



# Touchstone® DOCSIS® 3.0 8x4 Telephony Modem TM802G

## Specifications

### Physical

Operating Temperature °F (°C)	32 to 122 (0 to 50)
Operating Relative Humidity (Min-Max)	5-95% (non-condensing)
Storage Temperature °F (°C)	-40 to 158 (-40 to 70)
Dimensions (H x W x D) in. (cm)	9.7 x 2.1 x 7.1 (24.6 x 5.3 x 18.0) - excluding F-connector
Weight lbs (kg)	1.6 (0.73) – excluding battery
Battery Back-up 6-Hour Option	Lithium-ion 2.2 AH Capacity, 0.25 lbs (0.11 kg) Battery
Battery Back-up 8-Hour Option	Lithium-ion 2.6 AH Capacity, 0.25 lbs (0.11 kg) Battery
Battery Back-up 12-Hour Option	Lithium-ion 4.4 AH Capacity, 0.50 lbs (0.22 kg) Battery
Battery Back-up 16-Hour Option	Lithium-ion 6.6AH Capacity, 0.75 lbs (0.33 kg) Battery
Battery Back-up 24-Hour Option	Lithium-ion 8.8 AH Capacity, 1.0 lbs (0.44 kg) Battery
Battery Storage Temperature °F (°C)	-4 to 140 (-20 to 60)
Telemetry	<i>Note: Storage above 77°F (25°C) reduces battery life</i>
Diagnostic LEDs	AC Fail, Battery Low, Battery Missing, Replace Battery Power, DS, US, Online, Link, Tel 1, Tel 2, Battery

### Interfaces

RF Interface	External 75 ohm 'F' type connector
Data Interface	10/100/1000 Base-T Ethernet RJ-45
Telephony Interface	2 lines; RJ-14 ("Line 1/2"), RJ-11 ("Line 2")
Input Voltage (nominal)	115-240 VAC 50/60 Hz
Power Consumption (W)	9 (idle), 12.5 (max.)

### Telephony

Supervisory Voltage	48 V DC nominal
Maximum Loop Length to CPE	1000 ft (305M) of 26 AWG (0.4 mm) wire
Ringing Load Capacity	10 REN total; 5 per line
Provisionable High Loop Current Mode	Yes
Telcordia™ GR 1089 (Lightning and Power Surge) Tested	Yes
Programmable Interface for Worldwide Applications	Yes

### RF Downstream

Frequency Range (MHz)	108-1002
Bonded Channels	up to 8
Capture Bandwidth (MHz)	2x48 (two independent tuners, each 48MHz wide)
Modulation (QAM)	64 or 256
Data Rate (Mbps, Theoretical)	up to 320
	<i>Note: Maximum DOCSIS rate; actual data throughput is less due to overhead</i>
RF Input Sensitivity Level (dBmV)	-15 to +15
Carrier Bandwidth	6 MHz

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# Technical Specification

# Touchstone® DOCSIS® 3.0 8x4 Telephony Modem, TM802G Technical Specification

## Specifications Continued

### RF Upstream

Frequency Range (MHz)	5-42
Bonded Channels	up to 4
Modulation	QPSK, 8QAM, 16QAM, 32QAM, 64QAM, 128QAM (S-CDMA only)
Data Rate (Mbps, Theoretical)	up to 131 <i>Note: Maximum DOCSIS rate; actual data throughput is less due to overhead</i>
RF Output Level (dBmV – one channel)	
A-TDMA	+17 to 61 (QPSK); +17 to 58 (8QAM, 16QAM); +17 to 57 (32QAM, 64QAM) <i>Note: A-TDMA max output power reduced 3dB when transmitting 2 channels and 6dB when transmitting 3 or 4 channels.</i>
S-CDMA	+17 to +56 (all modulations) <i>Note: S-CDMA max output reduced 3dB when transmitting 2 or more channels.</i>
Automatic Level Adjust	Yes
Frequency Stability (kHz)	±5
Output Impedance (Ohms)	75

### Standards

DOCSIS 3.0	RoHS, WEEE
PacketCable 1.0 and 1.5	IEEE 802.3, IEEE 802.3ab
PacketCable 2.0 BASIC	RFC3261 SIP: Session Initiation Protocol
UL® 60950	Codec: G.711, 64 kbps, $\mu$ -law and A-law encoded speech
FCC Part 15 Class B	Enhanced codec support (G.726, G.728, G.729E)
CE, CB	T.38 Fax Relay

## Ordering Information

Part Number	Description
790440	Touchstone TM802G/NA-0 DOCSIS 3.0 / PacketCable 1.5 complaint E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. Includes ,Quick Install Guide, and Ethernet cable; <b>Battery not included.</b>
790441	Touchstone TM802G/NA-6 DOCSIS 3.0 / PacketCable 1.5 complaint E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. Includes one, 2-cell, 2.2 AH, Li-Ion Battery Pack for up to 6 hours of battery back-up, Quick Install Guide, and Ethernet cable.
790442	Touchstone TM802G/NA-8 DOCSIS 3.0 / PacketCable 1.5 complaint E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. Includes one, 2-cell, 2.6 AH, Li-Ion Battery Pack for up to 8 hours of battery back-up, Quick Install Guide, and Ethernet cable.
790443	Touchstone TM802G/CE-0 DOCSIS 3.0 / PacketCable 1.5 complaint E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. ncludes ,Quick Install Guide, and Ethernet cable; <b>Battery not included.</b>
790444	Touchstone TM802G/CE-6 DOCSIS 3.0 / PacketCable 1.5 complaint E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. Includes one, 2-cell, 2.2 AH, Li-Ion Battery Pack for up to 6 hours of battery back-up, Quick Install Guide, and Ethernet cable.
790445	Touchstone TM802G/CE-8 DOCSIS 3.0 / PacketCable 1.5 complaint E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. Includes one, 2-cell, 2.6 AH, Li-Ion Battery Pack for up to 8 hours of battery back-up, Quick Install Guide, and Ethernet cable.

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