

Touchstone® DOCSIS® 3.0 8x4 Ultra-High Speed Cable Modem CM820



PRODUCT OVERVIEW:

The Touchstone® DOCSIS 3.0 8x4 Cable Modem CM820 delivers ultra-high speed data access to cable service subscriber's homes and businesses. Designed to support the services desired most by advanced users, the CM820 enables the home or small business user to address productivity needs with the speed and performance found only in the 8x4 bonded channel cable environment along with industry-leading ARRIS reliability. With the CM820, cable operators can offer data services at downstream speeds greater than 300 Mbps (greater than 400Mbps in EuroDOCSIS® mode) to their subscribers to compete against VDSL and fiber to the home, as well as provide a platform to deliver competitive high capacity commercial services to businesses.



- DOCSIS® / EuroDOCSIS® 3.0 Compliant and backward compatible
- Integrated Universal Power Supply for high reliability
- Flexible DSxUS channel bonding configuration support (up to 8x4)
- Multi-colored LEDs for rapid troubleshooting on installation
- Dual, independent 96MHz Tuners with receive range up to 1 GHz
- Dual-Mode operation on the CM820B and CM820S models

GENERAL SPECIFICATIONS

Physical

Operating Temperature °F (°C)	32 to 104 (0 to 40)
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) <i>Excludes F-connector</i>	6.2 x 1.7 x 5.7 (16.3 x 5.3 x 14.5)
Weight lbs (kg)	0.81 (0.37)
Diagnostic LEDs	Power, DS, US, Online, Link

Interfaces

RF Interface	External 75Ω 'F' type connector
Data Interface	10/100/1000 Base-T Ethernet RJ-45
Input Voltage (nominal)	115-240 VAC 50/60 Hz (A, B, S models) 100 VAC 50/60 Hz (C model)
Power On/Off Switch	Yes (S model)
Power Consumption (W)	5 (idle), 5.5 (max.) (A, B, S models) 6 (idle), 6.5 (max.) (C model)

RF Downstream

Frequency Range (MHz)	108-1002
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) <i>Note: Maximum raw DOCSIS / EuroDOCSIS rates; actual data throughput is less due to overhead, configuration, and RF conditions.</i>	Up to 343 (A, C models) Up to 444 (B, S models)
RF Input Sensitivity Level (dBmV)	-15 to +15 (A, C models) -17 to +17 (B, S models)
Carrier Bandwidth (MHz)	6 (A, C models) 8 (B, S models)
MoCA® Immunity Filter	Embedded

GENERAL SPECIFICATIONS (continued)

RF Upstream

Frequency Range (MHz)	5-42 (A model) 5-65 (B, C, S models)
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) <i>Note: Maximum raw DOCSIS / EuroDOCSIS rates; actual data throughput is less due to overhead, configuration, and RF conditions.</i>	Up to 122
RF Output Level (dBmV – one channel) <i>Note: S-CDMA max output reduced 3dB when transmitting 2 or more channels.</i>	TDMA: +17 to 61 (QPSK) -17 to 58 (8QAM, 16QAM) +17 to 57 (32QAM, 64QAM) S-CDMA: +17 to +56 (all modulations)
Automatic Level Adjust	Yes
Frequency Stability (kHz)	±5
Output Impedance (Ω)	75

Standards

DOCSIS® 3.0	PSE
EuroDOCSIS® 3.0	VCCI
UL® 60950	RoHS
FCC Part 15 Class B	WEEE
CE, CB	IEEE 802.3, IEEE 802.3ab

ORDERING INFORMATION

Part #	Description
793987	Touchstone CM820A/NA DOCSIS 3.0 8x4 CM with integrated 100-240 VAC, 50/60 Hz power supply with 6 ft NEMA 1-15 power cord. Includes Quick Install Guide and Ethernet Cable
793988	Touchstone CM820A/CE DOCSIS 3.0 8x4 CM with integrated 100-240 VAC, 50/60 Hz power supply with 6 ft CEE 7/16 Euro power cord. Includes Quick Install Guide and Ethernet Cable
793989	Touchstone CM820B/CE Dual-Mode EuroDOCSIS/DOCSIS 3.0 8x4 CM with integrated 100-240 VAC, 50/60 Hz power supply with 6 ft CEE 7/16 Euro power cord. Includes Quick Install Guide and Ethernet Cable
793990	Touchstone CM820S/CE Dual Mode EuroDOCSIS/DOCSIS 3.0 8x4 CM with integrated 100-240 VAC, 50/60 Hz power supply with 6 ft CEE 7/16 Euro power cord and ON/OFF switch. Includes Quick Install Guide and Ethernet Cable.
793991	Touchstone CM820C/JA DOCSIS 3.0 8x4 CM for Japan, with integrated 100-240 VAC, 50/60 Hz power supply with 6 ft JIS 8303 (Class II) power cord. Includes Quick Install Guide.