



ARRIS Touchstone®

Euro-DOCSIS 3.0 Telephony Modem TM702B

Configuration

- Dual-mode EuroDOCSIS 3.0 and DOCSIS 3.0 compliant
- EuroPacketCable™ 1.5 and 2.0 compliant
- Flexible 4x4 upstream/downstream channel-bonding with superior throughput
- 10/100/1000 Base-T Ethernet interface
- High Speed (480Mbps) USB 2.0 interface
- Up to two lines of carrier-grade VoIP
- Simplified interoperability through PacketACE™ configuration file editor
- Multiple Protocol Support: PacketCable (NCS) and Session Initiation Protocol (SIP)



With millions of Touchstone Telephony Modems shipped, ARRIS is pleased to release our Euro-DOCSIS 3.0 next generation residential product family. The Touchstone TM702B is a dual mode Euro-DOCSIS 3.0 and DOCSIS® 3.0 Embedded Media Terminal Adaptor (E-MTA) that delivers two lines of primary line Voice over IP (VoIP) and ultra-high speed data access. With Euro-DOCSIS 3.0 channel bonding, cable operators can offer data services at speeds greater than 220 Mbps to their subscribers to compete against VDSL and Fiber to the home threats. The TM702B contains both DOCSIS and Euro-DOCSIS within the same modem to support dual-mode cable plants. The TM702B is backwards compatible with legacy DOCSIS/ Euro-DOCSIS 1.0, 1.1, and 2.0 cable equipment and can be deployed without service interruption.

Performance

- Line card performance equal to the industry leading TM602 family of products
- Configurable options for loop current, loop voltage management, and ringing waveform
- Loop Diagnostics for remote testing and troubleshooting of in-house wiring
- Toll grade, compression, and High Fidelity CODECs supported (High Fidelity supported in future firmware upgrade)
- Auto-adapting FSK/CAS tone levels, dynamic jitter buffers, G.168 echo cancellation
- 1 GHz downstream RF tuner with up to 100 MHz capture bandwidth

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 (HxWxD) in. (cm)	7.3 x 2.0 x 7.4 (23.5 x 5.1 x 18.7) - excluding F-connector
	Weight lbs (kg)	1.4 (0.64)
	Diagnostic LEDs:	Power, DS, US, Online, Link, Telephone 1, Telephone 2
Interfaces:	RF Interface	External F-connector
	Data Interfaces (bridged)	10/100/1000 Base-T Ethernet RJ-45 High Speed (480Mb/S) USB 2.0
	Telephony Interface	2 lines; RJ-14 ("Line 1/2"), RJ-11 ("Line 2")
	Input Voltage (nominal)	220/240 V _{AC} 50 Hz
	Power Consumption (W)	7 (idle) 10 (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 4
	Capture Bandwidth (MHz)	96 (typical)
	Modulation (QAM)	64 or 256
	Data Rate (Mbps)	up to 220
	RF Input Sensitivity Level (dBmV)	-17 to +17
	Carrier Bandwidth	8 MHz
RF Upstream:	Frequency Range (MHz)	5-65
	Bonded Channels	up to 4
	Modulation	QPSK, 8-QAM, 16-QAM, 32-QAM, 64-QAM & 128-QAM (S-CDMA only)
	Data Rate (Mbps) (Max.)	up to 122
	RF Output Level (dBmV – one channel)	
	A-TDMA	+17 to 57 dBmV (32 QAM, 64 QAM) +17 to 58 dBmV (8 QAM, 16 QAM) +17 to 61 dBmV (QPSK)
	max output power reduced 3dB when transmitting two channels and 6dB when transmitting 3 or 4 channels.	
	S-CDMA	+17 to +56 dBmV (all modulations) 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 / Euro-DOCSIS 3.0	
	Euro-PacketCable 1.0, 1.5 and 2.0	
	CE, CB	
	RoHS, WEEE	
	WHQL, USB-IF	
	IEEE 802.3, IEEE 802.3ab	
	RFC3261 SIP: Session Initiation Protocol	
	CODEC: G.711, 64 kbps, μ-law and A-law encoded speech	
	Enhanced cODEC support (G.726, G.728, G.729E)	
	T.38 Fax Relay	

Ordering Information

Part #	Description
722027	Touchstone TM702B/CE Euro-DOCSIS 3.0 / Euro-PacketCable 1.5 complaint E-MTA with integrated 220/240 VAC, 50 Hz power supply with 6 foot CEE 7/16 Euro power cord, Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with users guide and USB drivers
780156	Touchstone TM702B/CE-SIP Euro-DOCSIS 3.0 / Euro-PacketCable 2.0 complaint E-MTA with integrated 220/240 VAc, 50 Hz power supply with 6 foot CEE 7/16 Euro power cord, Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with users guide and USB drivers

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