

SINAMICS G120 智能连接模块 (选件)

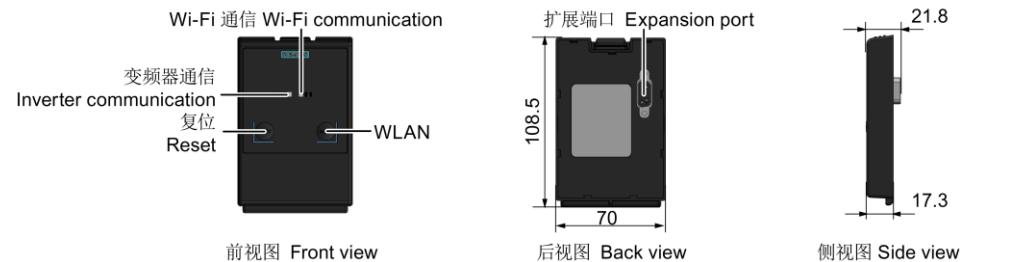
SINAMICS G120 Smart Access (option)

有关模块的详情, 参见《SINAMICS G120 智能连接模块操作说明》。

For more information about the module, see *SINAMICS G120 Smart Access Operating Instructions*.

SINAMICS G120 智能连接模块 SINAMICS G120 Smart Access

订货号 Article number: 6SL3255-0AA00-5AA0



功能 Functionality

SINAMICS G120 智能连接模块是一款基于 Wi-Fi 的网络服务器模块和工程工具。可允许从所连设备 (带无线网卡的传统 PC、平板电脑或智能手机) 对支持的 SINAMICS G120 变频器进行基于网络的访问, 实现快速调试、参数设置、JOG、监控、诊断、备份与恢复等变频器操作。SINAMICS G120 智能连接模块仅供调试使用, 不可长期与变频器共用。

SINAMICS G120 Smart Access is a Wi-Fi-based Web server module and an engineering tool. It allows web-based access to the supported SINAMICS G120 inverter from a connected device (a conventional PC with a wireless network adapter installed, a tablet, or a smart phone), realizing inverter operations such as quick setup, parameterization, JOG, monitoring, diagnostics, backup and restoring. SINAMICS G120 Smart Access is only for commissioning and thus cannot be used with the inverter permanently.

连接设备 Connecting the device

SINAMICS G120 智能连接模块 SINAMICS G120 Smart Access	带无线网卡的设备 Device with wireless network adapter	操作系统 Operating system	推荐使用的网络浏览器 ^{*)} Recommended Web browser
	PC	Windows 7	<ul style="list-style-type: none"> ≥ Google Chrome 64.0.3239 ≥ IE 11.0.9600 ≥ Firefox 45.0.2
		Windows 10	<ul style="list-style-type: none"> ≥ Edge 38.14393.1066 ≥ Firefox 45.0.2
	智能手机/平板电脑 Smart phone/tablet	≥ Apple iOS 10.2	<ul style="list-style-type: none"> ≥ Firefox 10.6 Safari
		≥ Android 6.0.1	<ul style="list-style-type: none"> ≥ Google Chrome 64.0.3202.84 ≥ Firefox 45.0.2

^{*)} 为了保证最佳网络浏览性能, 西门子推荐使用以上浏览器进行操作。

Siemens recommends that you use the Web browsers listed above to achieve optimum browsing performance.

LED 状态 LED Status

LED	颜色 Color	描述 Description
变频器通信 Inverter communication	红色长亮 Solid red	模块与变频器未建立通信。 The communication between the module and the inverter is not established.
	绿色长亮 Solid green	模块与变频器已建立通信。 The communication between the module and the inverter is established.
Wi-Fi 通信 Wi-Fi communication	红色长亮 Solid red	网络通信正在初始化。 The network communication is initializing.
	黄色长亮 Solid yellow	网络初始化已完成但模块尚未连接到 PC 或移动设备。 The network initialization completes but the module is not connected to a PC or mobile device.
	绿色长亮 Solid green	模块与 PC 或移动设备已建立连接, 现在可以打开网页。 The connection between the module and the PC or mobile device is set up and you can open the Web pages now.
	绿色闪烁 Flashing green	模块与 PC 或移动设备已建立连接, 网页已打开。 The connection between the module and the PC or mobile device is set up and the Web page is open.
	黄色闪烁 Flashing yellow	模块因升级完成或 Wi-Fi 配置修改而需要重启。 The module requires a restart because an upgrade completes or the Wi-Fi configuration is modified.
	红黄交替闪烁 Alternating flashing red and yellow	模块正在升级。 The module is upgrading.

