



Touchstone® DOCSIS® 3.0 8x4 Telephony Modem TM822G

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)	8.5 x 2.1 x 7.1 (21.6 x 5.3 x 18.0) - excluding F-connector
Weight lbs (kg)	1.3 (0.60) – 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 18-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
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)	6 (idle), 11.5 (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 (edge-to-edge)
Bonded Channels	up to 8
Number of Tuners	2
Capture Bandwidth (MHz)	96 (per tuner, 192 MHz total)
Modulation (QAM)	64 or 256
Data Rate (Mbps, Theoretical)	up to 343

Note: Maximum raw DOCSIS rate; actual data throughput is less due to overhead, configuration, and RF conditions

RF Input Sensitivity Level (dBmV)	-15 to +15
Carrier Bandwidth	6 MHz
MoCA® Immunity Filter	Yes

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Specifications Continued

RF Upstream

Frequency Range (MHz)	5-42
Bonded Channels	up to 4
Modulation	QPSK, 8QAM, 16QAM, 32QAM, 64QAM, 128QAM (S-CDMA only)
Modulation Bandwidth (kHz)	TDMA: 200, 400, 800, 1600, 3200, 6400 S-CDMA: 1600, 3200, 6400
Data Rate (Mbps, Theoretical)	up to 122 <i>Note: Maximum raw DOCSIS rate; actual data throughput is less due to overhead, configuration, and RF conditions</i>

RF Output Level (dBmV – one channel)

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
UL® 60950	RFC3261 SIP: Session Initiation Protocol
FCC Part 15 Class B	Codec: G.711, 64 kbps, μ -law and A-law encoded speech
CE	Enhanced codec support (G.726, G.728, G.729E)
CB	T.38 Fax Relay

Ordering Information

Part Number	Description
790629	Touchstone TM822G/NA-0 DOCSIS 3.0 / PacketCable 1.5 compliant 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.
790632	Touchstone TM822G/NA-6 DOCSIS 3.0 / PacketCable 1.5 compliant 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.
790635	Touchstone TM822G/NA-8 DOCSIS 3.0 / PacketCable 1.5 compliant 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.
793933	Touchstone TM822G/NA-12 DOCSIS 3.0 / PacketCable 1.5 compliant E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot NEMA 1-15 power cord. Includes one, 4-cell, 4.4 AH, Li-Ion Battery Pack for up to 12 hours of battery back-up, Quick Install Guide, and Ethernet cable.
790630	Touchstone TM822G/CE-0 DOCSIS 3.0 / PacketCable 1.5 compliant E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot CEE 7/16 power cord. Includes Quick Install Guide, and Ethernet cable; Battery not included.
790633	Touchstone TM822G/CE-6 DOCSIS 3.0 / PacketCable 1.5 compliant E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot CEE 7/16 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.
790636	Touchstone TM822G/CE-8 DOCSIS 3.0 / PacketCable 1.5 compliant E-MTA with integrated 115-240 VAC, 50/60 HZ power supply with 6 foot CEE 7/16 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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