



Touchstone® DOCSIS® 3.0 Residential Gateway

With 802.11n, 4 Port
Router, and 2 Voice
Lines TG862G



Configuration

- 8x4 Channel Bonding
- Multi Processor Technology for Highest Performance
- DOCSIS® 3.0 and PacketCable™ 1.1/1.5 compliant design
- Upgradable to PacketCable 2.0
- 4 port Gigabit Ethernet Wireless Router
- Integrated 2.4GHz 802.11n radio
- USB 2.0 Host Port
- Enhanced WebGUI Interface with Technician Level Access
- Supports Firewall, Parental Control, L2TP, RIP, DHCP and more
- Up to two lines of carrier-grade VoIP
- Multiple Protocol Support: PacketCable (NCS) and Session Initiation Protocol (SIP)
- Internal Power Supply for Highest Reliability

Advanced Residential Gateway Solution for Voice, Data , and Wireless

The Touchstone® DOCSIS® 3.0 Residential Gateway is an 8x4 advanced gateway product. The TG862 combines two analog voice lines, a 4-port Gigabit Router, and a 802.11n wireless access point into a single device capable of supporting both home and small office applications. Using multi-processor technology, the TG862 can achieve high bandwidth performance without affecting voice quality, a historical ARRIS product standard. This feature packed unit will lead the future for advanced home and small office services.

Enhanced Performance

Operators strive to push the limits on DOCSIS 3.0 performance delivered to the customer with both the Ethernet and the wireless interfaces. The 802.11n wireless interface can deliver the performance desired while also offering improvements in home coverage above those of previous technologies.

Efficient and Flexible Maintenance

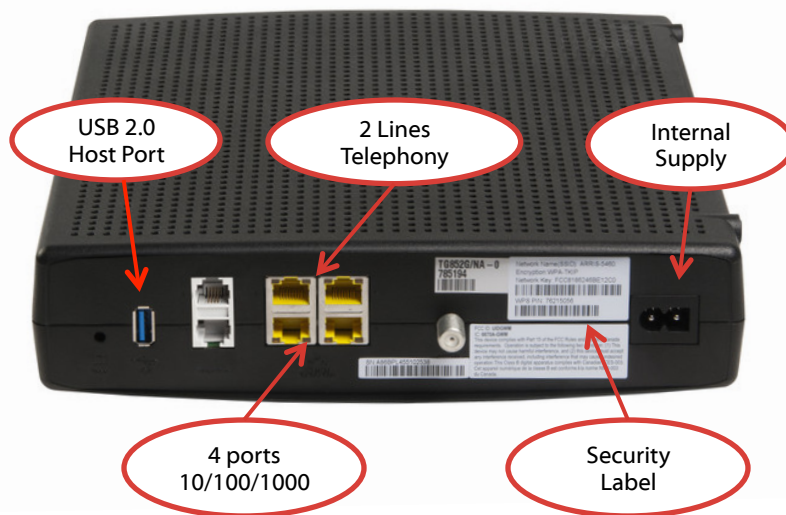
The TG862 distinguishes itself with capabilities that minimize an operator's support needs. Multiple provisioning methods (SNMP, Configuration File, Remote WebGUI access, and TFTP) allow a custom designed setup to be efficiently applied to the end user. Multiple local and remote access levels (User , Technician) also allow more ease and flexibility for manual configuration and control.

Energy Management and Conservation for Cost Savings

To lower the operational costs, ARRIS advanced battery technology allows for use of the smallest battery size in the industry for reaching 8 hours of standby support. This technology will also realize significant cost savings to the end consumer in energy consumption over the life of the product.

Touchstone® DOCSIS® 3.0 Residential Gateway With 802.11n, 4 Port Router, and 2 Voice Lines

- DOCSIS® 3.0 compliant designs
- Up to 8 downstream channels supporting over 320Mbps of data capacity
- Up to 4 upstream channels supporting over 120Mbps of data capacity
- Tuners support two 96MHz blocks for up to 8 bonded channels
- High performance WiFi-Alliance certified 802.11b/g/n wireless access point
- Advanced MIMO antenna configuration for optimal throughput and coverage
- High Speed Internet via 4 ports 10/100/1000Base-T Ethernet (RJ-45)
- All ports support Auto-negotiation, auto speed sensing, and Auto MDIX
- Multiple (4) SSID Support. Expandable to 8.
- 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)
- Software support for UPnP
- USB 2.0 powered Host Port
- Support for Static and Dynamic IP, DHCP, NAT, L2TP, VLAN' s and RIPv2
- Dual Color LED Status Information for defining operational status
- Low Power Consumption
- Integrated Universal Power Supply for Higher Reliability
- Vertical or Horizontal Mounting
- 2 lines of Carrier Grade Voice
- Multiple Protocol Support: PacketCable (NCS) and Session Initiation Protocol (SIP)
- Toll grade, compression, and High Fidelity Wideband CODECs (HD) supported.
- Battery Backup options allow over 8 hours of standby support