技术规格 Technical specifications

额定电压 Rated voltage	15 V DC
无线技术和工作频率 Wireless technology and working frequency	Wi-Fi 2400 MHz ... 2483.5 MHz
最大射频功率 Maximum radio frequency power	17.5 dBm (EIRP ^{*)})
无线调制制式 Wireless modulation type	802.11 b/g
天线增益 Antenna gain	1.9 dBi
极限工作温度范围 Extreme temperature range	-10 °C ... 60 °C
运行环境温度 Operating ambient temperature	0 °C ... 50 °C ^{**)}

^{*)} EIRP 表示等效全向辐射功率。EIRP means effective isotropic radiated power.

^{**)} 根据 UL 要求 according to UL requirement

SINAMICS G120 网址 SINAMICS G120 Web address

- <http://192.168.1.1>
- <https://192.168.1.1> (需下载和安装 SSL 证书 requires download and installation of SSL certificates)

安装 SSL 证书 (仅适用于 https:// 访问) Installing SSL certificates (https:// access only)

若要从基于 Windows 10 的 PC 或基于 iOS 的移动设备使用 https:// 访问 SINAMICS G120 网页, 需要安装 SSL 证书。

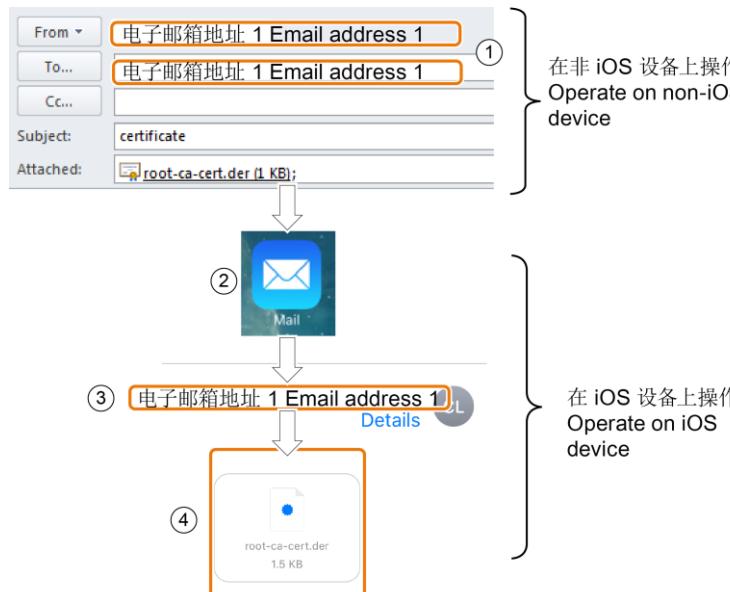
To access the SINAMICS G120 Web pages with https:// from Windows 10-based PCs or iOS-based mobile devices, you need to install SSL certificates.

• 在基于 Windows 10 的 PC 上安装 Installing on Windows 10-based PCs

- 进入证书下载网站 (<https://support.industry.siemens.com/cs/ww/en/ps/13225/dl>)，下载文件“G120 smart access certificates.zip”。解压证书文件“root-ca-cert.der”至本地驱动。
Enter the certificate download Web site (<https://support.industry.siemens.com/cs/ww/en/ps/13225/dl>) and download the file "G120 smart access certificates.zip". Extract the certificate file "root-ca-cert.der" to your local drive.
- 双击文件“root-ca-cert.der”，选择“安装证书 > 下一步”打开证书存储。
Double-click the file "root-ca-cert.der" and then select "Install certificate > Next" to open the certificate store.
- 选择“将所有的证书都放入下列存储”，并浏览到“受信任的根证书颁发机构”。
Select "Places all certificates in the following store" and then browse to "Trusted Root Certification Authorities".
- 选择“下一步 > 完成 > 确定”完成证书安装。现在您可以通过 SINAMICS G120 智能连接模块访问 SINAMICS G120 网页。
Select "Next > Finish > OK" to complete the certificate installation. Now you are able to access the SINAMICS G120 Web pages via the SINAMICS G120 Smart Access.

