/User Manual

Model: MC60 Adapter

Version: 1.1 June 2019

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Welcome!

Thank you for purchasing this SmartRG product.

SmartRG offers solutions that simplify the complex Internet ecosystem. Our solutions include hardware, software, applications, enhanced network insights, and security delivered via a future-proof operating system. Based in the USA, SmartRG provides local, proactive software development and customer support. We proudly offer the best, most innovative broadband gateways available.

Learn more at www.SmartRG.com.

Purpose & Scope

This Gateway User Manual provides SmartRG customers with installation, configuration and monitoring information for their MC60 extender.

Intended Audience

The information in this document is intended for Network Architects, NOC Administrators, Field Service Technicians and other networking professionals responsible for deploying and managing broadband access networks. Readers of this manual are assumed to have a basic understanding of computer operating systems, networking concepts and telecommunications.

Getting Assistance

Frequently asked questions are provided at the bottom of the Subscribers page of the SmartRG Web site.

Subscribers: If you require further help with this product, please contact your service provider.

Service providers: if you require further help with this product, please open a support request.

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Getting Familiar with your Adapter

This section contains a quick description of the adapter's lights, ports, and buttons to help you get familiar with its operation.

LED Status Indicators

Your SmartRG adapter has three indicator lights (LEDs) on its exterior. The following table describes the LEDs located on top of the adapter.

INDICATOR	COLOR	STATE	DESCRIPTION
Power	White	On	The device is powered on.
Ethernet	Green	On	A connection is detected.
	Green	Blink	Internet data is being transmitted.
MoCA®	Green	On	This LED glows green briefly (about 1 second) when the adapter has connected with at least one MoCA.
	White	Blink	Data is being transmitted.
	Note: If you disconnect the coax cable from the adapter, this LED reverts to green.		

Connections

The connectors and buttons located on the back of the MC60 adapter are shown below and described in the following table.


Feature	Description
TV OUT	This coax port can be used to connect the adapter to your set-top box or TV.
MoCA® IN	This coax port can be used to connect the adapter to the coax wall outlet.
ETHERNET	This black RJ45 port can be used to connect a client device such as computers to the adapter.
RESET	The **Reset** button is a small hole in the adapter's enclosure with the actual button mounted behind the surface. This style of push-button prevents the adapter from being inadvertently reset during handling.

Feature	Description
	If you want to restore the default settings, insert a fine wire (such as a paper clip) into the hole, press the **Reset** button gently for 10 seconds, and then release the button. The system reboots and returns to the factory defaults. **Note:** If you press the **Reset** button for less than 10 seconds, the adapter reboots but no settings are changed. **Warning:** Do not press the **Reset** button unless you want to clear the current settings.
DC 5V	Use only the power supply included with your adapter. Intended for indoor use only.
ON/OFF	Power switch.

Symbols

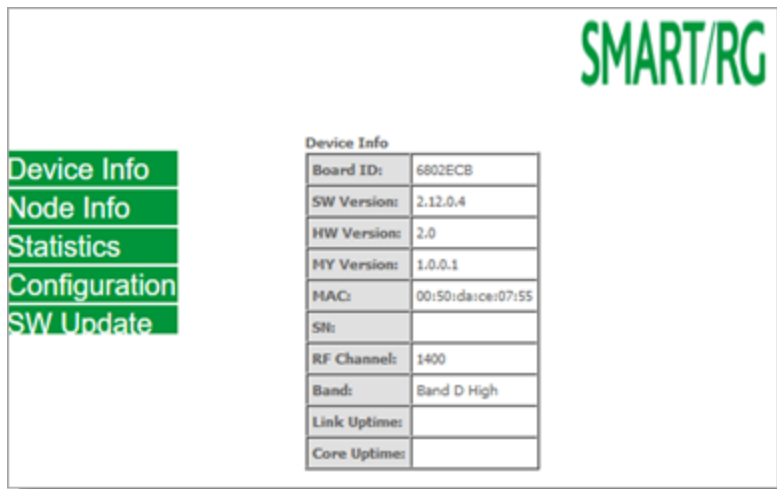The symbols displayed on the MC60 labeling are explained below.

