# 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) |
| | *Note: Storage above 77°F (25°C) reduces battery life* |
| Telemetry | AC Fail, Battery Low, Battery Missing, Replace Battery |
| Diagnostic LEDs | 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 |
| | *Note:  Maximum DOCSIS rate; actual data throughput is less due to overhead* |
| RF Input Sensitivity Level (dBmV) | -15 to +15 |
| Carrier Bandwidth | 6 MHz |

# 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 |
| | *Note: Maximum DOCSIS rate; actual data throughput is less due to overhead* |
| RF Output Level (dBmV – one channel) | |
| A-TDMA | +17 to 61 (QPSK);   +17 to 58 (8QAM, 16QAM);  +17 to 57 (32QAM, 64QAM) |
| | *Note: A-TDMA max output power reduced 3dB when transmitting 2 channels and 6dB when transmitting 3 or 4 channels.* |
| S-CDMA | +17 to +56 (all modulations) |
| | *Note: S-CDMA max output reduced 3dB when transmitting 2 or more channels.* |
| 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, μ-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; **Battery not included.** |
| 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; **Battery not included.** |
| 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. |

Specifications are subject to change without notice.

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