining a separate IC authorization.

When using Summit's IC grant for the SDC-MSD30AG, the integrator must include specific information in the user's guide for the device into which the SDC-MSD30AG is integrated. The integrator must not provide information to the end user regarding how to install or remove this RF module in the user's manual of the device into which the SDC-MSD30AG is integrated. In addition to the required FCC statements outlined above, the following IC statements must be added in their entirety and without modification into a prominent place in the user's guide for the device into which the SDC-MSD30AG is integrated:

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

The integrator must list out information for each antenna used with the host device into which the SDC-MSD30AG is integrated. The following examples are based on antennas with which the SDC-MSD30AG was certified and represent an acceptable format:

AIR-ANT 4941

Form Factor: Whip

Type: Dipole

Maximum 2.4 GHz Gain: 2.2 dBi

Radiall Larson Dipole

Form Factor: Whip

Type: Dipole

Maximum 2.4 GHz Gain: 1.6 dBi (not used during testing)

Maximum 5 GHz Gain: 5 dBi

HUBER+SUHNER

Form Factor: WhipType: Monopole

Maximum 2.4 GHz Gain: 3 dBi
 Maximum 5 GHz Gain: 6.5 dBi



Labeling Requirements

The final end product must be labeled in a visible area with the following notice:

Contains IC ID: 6616A-SDCMSD30AG

European Union

User's Guide Requirements

The integrator must include specific information in the user's guide for the device into which the SDC-MSD30AG is integrated. In addition to the required FCC and IC statements outlined above, the following R&TTE statements must be added in their entirety and without modification into a prominent place in the user's guide for the device into which the SDC-MSD30AG is integrated:

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

EN60950-1:2001 A11:2004

Safety of Information Technology Equipment

EN 300 328 V1.7.1: (2006-10)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EN 301 489-1 V1.6.1: (2005-09)

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

EN 301 489-17 V1.2.1 (2002-08)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

EN 301 893

Electromagnetic compatibility and Radio spectrum Matters (ERM); Broadband Radio Access Networks (BRAN); Specific conditions for 5 GHz high performance RLAN equipment

EU 2002/95/EC (RoHS)

Declaration of Compliance – EU Directive 2003/95/EC; Reduction of Hazardous Substances (RoHS)

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.



In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

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

ে Česky [Czech]	[Jméno výrobce] tímto prohlašuje, že tento [typ zařízení] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
daDansk [Danish]	Undertegnede [fabrikantens navn] erklærer herved, at følgende udstyr [udstyrets typebetegnelse] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de Deutsch [German]	Hiermit erklärt [Name des Herstellers], dass sich das Gerät [Gerätetyp] in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et Eesti [Estonian]	Käesolevaga kinnitab [tootja nimi = name of manufacturer] seadme [seadme tüüp = type of equipment] vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
enEnglish	Hereby, [name of manufacturer], declares that this [type of equipment] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es Español [Spanish]	Por medio de la presente [nombre del fabricante] declara que el [clase de equipo] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [name of manufacturer] ΔΗΛΩΝΕΙ ΟΤΙ [type of equipment] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
français [French]	Par la présente [nom du fabricant] déclare que l'appareil [type d'appareil] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it Italiano [Italian]	Con la presente [nome del costruttore] dichiara che questo [tipo di apparecchio] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [name of manufacturer / izgatavotāja nosaukums] deklarē, ka [type of equipment / iekārtas tips] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo [manufacturer name] deklaruoja, kad šis [equipment type] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.



Nederland s [Dutch]	Hierbij verklaart [naam van de fabrikant] dat het toestel [type van toestel] in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt Malti [Maltese]	Hawnhekk, <i>[isem tal-manifattur]</i> , jiddikjara li dan <i>[il-mudel tal-prodott]</i> jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
հսMagyar [Hungarian]	Alulírott, [gyártó neve] nyilatkozom, hogy a [típus] megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym [nazwa producenta] oświadcza, że [nazwa wyrobu] jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt Portuguê s [Portuguese]	[Nome do fabricante] declara que este [tipo de equipamento] está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensk o [Slovenian]	[Ime proizvajalca] izjavlja, da je ta [tip opreme] v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensk y [Slovak]	[Meno výrobcu] týmto vyhlasuje, že [typ zariadenia] spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar [företag] att denna [utrustningstyp] står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Labeling Requirements

The final end product must be labeled in a visible area with the following notice:



