SDC-MSD10G

HARDWARE INTEGRATION GUIDE

VERSION 2.1

global solutions: local support™

Americas: +1-800-492-2320 Option 2
Europe: +44-1628-858-940
Hong Kong: +852-2923-0610
www.lairdtech.com/wi-fi

REVISION HISTORY

Version	Revision Date	Change Description	Approved By
1.0	11/12/09	Transitioned Application Notes documentation to Hardware Integration Guide format.	Ron Seide
1.01	11/17/09	Revised pin names and definitions.	Ron Seide
1.02	01/04/10	Revised Operational Description. Added Regulatory section.	Ron Seide
1.03	03/03/10	Added RF Layout Guidelines section.	Ron Seide
1.04	07/27/2010	Edited Operational Description. Updated Pin table. Revised RF Layout Design Guidelines.	Ron Seide
1.05	05/18/2011	Updated supported Operating Systems.	Ron Seide
2.0	11/07/12	Updated formatting (Laird).	Ron Seide
2.1	10/23/13	Removed references to summitdata.com	Ron Seide

CONTENTS

SCOPE

This document describes key hardware aspects of the SDC-MSD10G 802.11b/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 is drawn from a number of sources and includes information found in the Broadcom BCM4318E data sheet issued in July of 2006.

The information in this document is subject to change without notice. Please contact Laird or visit the MSD10G page of the Laird website to obtain the most recent version of this document.

OPERATIONAL DESCRIPTION

This device is an SDC-MSD10G 802.11b/g SDIO (Secure Digital Input/Output) Radio Module, which

operates in unlicensed portions of the 2.4 GHz radio frequency spectrum. The device is compliant with IEEE 802.11b and 802.11g standards using Direct Sequence Spread Spectrum and Orthogonal Frequency Division Multiplexing. The device supports all 802.11b and 802.11g data rates and automatically adjusts data rates and operational modes based on various environmental factors.

The SDC-MSD10G interfaces to host devices via a 60-pin connector. The device is based on the Broadcom BCM4318e chip which is an integrated device providing a Media Access Controller (MAC), a Physical Layer Controller (PHY or baseband processor) and a 2.4 GHz transceiver. To maximize operational range, the SDC-MSD10G incorporates a 2.4 GHz Power Amplifier to increase transmit power to as much as 18 dBm (63 mW) and a 2.4 GHz Low Noise Amplifier to improve receiver sensitivity. The frequency stability for both 2.4 GHz (802.11b and 802.11g) operation is +/- 20 ppm.

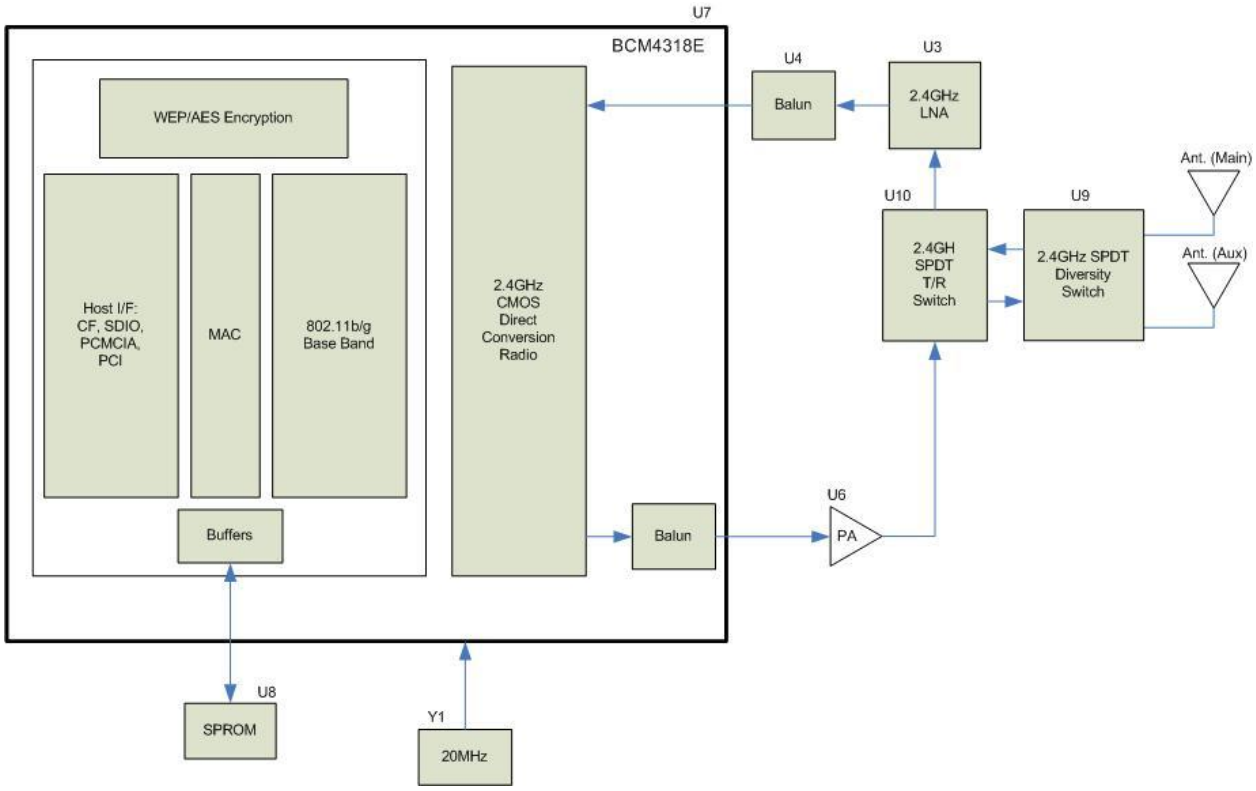
The SDC-MSD10G has its own RF shielding and does not require shielding provided by the host device into which it is installed in order to maintain compliance with applicable regulatory standards. As such, the device may be tested in a standalone configuration via an extender card.

The device buffers all data inputs so that it will comply with all applicable regulations even in the presence of over-modulated input from the host device. Similarly, the SDC-MSD10G incorporates power regulation to comply with all applicable regulations even when receiving excess power from the host device.

The SDC-MSD10G provides two antenna connectors (Hirose U.FL type) to support transmit and receive diversity. Supported host device antenna types include dipole and monopole antennas.

Regulatory operational requirements are included with this document and may be incorporated into the operating manual of any device into which the SDC-MSD10G installed. The SDC-MSD10G 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.

BLOCK DIAGRAM



SPECIFICATIONS

Feature	Description
System Interface	32-bit Secure Digital Input/Output (SDIO) with Molex 54722-0607 60-pin connector (mates to Molex connector 55560-0607)
Antenna Interface	2 U.FL (Hirose) connectors for antenna diversity
Chip Set	Broadcom BCM4318E
Input Voltage Requirements	3.3 VDC +/- 10%
Current Consumption (At maximum transmit power setting)	**Transmit:** 440mA (1320 mW) **Receive:** 180 mA (594 mW) **Standby:** 10 mA (33 mW)
Operating Temperature	-30° to 85°C (-22° to 185°F)
Operating Humidity	10 to 90% (non-condensing)
Storage Temperature	-40° to 80°C (-40° to 176°F)
Storage Humidity	10% to 90%
Maximum Electrostatic Discharge	4 kV
Length	32 mm (1.26”)
Width	22 mm (.87”)
Thickness	3.5 mm (0.14 ”)
Weight	9 g (0.3 oz)
Wireless Medina	Direct Sequence-Spread Spectrum (DSSS) Orthogonal Frequency Divisional Multiplexing (OFDM)
Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)

Feature	Description
Network Architecture Types	Infrastructure and ad hoc
Network Standards	IEEE 802.11b, 802.11d, 802.11e, 802.11g, 802.11i
Data Rates Supported	802.11b (DSSS): 1, 2, 5.5, 11 Mbps 802.11g (OFDM): 6, 9, 12, 18, 24, 36, 48, 54 Mbps
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 **MIC (formerly TELEC)** 2.4 GHz to 2.495 GHz **KCC** 2.4 GHz to 2.4835 GHz
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)
Transmit Power Settings *Note: Maximum transmit power varies according to individual country regulations. All values nominal, +/-2 dBm*	**DSSS:** 18 dBm (63 mW) 17 dBm (50 mW) 15 dBm (30 mW) 10 dBm (10 mW) 0 dBm (1 mW) **OFDM:** 15 dBm (30 mW) 10 dBm (10 mW) 0 dBm (1 mW)
Typical Receiver Sensitivity	1 Mbps -96 dBm 2 Mbps -95 dBm 5.5 Mbps -94 dBm 6 Mbps -94 dBm 9 Mbps -91 dBm 11 Mbps -90 dBm 12 Mbps -88 dBm 18 Mbps -86 dBm 24 Mbps -83 dBm 36 Mbps -78 dBm 48 Mbps -76 dBm 54 Mbps -75 dBm (PER <= 10%)
Delay Spread	1 Mbps 600 ns 2 Mbps 500 ns 5.5 Mbps 400 ns 6 Mbps 400 ns 9 Mbps 400 ns

Feature	Description
	11 Mbps 200 ns 12 Mbps 350 ns 18 Mbps 350 ns 24 Mbps 250 ns 36 Mbps 250 ns 48 Mbps 150 ns 54 Mbps 150 ns
Mean Time Between Failure (MTBF)	1,259,920 hours
Operating Systems Supported	Windows Mobile 6.1 Windows Mobile 6.0 Windows Mobile 5.0 Pocket PC 2003 Windows Embedded CE 6.0 R2 and R3 Windows Embedded CE 6.0 Windows Embedded CE 5.0 Windows XP Professional and Embedded
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 ▪ PEAP-GTC ▪ PEAP-MSCHAPv2 ▪ PEAP-TLS ▪ LEAP
Compliance *Note: For additional information, refer to the Certifications section of the MSD10G page.*	**ETSI Regulatory Domain** EN 300 328 EN 301 489 EN 50392 EN 62311:2008 EN60950-1 EU 2002/95/EC (RoHS) **FCC Regulatory Domain** Part 15.247 Subpart C **Industry Canada** RSS-210 and RSS-Gen Issue 2 **MIC (formerly 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)

Feature	Description
Certifications	Wi-Fi Alliance 802.11a, 802.11b, 802.11g WPA Enterprise WPA2 Enterprise Cisco Compatible Extensions
Warranty	Limited Lifetime

All specifications are subject to change without notice

Recommended Operating Conditions

Parameter	Min.	Typical	Max.	Units	Comments
Supply Voltage					
VDDIO, VDDBUS	3.0	3.3	3.6	V	
VDDCORE, PLLVDD, AVDD	1.71	1.8	1.89	V	
Logic Inputs					
V_{INH}, Input High Voltage	2.0	–	–	V	
V_{INL}, Input Low Voltage	–	–	0.8	V	
Logic Outputs					
V_{OH}, Output High Voltage	2.4	–	–	V	Current is determined by the specific pad.
V_{OL}, Output Low Voltage	–	–	0.4	V	

PIN DEFINITIONS

Note: With the MSD10G, most of the pins on the 60-pin connector are unused.

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 #	Pin Name	I/O	Power Supply	Description
1	GND			Ground
2		N/C		No Connect
3		N/C		No Connect
4		N/C		No Connect
5		N/C		No Connect
6		N/C		No Connect
7		N/C		No Connect
8		N/C		No Connect
9		N/C		No Connect
10		N/C		No Connect
11		N/C		No Connect
12		N/C		No Connect
13	VCC3_3			3.3V Module Power
14		N/C		No Connect
15		N/C		No Connect
16		N/C		No Connect
17		N/C		No Connect
18		N/C		No Connect
19		N/C		No Connect
20		N/C		No Connect
21		N/C		No Connect
22		N/C		No Connect
23		N/C		No Connect
24		N/C		No Connect
25		N/C		No Connect
26		N/C		No Connect
27	SDIO_DATA_2			SDIO Data 2
28	WLAN_ACTIVE	O	VDDIO	Output to BT device. When high, indicates that WLAN is transmitting or receiving. Do not connect when not used
29	VCC3_3			3.3V Module Power
30	GND			Ground
31	GND			Ground

Pin #	Pin Name	I/O	Power Supply	Description
32		N/C		No Connect
33		N/C		No Connect
34		N/C		No Connect
35		N/C		No Connect
36	BT_ACTIVE	I	VDDIO	Input from BT device. When high, indicates that Bluetooth is transmitting or receiving. The Summit radio does not transmit when BT_ACTIVE is high. Tie to GND when not used
37		N/C		No Connect
38		N/C		No Connect
39	Slot0_nWAIT			Wait line pulled low when active
40		N/C		No Connect
41		N/C		No Connect
42	WL_LED_ACT	O	VDDIO	WLAN LED activity indicator.
43		N/C		No Connect
44		N/C		No Connect
45		N/C		No Connect
46		N/C		No Connect
47		N/C		No Connect
48		N/C		No Connect
49		N/C		No Connect
50		N/C		No Connect
51		N/C		No Connect
52		N/C		No Connect
53		N/C		No Connect
54		N/C		No Connect
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

Note: To create the SDC-MSD10G, Summit starts with the SDC-MCF10G and moves a resistor. As a result, the MSD10G has the same hardware and uses the same connector as the MCF10G. Pin definitions for the MSD10G are different than those for the MCF10G.