• 在基于 iOS 的移动设备上安装 Installing on iOS-based mobile devices

- 由于 iOS 设备不支持直接下载文件，使用非 iOS 设备（比如 PC）进入证书下载网站 (<https://support.industry.siemens.com/cs/ww/en/ps/13225/dl>)，下载文件“G120 smart access certificates.zip”。解压证书文件“root-ca-cert.der”至非 iOS 设备的本地驱动。
As iOS devices do not support directly downloading files, enter the certificate download Web site (<https://support.industry.siemens.com/cs/ww/en/ps/13225/dl>) from a non-iOS device (for example, a PC) and download the file "G120 smart access certificates.zip". Extract the certificate file "root-ca-cert.der" to your local drive of this non-iOS device.
- 将证书文件以附件形式发送到个人电子邮箱账户（“①”）。使用 iOS 设备的内置邮箱应用（“②”）登录你的邮箱（“③”），接收附件，并点击附件安装证书文件（“④”）。
Send the attached certificate file to an E-mail account of your choice ("①"). Use the built-in mail application ("②") of your iOS-based mobile device to log in to your E-mail account ("③"), receive the attachment, and tap the attachment to install the certificate ("④").



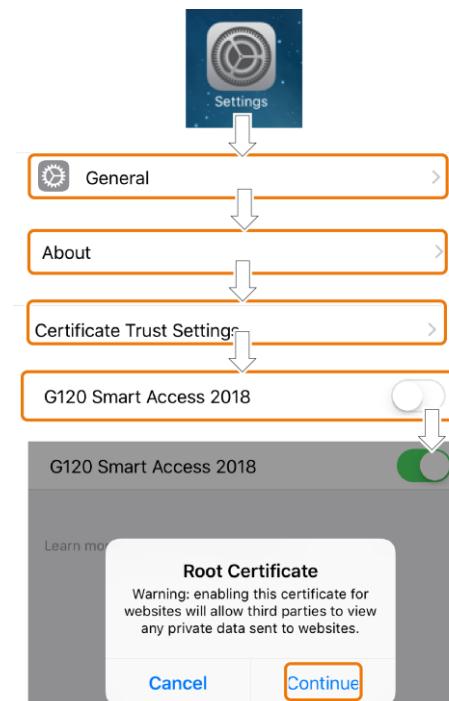
- 在基于 iOS 的移动设备上，选择“设置 > 通用 > 描述文件”查看配置描述文件，以确保证书已签发给“G120 Smart Access 2018”。

Select "Settings > General > Profiles" to view configuration profiles in your iOS-based mobile device and make sure that the certificate has been issued to "G120 Smart Access 2018".



- 选择“设置 > 通用 > 关于本机 > 证书信任设置”，开启对根证书“G120 Smart Access 2018”的全面信任。现在您可以通过 SINAMICS G120 智能连接模块访问 SINAMICS G120 网页。

Select "Settings > General > About > Certificate Trust Settings" to enable full trust for the root certificate "G120 Smart Access 2018". Now you are able to access the SINAMICS G120 Web pages via the SINAMICS G120 Smart Access.



建立首次无线网络连接 Establishing initial wireless network connection

1. SINAMICS G120 智能连接模块安装到变频器后, 给变频器通电, 然后按下 WLAN 按钮 (> 3 秒) 开启模块的 Wi-Fi 连接。

After you have fitted the SINAMICS G120 Smart Access to the inverter, power on the inverter and then hold down the WLAN button (> 3 s) to enable the Wi-Fi connection of the module.

2. 启用 PC 或移动设备内的 Wi-Fi 接口。如需在 PC 上建立无线网络连接, 须确保自动 IP 设置已启用。

Activate the Wi-Fi interface inside your PC or mobile device. If you desire to establish the wireless network connection on your PC, make sure that you have previously enabled the automatic IP settings.