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TG862G DOCSIS® 3.0 Residential Gateway with 802.11n, 4 Port Router and 2 Voice Lines

Specifications

Physical		<i>Continue to next page.</i>
Operating Temperature ° F (° C)	41 to 122 (5 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 x 8.2 x 2 - excluding F-connector	
Weight lbs	No battery included: 1.8	
Backup Capacity	Lithium-ion 2.6 Ah for 8 hours operation. Consult ARRIS for other battery holdup time options.	
Battery Dimensions in.	1.2 x 1.85 x 3.1	
Weight lbs	1.0	
Battery Storage Temperature ° F (° C)	-4 to 140 (-20 to 60) Note: Storage above 77° F (25° C) will significantly reduce life of the battery and is not recommended.	
Telemetry	AC Fail, Battery Low, Battery Missing, Replace Battery	
Diagnostic LEDs	Power, DS, US, Online, Ethernet, WiFi, Secure, Tel 1, Tel 2, Battery	
Interfaces		
RF Interface	External 'F' type connector	
Data Interfaces (bridged)	4 x 10/100/1000 Base-T Ethernet (RJ-45 connector)	
Telephony Interface	2 lines; RJ-14 ("Line 1/2"), RJ-11 ("Line 2")	
USB Interface	USB 2.0 Powered Host Port	
Input Voltage (nominal)	100-240 Vac 50/60 Hz	
Telephony		
Supervisory Voltage	48 Vdc nominal	
Maximum Loop Length to CPE	1000 ft (457M) of 26 AWG (0.4 mm) wire	
Ringling Load Capacity	10 REN total; 5 per line	
Provisionable High Loop Current Mode	Yes (40mA constant current source, NA templates ONLY)	
Telcordia™ GR 1089 (Lightning and Power Surge) Tested	Yes	
Programmable Interface for Worldwide Applications	Yes (supports multiple country templates)	
RF Downstream		
Bonded Channels	Up to 8	
Tuner Configuration	2 tuning ranges of 48MHz each supporting 4 bonded channels	
Frequency Range (MHz)	108-1002 DOCSIS	
Carrier Bandwidth (MHz)	6 (DOCSIS)	
Modulation (QAM)	64 or 256	
Data Rate (Mbps Max.)	Up to 320 DOCSIS	
RF Input Sensitivity Level (dBmV)	-15 to +15 (DOCSIS)	

Technical Specification

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 54 dBmV (32 QAM, 64 QAM) +8 to 55 dBmV (8 QAM, 16 QAM) +8 to 58 dBmV (QPSK) S-CDMA: +8 to +53 dBmV (all modulations)
Automatic Level Adjust	Yes
Frequency Stability (kHz)	±5
Output Impedance (Ohms)	75

Wireless

Transmit Power Output (EIRP)	19.5dBm +1.5/-1.5dB 802.11b; 17.5dBm +1.5/-1.5dB 802.11n (MCS 7)
Receive Levels	>-86dBm 802.11b 11mbps; >-76dBm 802.11g 54mbps, >-76dBm 802.11n HT20 MCS7
Frequency Range	2400-2483.5 MHz
Antennas	2 transmit and receive

Standards

DOCSIS 3.0	IEEE 802.3, IEEE 802.3ab, IEEE 802.3x
PacketCable 1.0 & 1.5	IEEE 802.1p, IEEE 802.1Q
Codec: G.711, 64 kbps, μ and A-law encoded speech	IEEE Std. 802.11b, 1999 Edition
Enhanced codec firmware support (G.726, G.828, G.729E)	IEEE Std. 802.11g, 2002 Edition
T.38 Fax Relay	IEEE Std. 802.11n WiFi Alliance Certified UL® 60950 FCC Part 15 Class B

Battery back-up times are typical and can be influenced by the age of the battery, the charging state, storage conditions and operating temperature as well as factors such as data activity and length of active telephone calls. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice. Actual operating range may vary according to environmental conditions at the time of use.

Ordering Information

Part Number	Description
DOCSIS 3.0 Models	PacketCable 1.0/1.5 Compliant Gateway, Integrated 100-240 VAC, 50/60 HZ Power supply with 6 foot power cord. Includes Quick Install Guide, Ethernet Cable, and CD-ROM with users guide
790682	Touchstone TG862G/CE-0 - CEE 7/16 Euro power plug - battery capable but no battery included
790683	Touchstone TG862G/CE-8 - CEE 7/16 Euro power plug - 2 cell, Li-Ion Battery Pack for up to 8 hours of battery back-up
790680	Touchstone TG862G/NA-0 - NEMA 1 power plug - battery capable but no battery included
790681	Touchstone TG862G/NA-8 - NEMA 1 power plug - 2 cell, Li-Ion Battery Pack for up to 8 hours of battery back-up
Accessories	
789699	2-Cell, 2.6 Ah, Li-Ion Battery Pack for TG862 (Battery models)
722805	North American NEMA 1-15 plug Power Cord, 6 foot
721197	European CEE 7/16 plug Power Cord, 6 foot

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