MECHANICAL SPECIFICATIONS

Connector Overview

MCF10G/MSD10G connector	Molex 54722-0607 60-pin connector
Mating connector (on board)	Molex 55560-0607 60-pin connector

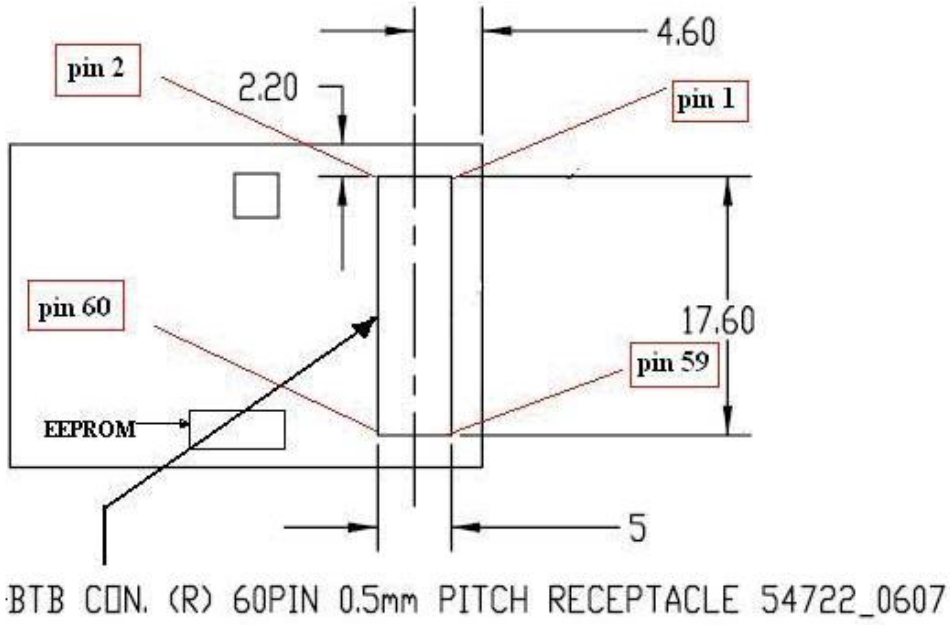
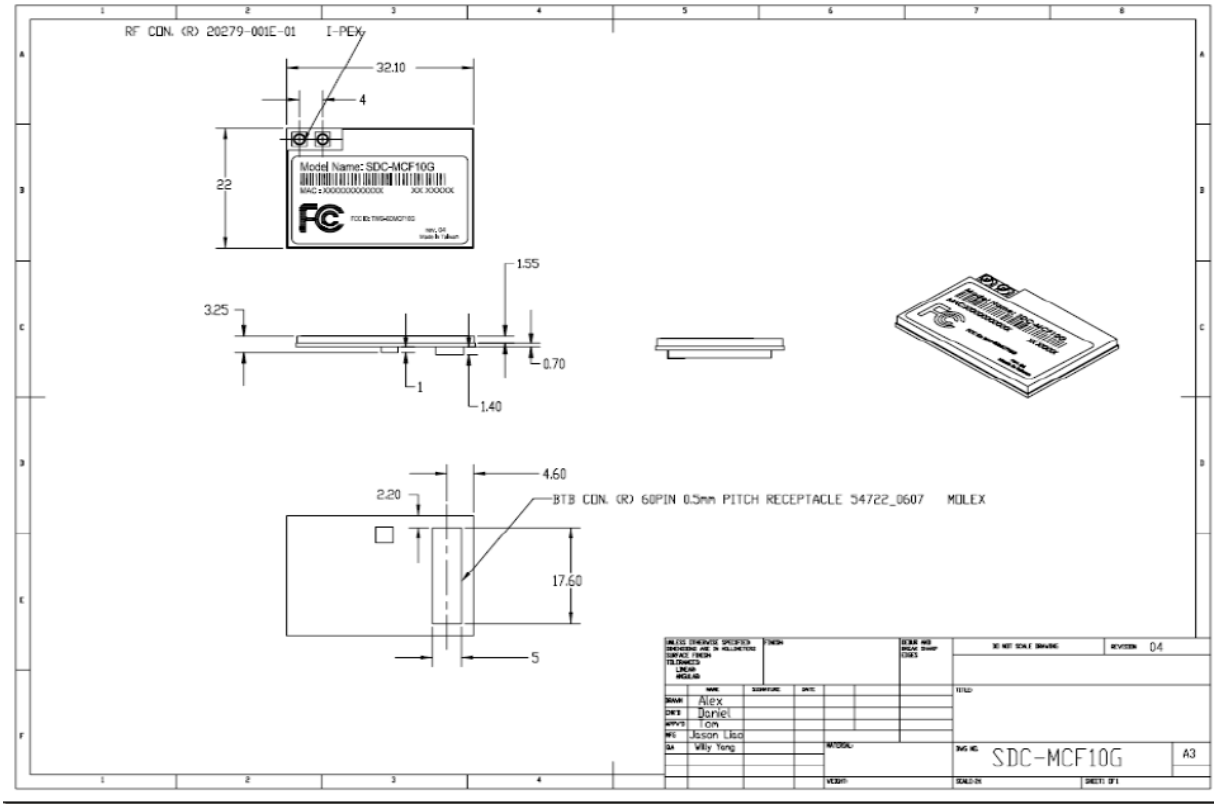


