Technicolor

DOCSIS Cable Gateway

CGM4140COM
CGM4141COX

User Manual

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Rev. 0.1

Description

This is a DOCSIS cable gateway device including the following functionalities:

- DOCSIS 3.1 Cable Modem
- PacketCable 2.0 eDVA
- 2 port Gigabit Ethernet switch with advanced routing capability
- 802.11n WiFi interface at 2.4GHz
- 802.11ac WiFi interface at 5GHz
- Zigbee radio interface
- Bluetooth Smart radio interface
- Thread radio interface
- 2 FXS ports
- Internal PSU
- eMTA supporting PacketCable 2.0
- IPv4/IPv6 router
- Remote management capabilities (SNMP, TR069, HNAP)

External Photos

Features

- High speed DOCSIS 3.1 interface
    - Supports Gigabit internet connectivity
- High speed wireless interface
    - Supports whole-home coverage with state-of-the-art radio technology
- Voice performance
    - PacketCable 2.0 compliant and equipped with basic and extended CLASS features such as caller ID and call-waiting
- Advanced Security
    - The integrated firewall provides Stateful Packet Inspection (SPI), and an integrated Intrusion Detection and Prevention System (IDS) engine monitors a wide range of attack patterns, and logs potential security breaches to a local cache or remote server. To secure data exchange between the gateways and the cable operators' servers, BPI+ communications privacy is used.
- WPS
    - With Wi-Fi Protected Setup (WPS) users can easily connect to the wireless network by simply pushing a button or entering a PIN code. It allows home users to easily connect to a secure network without any complex configuration and eliminates the need to remember or store their security information in an unsafe way.
- Easy to Use
    - This is an easy-to-use/easy-to-install gateway. For convenience of the end user, the easy-to-access multi-colored LEDs provide a clear indication of start-up sequence and connectivity status. Multiple integrated web pages allow direct access to the status and settings, including privacy and security information.

Technical Specifications

Cable Certifications

- Data
- Voice
- CMTS interoperability
- DOCSIS 3.1
- PacketCable 2.0

Hardware Specifications

- WAN Interface 1 RF F-type
- LAN interface 2-port wired ethernet RJ45, WiFi IEEE 802.11 2.4/5GHz, MoCA
- Interfaces other WPS button, reset button
- Power supply 120-240VAC 50-60Hz
- Operating Temperature 0 to 40 degC
- Operating humidity 20-90% non-condensing
- Storage temperature -20-70 degC

Receiver Specifications

- Downstream modulation QAM, OFDM
- Downstream Frequency Range 54-1002 MHz
- Input signal level range -15 / +15dBmV
- Input impedance 75 ohm

Transmitter Specifications

- Upstream Modulation QPSK, QAM, OFDM
- Upstream Frequency Range 5-42 MHz
- Output Impedance 75 ohm

Wireless Specifications

- WiFi IEEE 802.11a/b/g/n/ac
- WiFi Protected Setup

SAFETY INSTRUCTIONS AND REGULATORY NOTICES

BEFORE YOU START INSTALLATION OF OR USE THIS PRODUCT, CAREFULLY READ THESE INSTRUCTIONS

When using this product, always follow the basic safety precautions to reduce the risk of fire, electric shock and injury to persons, including the following:

- Always install the product as described in the documentation that is included with your product.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use this product to report a gas leak in the vicinity of the leak.

Safety instructions

- *Read these instructions.*
- *Keep these instructions.*
- *Heed all warnings.*
- *Follow all instructions.*

Climatic conditions

This product:

- Is intended for in-house stationary use; the maximum ambient temperature must not exceed 40 °C (104 °F); the relative humidity must be between 20% and 80%.
- Must not be mounted in a location exposed to direct or excessive solar and/or heat radiation.
- Must not be exposed to heat trap conditions and must not be subjected to water or condensation.
- Must be installed in a Pollution Degree 2 environment (environment where there is no pollution or only dry, nonconductive pollution).
- If applicable, batteries (battery pack or batteries installed) must not be exposed to excessive heat such as sunshine, fire or the like.

Ventilation and positioning

- Remove all packaging material before applying power to the product.
- Do not block or cover any ventilation openings; never stand it on soft furnishings or carpets.
- Never push objects through the openings in this product.
- Leave 7 to 10 cm (3 to 4 inches) around the product to ensure that proper ventilation gets to it.
- Do not install the product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not put anything on it which might spill or drip into it (for example, lighted candles or containers of liquids). Do not expose it to dripping or splashing, rain or moisture. If a liquid enters inside the product, or if the product has been exposed to rain or moisture, unplug it immediately and contact the Customer Service.

Cleaning

Unplug this product from the wall socket and computer before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Water and moisture

Do not use this product near water, for example near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool.

Transition of the product from a cold environment to a hot one may cause condensation on some of its internal parts. Allow it to dry by itself before restarting the product.

Accessibility

The plug on the power supply cord or power supply unit serves as disconnect device. Be sure that the mains supply socket outlet you use is easily accessible and located as close to the product as possible.

Overloading

Do not overload mains supply socket outlets and extension power cords as this increases the risk of fire or electric shock.

Cable Distribution

For this apparatus, the cable shield/screen shall be grounded (earthed) as close as practical to the point of entry of the cable into the building. *For products sold in the US and Canada*, this reminder is provided to call the system installer's attention to ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93, Grounding of Outer Conductive Shield of a Coaxial Cable (or Canadian Electrical Code Part 1).

Servicing

To reduce the risk of electric shock, do not disassemble this product. None of its internal parts are user-replaceable; therefore, there is no reason to access the interior. Opening or removing covers may expose you to dangerous voltages. Incorrect reassembly could cause electric shock if the appliance is subsequently used.
If service or repair work is required, take it to a qualified service dealer.

Damage requiring service

Unplug this product from the mains supply socket outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply, power cord or its plug are damaged.
- When the attached cords are damaged or frayed.
- If liquid has been spilled into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally.
- If the product has been dropped or damaged in any way.
- There are noticeable signs of overheating.
- If the product exhibits a distinct change in performance.

Immediately disconnect the product if you notice it giving off a smell of burning or smoke. Under no circumstances must you open the equipment yourself; you run the risk of electrocution.

Protect the product when moving it.

Always disconnect the power source when moving the product or connecting or disconnecting cables.

TECHNICOLOR
1-5 rue Jeanne d'Arc
92130 Issy-les-Moulineaux
France
www.technicolor.com

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North-America - Canada

Notification of Canadian Radio Frequency Interference Statement

This Class B digital apparatus complies with Canadian ICES-003.
This product meets the applicable Innovation, Science and Economic Development Canada technical specifications.

Canada - Industry Canada (IC)

In case this product is equipped with a wireless transceiver, this device complies with Industry Canada's licence-exempt RSSs. 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.

Canada - Radiation exposure statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (8 inches) between the radiator and your body.

Restricted frequency bands

In case this product is equipped with a wireless transceiver operating in the 2.4 GHz band, it may only use channels 1 to 11 (2412 to 2462 MHz) on Canada territory.
In case this product is equipped with a wireless transceiver operating in the 5 GHz band, it is for indoor use only.
The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

North-America - United States of America

Federal Communications Commission (FCC) radio frequency 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 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 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.

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.
Responsible Party: Technicolor, 101W. 103rd St., Indianapolis, IN 46290 USA, 317-587-5466.

RF exposure statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance.

To maintain compliance with FCC RF exposure compliance requirements, please follow operation instruction as documented in the product documentation.
When the product is equipped with a wireless interface, then it becomes a mobile or fixed mounted modular transmitter and must have a separation distance of at least 20 cm (8 inches) between the antenna and the body of the user or nearby persons. In practice, this means that the user or nearby persons must have a distance of at least 20 cm (8 inches) from the product and must not lean on the product in case it is wall-mounted. With a separation distance of 20 cm (8 inches) or more, the M(aximum) P(ermissible) E(xposure) limits are well above the potential this wireless interface is capable to produce.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Restricted frequency bands

In case this product is equipped with a wireless transceiver operating in the 2.4 GHz band, it may only use channels 1 to 11 (2412 to 2462 MHz) on U.S.A. territory.
In case this product is equipped with a wireless transceiver operating in the 5 GHz band, it meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.
The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

This product may contain certain open source software modules which are subject to Open Source Software license terms.

A list of the Open Source Software used or provided inside this product and their corresponding licenses and version number are available on TECHNICOLOR's extranet at the following address: http://www.technicolor.com/en/hi/minisites/open-software or at another address as Technicolor may provide from time to time.

If and where applicable, depending on the terms of the applicable Open Source Software licenses, the source codes of the Open Source Software are available for free on TECHNICOLOR's website at the following address: http://www.technicolor.com/en/hi/minisites/open-software.

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