

# Cable Modem plus Router

16x4 686 Mbps plus AC1900 Dual Band Wi-Fi with Power Boost

The Motorola Model MG7550 cable modem with built-in router supports modem speeds up to 686 Mbps. With its high speed and IPv4 and IPv6 networking support, this is a product designed and built for use today and for years to come. The embedded AC1900 Dual Band wireless router provides the range, wireless speeds and networking support needed for multimedia, Internet video and high-performance networking in a home or office. Power Boost technology amplifies the wireless signal to the legal limit in the U.S. AnyBeam implicit beamforming at 2.4 GHz and 5.0 GHz focuses the wireless signal toward the wireless clients. Both Power Boost and AnyBeam extend range. Together, they provide the fastest and most robust connections over the largest possible range, for virtually all client types.



# MG7550

16x4 686 Mbps\* DOCSIS 3.0 Cable Modem plus AC1900 Wi-Fi® Router

## **Features**

Fast data speed – Up to 686 Mbps downstream and 123 Mbps upstream with bonding of up to sixteen channels downstream and four channels upstream. Full-Band Capture Digital Tuning lets service providers deliver faster, more reliable Internet.

#### High speed AC1900 Dual Band Wi-Fi Router

- · AC1900 Dual Band Wi-Fi plus 4 Gigabit Ethernet ports
- AC1900 Dual Band Wi-Fi provides wireless Internet access for wireless ac, n, a, g, and b devices including smartphones, computers, tablets, and HDTVs
- Wireless Power Boost to the FCC limit for extended speed and range
- AnyBeam implicit beamforming at 2.4 GHz and 5.0 GHz focuses the signal on wireless clients to allow better performance and range
- Four 10/100/1000 Gigabit Ethernet ports for wired connection to computers, HDTVs, game stations, and other Ethernet-capable devices

### Security and Safety Features

- Advanced Firewall with DoS (Denial-of-Service) attack prevention, plus double SPI and NAT firewall protection
- Guest network access gives visitors Internet services while protecting your local network's information
- Parental control lets parents restrict access to child-inappropriate

  Web sites
- Browser-based Configuration Manager with easy menus and context-sensitive help

#### Easy installation

**Supports IPv4 and IPv6** – Support for the latest Internet addressing keeps your equipment current.

**Status-reporting LEDs** – Power, Downstream, Upstream, Online, 2.4 GHz Wireless, 5.0 GHz Wireless, WPS, and Ethernet link lights allow easy status monitoring.

DOCSIS 3.0 compatible, and compatible with earlier standards – Provides support for DOCSIS 3.0 as well as DOCSIS 1.1 and 2.0, to ensure operation and compatibility with all U.S. operators. DOCSIS (Data Over Cable Service Interface Specification) is the industry standard for transmission of Internet data over cable-based systems in the U.S. and many other countries.

#### SNMP v1/v2/v3

Compact, space-saving design

Experienced, U.S.-based technical support

Certified by CableLabs®, Comcast XFINITY®, Time Warner Cable®, and other service providers

Two year warranty



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## **Specifications**

#### General

Cable Modem Service Interface: F-type female  $75 \Omega$  (standard coaxial connector)

Ethernet LAN Interface: 4 X RJ-45 10/100/1000 Mbps Ethernet, with Auto-MDI/MDIX

Wireless: 802.11ac/n/q/b/a, 3x3 MIMO (Multiple Input Multiple Output)

Router Mode: • Dynamic DNS • Port Forwarding/DMZ support

· Compliant with IEEE 802.11ac, n, a, q,

• DHCP Server and Client • RIP V1 and V2

NAT
 Support for up to 253 client devices

Bridging

Security: • Stateful Packet Inspection (SPI) • IP/MAC/Port filtering

• VPN passthrough: PPTP, IPsec tunneling • Denial of Service Notification

Parental Control
 Wireless MAC address filtering

Attack Protection
 Supports Baseline Encryption (BPI) Management

TKIP/AESWPS

· Password protected system management · Cable modem diagnostic log

Wireless Networking

and Security: and b standards

Up to 300 Mbps\* at 2.4 GHz
Up to 1600 Mbps\* at 5.0 GHz
Simultaneous Dual Band radios
802.1x Authentication
6 SSIDs (3 per radio)
Wireless Quality of Service

• WDS • Transmit power: 20dBm

WMM/WME
 Three internal dual band antennas
 WPA-PSK/WPA2-PSK
 Power Boost wireless amplifiers

WPA/WPA2
 MEP-64/128
 AnyBeam at 2.4 GHz and 5.0 GHz for implicit
 beamforming with any Wi-Fi compatible device

Status Indicators: Front panel:

Power, Downstream link, Upstream link, Connection status, 2.4 GHz Wireless link,

5.0 GHz Wireless link, WPS

Back panel:

Each Ethernet port has two LEDs indicating data flow and LAN connection speed. Green indicates 1 Gigabit; amber indicates 10 or 100 Mbps. Blinking indicates data flow.

Size:  $2\frac{1}{2}$ " wide by  $8\frac{1}{2}$ " deep by 9" tall (229m x 216mm x 63.5mm)

Weight: 23.6 ounces (669 grams)

Power Adapter: DoE-compliant Level VI energy-saving, UL-listed power adapter with 12 Volt DC,

2.5 Amp output and 100-240VAC universal input.

NEMA 1-15 (North American style) 2-prong plug is provided in the US.

Operating Temperature: 32° to 104° F (0° to 40° C)

Certifications: FCC 15B and 15C, FCC MPE, Bureau Veritas 60950-1 ITE safety, Wi-Fi Alliance®, CableLabs®,

cable service providers

Surge Protection: Ruggedized cable and power lightning protection

Warranty: Two years



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# **Specifications**

#### **Operating Parameters**

Downstream:

Data Rate\*: Up to 686 Mbps (16 channels), Up to 43 Mbps (single channel)

Frequency: 88 to 1002 MHz (edge to edge)

Modulation: 64 or 256 QAM

Operating Level Range: -15 to +15 dBmV

Upstream:

Data Rate\*: Up to 123 Mbps (4 channels), Up to 31 Mbps (single channel)

Frequency: 5 to 42 MHz (edge to edge)

Modulation: QPSK, 8QAM, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM

Operating Level Range: A-TDMA: +8 to +54 dBmV (32QAM, 64QAM)

+8 to +58 dBmV (QPSK)

S-CDMA: +8 to +53 dBmV (all modulations)

Security: DOCSIS 3.0 Security (BPI+, EAE, SSD)

Network Protocols: IPv4, IPv6, TCP, UDP, ARP, ICMP, DHCP, FTP, TFTP, SNMP, HTTP

Application Protocol: SNMP v1/v2/v3

DHCP Client: Automatically retrieves IP and DNS server address from DHCP server at ISP

ToD (RF868): ToD support for local and MSO time synchronization

TFTP Client: TFTP support for cable modem configuration file download

Management: Web-based management interface utility

Core Chipset: Broadcom BCM33843G



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# Cable Modem/Router Back Diagram



## System Requirements

- The cable modem must be connected to a cable modem service that uses any of the DOCSIS standards – 3.0, 2.0, 1.1.
- · Directly connected devices, such as computers, HDTVs, and game stations, must have an Ethernet port.
- Devices connected wirelessly must have wireless ac, n, a, g, or b capability.
- The supplied power cube plugs into the most common USA power outlet.

## Package Contents

- · Cable Modem with built-in Wi-Fi Router
- · Power Cube
- Ethernet Cable
- · Velcro® Cable Organizer
- Coax Connection Tool
- Quick Start Flyer













- Data throughput will be reduced by network overhead. Delivered data speeds are also dependent upon the configuration and capacity of the data-over-cable service on which the MG7550 is used.
- \*\* Speeds shown are maximum wireless speeds derived from IEEE Standard 802.11 specifications. Actual speeds will vary.

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