Symbol	Indicates
	Polarity of DC power connector.
	DC voltage.
	AC voltage.
	For indoor use only.
	Class II equipment.
	Energy Efficiency Marking.

Logging in to your Adapter's Interface

To manually configure the MC60 adapter, access its embedded UI.

Note: Before you can access the UI, make sure that your computer's IP (NIC) is set to any other IP address than the default IP address of the adapter (192.168.0.2).

1. Open a Web browser on your computer.
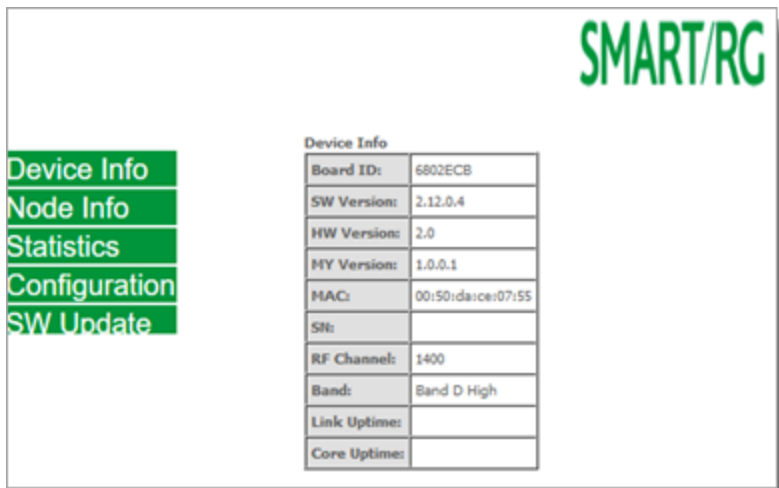2. Enter http://192.168.0.2 (the default IP address of the adapter) in the address bar. The Device Info page appears.

Device Info

On this page, you can view information about your device including

- **Board ID**: The installed chip.
- **SW Version:** The embedded software version.
- **HW Version:** The hardware version.
- **MY Version:** The firmware version.
- **RF Channel:** The channel currently in use.
- **Band:** The active band.
- **Link Uptime:** How long since the MC60 was linked up.
- **Core Uptime:** How long since core was activated.

In the left navigation bar, click **Device Info**. The following page appears.

Node Info

On this page, you can view information about your node including the node name, MAC address, power levels, etc.

In the left navigation bar, click **Node Info**. The following page appears.

Statistics

On this page, you can view Ethernet statistics.

In the left navigation bar, click **Statistics**.The following page appears.
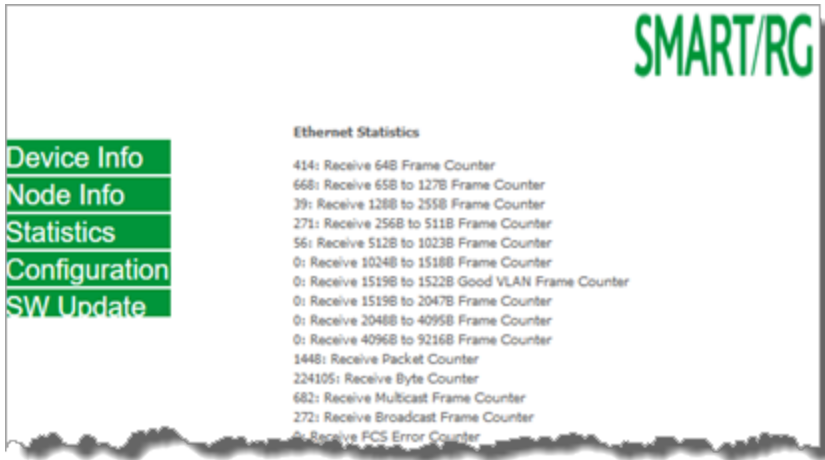
Configuration

On this page, you can configure the RF settings.

1. In the left navigation bar, click **Configuration**. The following page appears.
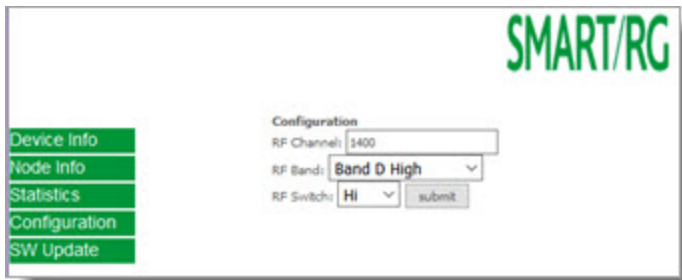
2. Modify the fields, using the information provided in the table below.
3. Click **Submit**.

Field	Description
RF Channel	This option is set to **1400** by default and cannot be changed.
RF Band	Select an appropriate RF band. Options are **Band D Low**, **Band D High**, **Band D Extended**, **Band E**, **Band F**, **Band C4**, and **Band H**. The default is **Band D High**.
RF Switch	Select the switch level. Options are **Hi** and **Low**. The default is **Hi**.

SW Update

On this page, you can upload a new software image file (firmware) to update your adapter.

1. In the left navigation bar, click **SW Update**. The following page appears.
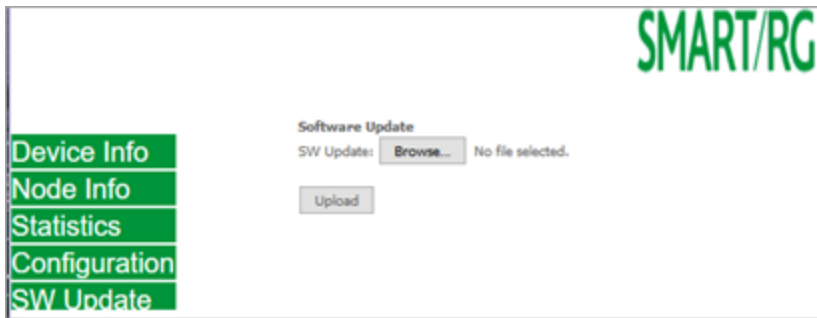
2. Click **Browse** and select the file you want to upload.
3. Click **Upload**. The new firmware is active the next time you turn the adapter on.

APPENDIX A: FCC STATEMENTS

FCC Interference Statement

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.

- This device must accept any interference received, including interference that may cause undesired operation.

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

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

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numrique de la classe B est conforme Ã la norme NMB-003 du Canada.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules.

- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

- This equipment should be installed an operated with a minimum distance of 20cm between the radiator and your body.

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

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.

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

FCC - PART 68

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom case of this equipment is a label that contains, among other information, a product identifier in the format US: VW7DL01BSR555A.

This equipment uses the following USOC jacks: RJ-11/RJ45/USB/Power Jacks.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Ringer Equivalency Number Statement

Notice: The Ringer Equivalency Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment, for repair or warranty information, please contact SmartRG,Inc. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your home has specially wired alarm equipment connected to the telephone line, ensure the installation of this device does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

IC CS-03 statement

This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux specifications techniques applicables d'Industrie Canada

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five. / L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

Canada Statement

This device complies with Industry Canada licence-exempt RSS standard(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.

Le présent appareil est conforme aux CNR d'Industrie 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, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

5GHz

5150-5250 MHz band is restricted to indoor operations only.

Revision History

Revision	Date	Description
1.1	June 2019	Updated content to reflect changes in physical design of the product.
1.0	Sept 2016	Initial release of this user manual.