3. 搜索 SINAMICS G120 智能连接模块的无线网络 SSID: G120 smart access_xxxxxx ("xxxxxx" 代表 SINAMICS G120 智能连接模块 MAC 地址的末尾六个字符)。

Search the wireless network SSID of the SINAMICS G120 Smart Access: G120 smart access_xxxxxx ("xxxxxx" stands for the last six characters of the module MAC address of the SINAMICS G120 Smart Access).

4. 输入无线网络密码启动连接 (默认密码: 12345678)。

Enter the wireless network password to launch the connection (default password: 12345678).

5. 在支持的浏览器中输入 IP 地址: (<http://192.168.1.1> 或 <https://192.168.1.1>)。

Enter the IP address (<http://192.168.1.1> or <https://192.168.1.1>) in the supported browser.

6. 更改密码的网页打开后, 输入新密码。新密码最低要求为 8 个字符, 包括数字、大写和小写字母的组合。为获得更高的网络访问安全性, 输入一个 10 到 20 个字符的新密码 (所允许的字符长度: 8 到 20 个字符), 密码需包含以下四类字符: 1) 数字: 0...9; 2) 大写字母: A...Z; 3) 小写字母: a...z; 4) 特殊字符: _、-、~、!、@、#、\$、%、^、&、*, 不可使用空格。

After the Web page for password change opens, enter a new password. The minimum requirement for the new password is 8 characters including numbers, uppercase and lowercase letters. To achieve better network access security, enter a new password of 10 to 20 characters (required character length: 8 to 20) that includes all of the following four categories of password characters: 1) numbers: 0 ... 9; 2) uppercase letters: A ... Z; 3) lowercase letters: a ... z; 4) special characters: _, -, ~, !, @, #, \$, %, ^, &, and *, the space character is not allowed.

注意, 该密码更改页包含一个安全级别指示器。指示器会根据新密码的复杂程度给出如下提示:

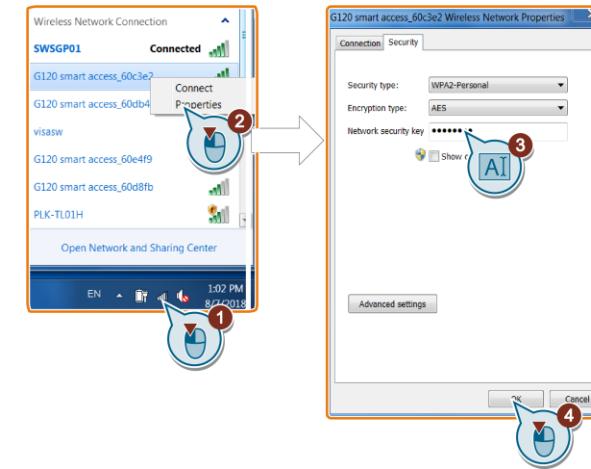
- 低: 密码长度为 8 到 9 个字符, 包括数字、大写和小写字母的组合。
- 中: 密码长度为 10 到 20 个字符, 包括数字、大写和小写字母的组合。或者密码长度为 8 到 9 个字符, 同时包括数字、大写和小写字母以及特殊字符的组合。
- 高: 密码长度为 10 到 20 个字符, 包括数字、大写和小写字母以及特殊字符的组合。

Note that this password change page includes a security level indicator. The indicator displays as follows with the complexity of the new password:

- Low: The password includes 8 or 9 characters and is a mixture of numbers, uppercase and lowercase letters.
- Medium: The password includes 10 to 20 characters and is a mixture of numbers, uppercase and lowercase letters. Or, the password includes 8 or 9 characters and is a mixture of numbers, uppercase and lowercase letters, and special characters.
- High: The password contains 10 to 20 characters and is a mixture of numbers, uppercase letters, lowercase letters, and special characters.

7. 选择 SINAMICS G120 智能连接模块的无线网络 SSID, 然后输入新的 Wi-Fi 密码启动连接。

Select the wireless network SSID of the SINAMICS G120 Smart Access and then enter the new Wi-Fi password to launch the connection.