Figure 1: Connector for Summit MCF10G/MSD10G Modules



RF Layout Design Guidelines

The following is a list of RF layout design guidelines and recommendation when installing a Summit radio into your device.

- Do not run antenna cables directly above or directly below the radio.
- Do not place any parts or run any high speed digital lines below the radio.
- If there are other radios or transmitters located on the device (such as a Bluetooth radio), place the devices as far apart from each other as possible.
- Ensure that there is the maximum allowable spacing separating the antenna connectors on the Summit radio from the antenna. In addition, do not place antennas directly above or directly below the radio.
- Summit recommends the use of a double shielded cable for the connection between the radio and the antenna elements.
- Summit has provided three plated mounting holes that can be used for grounding. When additional ground plane is required, you may use some or all of these grounded mounting holes.

Regulatory

Certified Antennas

The SDC-MSD10G 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-MSD10G has been tested to the regulatory standards defined in the "Certifications" section of the Specifications table above. These tests were conducted with the following antenna:

- **Antenna Form Factor and Type:** 0 dBi Printed Circuit Board (PCB) Omnidirectional
- **Effective Isotropic Radiated Power (EIRP):** 19 dBm (combined gain of the transmitter and antenna)

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-MSD10G 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-MSD10G 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-MSD10G is integrated.

FCC

User's Guide Requirements

As outlined in the Operational Description, the SDC-MSD10G complies with FCC Part 15 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-MSD10G 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 re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

When using Summit's FCC grant for the SDC-MSD10G, the integrator must include specific information in the user's guide for the device into which the SDC-MSD10G 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-MSD10G 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-MSD10G 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-SDCMSD10G

Industry Canada

User's Guide Requirements

As outlined in the Operational Description, the SDC-MSD10G 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-MSD10G 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 re-evaluating the end product (including the transmitter) and obtaining a separate IC authorization.

When using Summit's IC grant for the SDC-MSD10G, the integrator must include specific information in the user's guide for the device into which the SDC-MSD10G 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-MSD10G 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-MSD10G 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-MSD10G is integrated. The following examples are based on antennas with which the SDC-MSD10G was certified and represent an acceptable format:

- Antenna Form Factor and Type: 0 dBi Printed Circuit Board (PCB) Omnidirectional
- Effective Isotropic Radiated Power (EIRP): 19 dBm (combined gain of the transmitter and antenna)

Labeling Requirements

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

> Contains IC ID: 6616A-SDCMSD10G

European Union

User's Guide Requirements

The integrator must include specific information in the user's guide for the device into which the SDC-MSD10G 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-MSD10G 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

- 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.

cs **Česky [Czech]**	*[Jméno výrobce]* tímto prohlašuje, že tento *[typ zařízení]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da **Dansk [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.
en **English**	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.
fr **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.
Nederlands [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.
Malti [Maltese]	Hawnhekk, *[isem tal-manifattur]*, jiddikjara li dan *[il-mudel tal-prodott]* jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, *[gyártó neve]* nyilatkozom, hogy a *[... típus]* megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym *[nazwa producenta]* oświadcza, że *[nazwa wyrobu]* jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	*[Nome do fabricante]* declara que este *[tipo de equipamento]* está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	*[Ime proizvajalca]* izjavlja, da je ta *[tip opreme]* v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	*[Meno výrobcu]* týmto vyhlasuje, že *[typ zariadenia]* spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
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: