



# Touchstone® DOCSIS® 3.0 Data Gateway

DG1670A  
Dual Band 802.11n, 4  
Port Router, and  
MoCA®

**Time Warner/BrightHouse**

## Configuration

- 16x4 Channel Bonding
- Full Capture Bandwidth Tuner
- Multi Processor Technology with an Intel Atom Core Application Processor
- DOCSIS® 3.0 certified design
- 4 port Gigabit Ethernet Wireless Router
- 3x3 Integrated Dual Band Concurrent 2.4GHz and 5GHz 802.11n radios with Beam Forming
- USB 2.0 Host Port
- Upcoming support for DLNA and File Storage
- MoCA1.1 for in Home Video and Data distribution over Coax
- Dual Stack IPv4/IPv6 Home Router
- Support for Commercial Services
- Internal Power Supply for Highest Reliability



## Application

The ARRIS DOCSIS 3.0 Data Gateway DG1670A combines a 4-port Gigabit Router, MoCA and a Dual Band 802.11n wireless access point into a single integrated device. Using Intel's multi-processor technology, the DG1670A can achieve high bandwidth performance with simultaneous activity on all interfaces. This feature-packed unit is intended to serve as the hub of the subscribers network, connecting all IP capable devices (Internet, Data, Voice and Video) throughout the customers premises. The DG1670 will continue to lead the future for these advanced home and small office services.

## Performance

Operators want to push the limits on DOCSIS 3.0 performance and the user experience delivered to the customer. The DG1670A with its advance 3x3:3 Dual Band Wireless radios, and industry leading Beam forming technology provides superior home coverage and best in class wireless performance. The DG1670 Ethernet, USB and MoCA interfaces can deliver the uninterrupted performance while also offering improved quality of service and in home coverage above those of previous models.

## Maintenance

Residential gateway support has always been a concern of the operator. The DG1670 distinguishes itself with capabilities to minimize these support needs. Multiple provisioning methods (SNMP, Configuration File, Remote WebGUI access, TFTP, and TR-069) allow custom designed setups to be applied to monitor the end user more efficiently. Multiple local and remote access levels (User, Admin) also allow more ease and flexibility for manual configuration and control.

## Energy Management and Conservation

To lower the operational costs, ARRIS has incorporated technologies that will also realize significant cost savings to the end consumer in energy consumption over the life of the product.

## Touchstone® Data Gateway DG1670A

- DOCSIS® 3.0 compliant designs
- Up to 16 downstream and 4 upstream channel bonding
- Full Capture Bandwidth Tuning capability
- High performance Wi-Fi® Alliance certified 802.11a/b/g/n wireless access point
- Dual Band Concurrent radios for 2.4GHz and 5GHz operation
- Internal 3x3 MIMO antenna per radio configuration with Beam Forming for optimal throughput and coverage
- Multiple (8) SSID support per radio
- WPA™ and WPA2™ Personal and Enterprise, 64/ 128 bit WEP, and MAC authentication wireless security options
- Support for WMM® QOS, and WMM Power Save
- Wi-Fi Protected Setup™ (facilitates easy set-up of security using a Personal Identification Number (PIN) and/or a button located on the Wi-Fi device )
- High Speed Internet via 4 ports 10/100/1000Base-T Ethernet (RJ-45)
- All ports Auto-negotiation, auto speed sensing and Auto MDI/X
- Planned feature support for DLNA and File Storage.
- USB 2.0 Embedded Host port
- In home MoCA networking support
- Support for Dual Stack IPv4/IPv6 Home Router, Static and Dynamic IP, DHCP, NAT, L2TP, VLAN' s and RIP
- Integrated Universal Power Supply for Higher Reliability
- Compact footprint with advanced styling
- Reduced front LED' s to improve in home appearance
- Optional Wall Mount Bracket



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## DG1670A DOCSIS® 3.0 Dual Band Concurrent Wireless Data Gateway with MoCA®

Time Warner/Bright House

### Specifications

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#### Physical

Operating Temperature ° F (° C)	32 to 104 (0 to 40)
Operating Relative Humidity (Min-Max)	5-85% (Non condensing)
Storage Temperature ° F (° C)	-40 to 158 (-40 to 70)
Color	Black
Dimensions (H x W x D) in.	9.5 x 7.25 x 2.3 - excluding F-connector
Weight lbs.	1.2
Diagnostic LEDs	Power, US/DS, Online, 2.4GHz, 5GHz, MoCA

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#### Interfaces

RF Interface	External 'F' type connector
Data Interfaces (bridged)	4 x 10/100/1000 Base-T Ethernet (RJ-45 connector)
USB Interface	USB 2.0 Powered Host Port
MoCA	MoCA Version 1.1 coax support
Input Voltage (nominal)	100VAC-240VAC, 50/60 Hz

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#### RF Downstream

Bonded Channels	Up to 16
Tuner Configuration	Full capture tuning range
Frequency Range (MHz)	108-1002 DOCSIS
Carrier Bandwidth (MHz)	6 (DOCSIS)
Modulation (QAM)	64 or 256
Data Rate (Mbps Max.)	Up to 640 DOCSIS
RF Input Sensitivity Level (dBmV)	-15 to +15 (DOCSIS)

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# ARRIS Technical Specification

## Specifications Continued

### RF Upstream

Bonded Channels	Up to 4
Frequency Range (MHz)	5 to 42 (DOCSIS)
Modulation	QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM & 128 QAM (S-CDMA only)
Data Rate (Mbps Max.)	up to 160
RF Output Level (dBmV )	ATDMA: +8 to 57 dBmV (32 QAM, 64 QAM) +8 to 58dBmV (8 QAM, 16 QAM) +8 to 61 dBmV (QPSK) S-CDMA: +8 to +56 dBmV (all modulations)
Automatic Level Adjust	Yes
Output Impedance (Ohms)	75

### Wireless

Frequency Range	Simultaneous 2.5GHz and 5GHZ operation
Transmit Power (from any antenna)	2.4GHz – 24.3 dBm +2/-2 dBm 802.11n MCS0 ; 24.3dBm +2/-2dBm 802.11n (MCS7). 5.0GHz – 26.3 dBm +2/-2 dBm 802.11n MCS0 ; 26.3 dBm +2/-2dBm 802.11n (MCS7). Includes MiMo additive power gains . Total system power is adaptable to maintain regulatory limits in the specific band of operation where necessary.
Spatial Streams	3
Receive Levels (all bands)	2.4GHz - <-86dBm 802.11n (MCS0) , <-74dBm 802.11n (MCS7) 5.0GHz - <-84dBm 802.11n (MCS0) , <-72dBm 802.11n (MCS7)
Antennas	3 transmit, and 3 receive (per band)

### MoCA

Frequency Range (MHz)	1150 – 1500
Network Channel Bandwidth (MHz)	50
Max Transmit Power (dBm)	+ 9 max (adjustable)
Max Phy Rate (Mbps)	270
Application Data Rate (Mbps)	175 bidirectional combined
Link Delay	9ms max

### Standards

DOCSIS® 3.0	IEEE 802.3, IEEE 802.3ab, IEEE 802.3x
MoCA 1.1	IEEE 802.1p, IEEE 802.1Q
UL® 60950	IEEE Std. 802.11b, 1999 Edition
WiFi Alliance Certified	IEEE Std. 802.11g, 2002 Edition
FCC Part 15 Class B	IEEE Std. 802.11n

### Ordering Information

Part Number	Description
<b>DOCSIS 3.0 Models</b>	Touchstone; DG1670A/TW Wireless Modem DOCSIS 3.0 16x4, Dual Band Concurrent 3x3:3 802.11n radios, 4 Gigabit Ethernet, MoCA1.1, 115-240VAC, 50/60 Hz
800939	Touchstone DG1670A/TW with NEMA 1-15 Power Cord
<b>Accessories</b>	Please contact ARRIS for Specific Ordering Information and Options Power Cords, Wall Mounting Brackets

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