8. 输入 IP 地址 (<http://192.168.1.1> 或 <https://192.168.1.1>) 打开主页。

Enter the IP address (<http://192.168.1.1> or <https://192.168.1.1>) to open the home page.

无线网络连接示例 Wireless network connection examples

Windows 7/Windows 10

1. 点击 PC 任务栏上的  图标。

Click  on the taskbar on your PC.

2. 选择目标网络并输入无线网络密码启动连接。

Select the target network and enter the wireless password to launch the connection.



Android/iOS

进入平板电脑或智能手机的 Wi-Fi 设置窗口, 选择目标网络并输入无线网络密码启动连接。

Go to the Wi-Fi setting window on your tablet or smart phone, select the target network, and then enter the wireless password to launch the connection.



复位 Wi-Fi 配置 Resetting Wi-Fi configuration

在 SINAMICS G120 智能连接模块通电状态下按住复位按钮三秒以上可将 SINAMICS G120 智能连接模块的 Wi-Fi 配置复位至出厂默认值。

When the SINAMICS G120 Smart Access is in power-on state, holding down the reset button for more than three seconds resets the Wi-Fi configuration of the SINAMICS G120 Smart Access to factory defaults.

- Wi-Fi (SSID): G120 smart access_xxxxxx
"xxxxxx" 代表模块 MAC 地址最后六个字符。
"xxxxxx" stands for the last six characters of the module MAC address.
- Wi-Fi 默认密码 Wi-Fi default password: 12345678
- 默认频率通道 Default frequency channel: 1

说明 Note

在按下复位按钮复位 Wi-Fi 配置之前，确保 SINAMICS G120 智能连接模块上 Wi-Fi 通信 LED 的状态为绿色长亮/黄色长亮或绿色闪烁。Wi-Fi 通信 LED 状态为黄色闪烁表示 Wi-Fi 配置复位成功。复位后，重启 SINAMICS G120 Smart Access。

Before pressing the reset button to reset the Wi-Fi configuration, make sure that the Wi-Fi communication LED on the SINAMICS G120 Smart Access lights up solid green/solid yellow or flashes green. The Wi-Fi configuration is reset successfully when the status of the Wi-Fi communication LED flashes yellow. After resetting Wi-Fi configuration, restart SINAMICS G120 Smart Access.

升级 Upgrading

在 SINAMICS G120 网页上进行升级可升级模块的固件版本。

Upgrading on the SINAMICS G120 Web page upgrades the firmware version of the module.

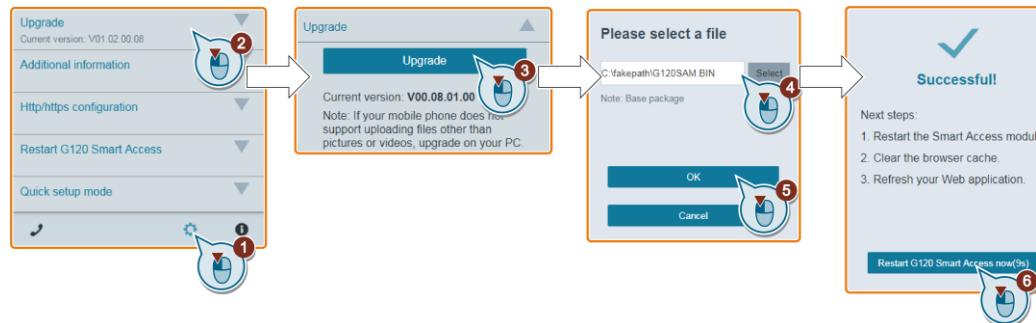
常规升级 Conventional upgrading

1. 从以下网站下载目标升级文件 (*.bin 文件) 至本地盘 (推荐在 PC 上操作) : Download the target upgrade file (*.bin file) from the following Web site to your local drive (recommended on PC):

<https://support.industry.siemens.com/cs/ww/en/ps/13225/dl>

2. 访问 SINAMICS G120 网页: <http://192.168.1.1> 或 <https://192.168.1.1>。按照以下步骤执行升级:

Access the SINAMICS G120 Web page: <http://192.168.1.1> or <https://192.168.1.1>. Proceed as follows to perform the upgrade:



升级成功后，SINAMICS G120 Smart Access 会在10秒倒计时结束后自动重启。

After upgrading is successfully complete, the SINAMICS G120 Smart Access will restart automatically after the 10-second countdown time has elapsed.

