

Touchstone™ Cable Modem CM450



Application

The Touchstone Cable Modem is the first modem designed with the needs of both the operator and consumer in mind. It meets operators' objective of maximizing revenue by providing an efficient, stable design in both DOCSIS® 2.0 and Euro-DOCSIS 1.1 certified versions. Consumers appreciate that it is easy to install, has superior throughput and is packaged in an attractive, space-saving design. No other modem delivers as many features at such a competitive price.

Packaging Innovation

Consumers gravitate towards products that take up less space so the Touchstone Cable Modem CM450 is designed to be both compact and flexible in how it can be positioned in a home. The Touchstone Cable Modem CM450 has a built in 'kickstand' that swivels out to hold the unit in a vertical position. No separate, clunky snap-on stand is needed. The Touchstone Cable Modem CM450 can be placed horizontally if preferred. Finally, the Touchstone Cable Modem CM450 is the only modem to provide a simple means for the subscriber to move the cable modem completely off their desk. The unit has built-in mounting holes that allow the CM450 to be hung vertically or horizontally on the wall.

Standby without Setting off Alarms

The Touchstone Cable Modem CM450 has a standby button on the top of the unit that fills a need for both operators and subscribers. It provides subscribers the security of suspending access to the Internet from the personal computer (PC) when it is not needed. The advantage for the operator is that when a subscriber presses the standby button, the connection between the cable modem and the operator's CMTS remains. This means that the cable modem does not deregister and cause error messages back at the headend.

Installation Ease

With the growth of high-speed Internet, there is demand both from the operator and from the subscriber to be able to self-install their cable modem. The operator wants to lower the cost associated with a truck roll and the subscriber enjoys the flexibility to install the modem at a time that is convenient for them. The Touchstone Cable Modem 450 provides a number of features to make this possible including easy understandable LEDs, an animated self-install CD-ROM and a colorful quick install guide.

Bridged Interface

Both the Touchstone CM450A and CM450B have a bridged Ethernet and USB interface that allow a subscriber to use two PCs simultaneously with one cable modem. This eliminates the need for additional equipment in a two-computer household. The Touchstone Cable Modem CM450 also allows a subscriber who needs more networking ability to use a home router and support up to 16 PCs via the Ethernet port.

First & Still the Best

In 1995, while the Internet was still in its infancy, a team of engineers working for a company called LANcity (acquired by ARRIS in 1999) designed and introduced the first cable modem for residential use. LANcity quickly became one of the largest providers of proprietary high-speed data systems for cable. As the market has evolved to the open standards-based technology, ARRIS has led the market with the development and introduction of DOCSIS and Euro-DOCSIS-based products including cable modems and CMTSs. Today ARRIS is a leader in the design and development of Cable Modems, Network Interface Units (NIUs) and E-MTAs (embedded multimedia terminal adapters). This expertise provides the foundation to offer best in class products at competitive prices.

- **Superior throughput brings home the Internet at its full potential**
- **Easy to Install**
- **Attractive, compact design minimizes space requirement**



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Specifications

Physical: Operating Temperature °F (°C)..... 41 to 104 (5 to 40)
 Operating Relative Humidity(Min.-Max.) 5-85%
 (Non condensing)
 Storage Temperature °F (°C).....-40 to 158 (-40 to 70)
 Color..... Dark gray
 Dimensions (H x W x D) in. (cm) 6.8 x 6.4 x 1.2
 (17.2 x 16.3 x 3.0)
 Weight lbs (kg) 0.8 (0.35)
 Diagnostic LEDs Power, On-line, Cable, USB¹, Ethernet

Interfaces: RF Interface External 'F' type connector
 Data Interfaces (bridged) 10/100 Base-T Ethernet (RJ-45);
 USB 1.1 Series B connector¹
 Input Power (nominal) CM450A/NA: 115/120 Vac, 60 Hz (9 W)
 CM450A/AR, CM450A/CEL, CM450B/CEL:
 220/240 Vac, 50 Hz, (9 W)
 CM450C/JA: 100 Vac, 50/60 Hz (9 W)

RF Downstream: Frequency Range (MHz)..... CM450A & CM450C: 88-860
 CM450B: 108-862
 Modulation (QAM) 64 or 256
 Data Rate (Mbps) (Max.)..... CM450A & CM450C: 30.34 or 42.88
 CM450B: 51
 Input Impedance (Ohms) 75
 RF Input Sensitivity Level (dBmV) CM450A & CM450C:
 approx -27 (64 QAM) to +15
 CM450B: -13 to +17 (256 QAM) or -17 to +13 (64 QAM)
 Bandwidth CM450A & CM450C: 6 MHz
 CM450B: 8 MHz

RF Upstream: Frequency Range (MHz)..... CM450A: 5-42
 CM450B: 5-65, CM450C: 5-55
 Modulation QPSK, 8 QAM, 16 QAM, 32 QAM,
 64 QAM & 128 QAM (S-CDMA only)
 Data Rate (Mbps) (Max.) up to 30.72
 RF Output Level (dBmV)..... A-TDMA:
 +8 to 54 dBmV (32 QAM, 64 QAM)
 +8 to 55dBmV (8 QAM, 16 QAM)
 +8 to 58 dBmV (QPSK)
 S-CDMA: +8 to +53 dBmV (all modulations)
 Bandwidth A-TDMA: 200, 400, 800, 1600, 3200 & 6400 KHz
 S-CDMA: 1600, 3200 & 6400 KHz
 Automatic Level Adjust..... Yes
 Gain Control Range (dB)..... 50
 Frequency Stability (kHz) ±5
 Output Impedance (Ohms)..... 75

Standards: DOCSIS 2.0 Certified (CM450A)
 DOCSIS 1.1 Certified (CM450A)
 Euro-DOCSIS 2.0 Compliant (CM450B)
 Euro-DOCSIS 1.1 Certified (CM450B)
 UL® 60950
 FCC Part 15 Class B
 CE
 WHQL
 USB-IF

Ordering Information

Touchstone Cable Modem CM450A/NA
 (DOCSIS 2.0, 110V N. American Power)..... 709348
 Touchstone Cable Modem CM450A/CEL
 (DOCSIS 2.0, 220V Power and CEE7 Plug)..... 713890
 Touchstone Cable Modem CM450A/AR
 (DOCSIS 2.0, 220V Australian Power) 710456
 Touchstone Cable Modem CM450B/CEL
 (Euro-DOCSIS 2.0, 220V Power and CEE7 Plug) .713889
 Touchstone Cable Modem CM450C/JA
 (DOCSIS 2.0 based, 5-55MHz, 110V Power) 710457

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¹ Touchstone CM450C does not support USB