3. 清除浏览器缓存并刷新网络应用程序。

Clear the browser cache and refresh your Web application.

基本升级 Basic upgrading

若常规升级失败，可进行基本升级。

Basic upgrading is applicable only when conventional upgrading fails.

1. 从以下网站下载目标升级文件 (*.bin 文件) 至本地盘 (推荐在 PC 上操作) : Download the target upgrade file (*.bin file) from the following Web site to your local drive (recommended on PC):

<https://support.industry.siemens.com/cs/ww/en/ps/13225/dl>

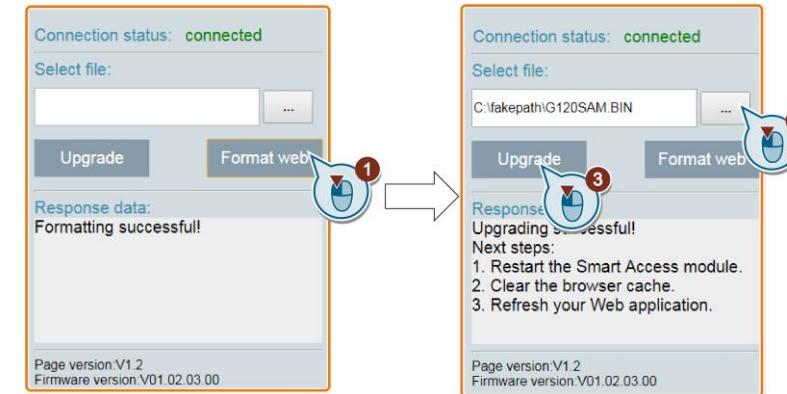
2. 模块处于断电状态时，按住模块上的复位按钮，然后给模块上电。

Hold down the reset button when the module is in power-off state and then power on the module.

3. 打开基本升级的网站: Open the following Web site specific for basic upgrading:

<http://192.168.1.1/factory/basicupgrade.html>

4. 按照以下步骤完成升级操作。Proceed as follows to complete the upgrade.



5. 重启模块，清除浏览器缓存，并刷新网络应用程序。

Restart the module, clear the browser cache, and refresh your Web application.

补充信息 Additional information

可从以下链接观看模块操作的视频教程: You can watch the online tutorial for operating the module from the following link: www.Siemens.com/sinamics-accessories

有关上传自制证书的详情，参见《SINAMICS G120 Smart Access Operating Instructions》。

For information about uploading self-created certificates, see *SINAMICS G120 Smart Access Operating Instructions*.

ANATEL 证书的葡萄牙语声明 Statement in Portuguese about the ANATEL certificate:

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

SINAMICS G120 智能连接模块符合无线电设备指令 2014/53/EU。

SINAMICS G120 Smart Access is in compliance with Radio Equipment Directive 2014/53/EU.



...或使用链接: ... or follow the link:
<https://support.industry.siemens.com/cs/ww/en/ps/13225/man>



...或使用链接: ... or follow the link:
<https://support.industry.siemens.com/cs/ww/en/sc/2067>



...或使用链接: ... or follow the link:
<https://support.industry.siemens.com/cs/ww/en/ps/13225/cert>



...或使用链接: ... or follow the link:
https://www.automation.siemens.com/aspa_app/?lang=en&showLayer=0

NCC Statement in Traditional Chinese:

NCC 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，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。

第十四條 低功率射頻電機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。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機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。

FCC Statement

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.

Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

RF exposure statement

This equipment complies with radio frequency exposure limits set forth by the FCC for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

IC Statement

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:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with radio frequency exposure limits set forth by the Innovation, Science and Economic Development Canada for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 cm between the device and the user or bystanders.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiofréquences définies par la Innovation, Sciences et Développement économique Canada pour un environnement non contrôlé.

Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre le dispositif et l'utilisateur ou des tiers.

Ce dispositif ne doit pas être utilisé à proximité d'une autre antenne ou d'un autre émetteur.