



Touchstone® TM601B

Telephony Modem



Configuration

- Dual-mode compliance (DOCSIS/PacketCable or EuroDOCSIS/EuroPC) provides a flexible solution for the long-term
- Toll quality voice supplies a superior subscriber experience
- Remote firmware upgrade simplifies maintaining latest feature support in deployed CPE
- Multiple Protocol Support: PacketCable (NCS) and Session Initiation Protocol (SIP)

Delivering Maximum Flexibility Via Dual Mode "Hybrid" Support

The TM601B comes equipped with both DOCSIS / PacketCable certificates and EuroDOCSIS / EuroPacketCable certificates from the factory. This enables the TM601B to be used in both DOCSIS and EuroDOCSIS networks. Upon installation, the TM601B will detect whether it is on a DOCSIS or EuroDOCSIS network based on the downstream carrier received. Then, using an 8 MHz upstream channel width, the TM601B will communicate with the CMTS using either an 8 MHz carrier (in EuroDOCSIS applications) or a 6 MHz carrier centered within the 8 MHz band (in DOCSIS applications). So, whether you operate DOCSIS networks, EuroDOCSIS networks, or some combination of both, the TM601B will meet your requirements.

Applications

Based on the success of the Touchstone TM501 product family, ARRIS introduces the Touchstone Telephony Modem TM601. The TM601 provides operators an economical converged platform that offers a single line of Voice over IP (VoIP) along with High-Speed Data Access. The TM601 is a cost effective platform that operators can install in place of traditional Cable Modems for High Speed Data subscribers, then up-sell voice services to the subscriber potentially without a truck roll.

Setting the Standard for VoIP Subscriber Premise Equipment

ARRIS is the market leader in subscriber premises equipment for cable telephony with combined deployments of over 14 million lines of proprietary constant-bit rate (CBR) Cornerstone® Voice Port® units and DOCSIS®/PacketCable™ compliant Touchstone Embedded Media Terminal Adaptors.

The Touchstone TM601 continues ARRIS cable telephony leadership by incorporating the latest generation DOCSIS silicon with updated telephone line interfaces while maintaining the feature set of the widely deployed ARRIS Cornerstone and Touchstone TM5 line interfaces. The TM601 supports 5 REN on its single voice line into 500-foot loop length. This means that multiple CPE can interface and properly operate on the same line (for example telephones, FAX machines, answering machines, etc.).

ARRIS Touchstone Telephony Modems Offers World Class Features to Deliver the Highest Quality Voice Service

All ARRIS Touchstone Telephony Modems support a wide variety of class features including three-way calling, call waiting, caller ID, Emergency 911 and regulatory requirements for wiretap under CALEA legislation. As with all Touchstone Telephony Modems, equivalent Telephony Firmware runs on all Touchstone Telephony Modem models. This ensures that the quality and performance of all Touchstone Telephony Modems are consistent and maintained at the highest level.

Touchstone® TM601A Telephony Modem

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)	8.6 x 2.1 x 7.1, (21.8 x 5.3 x 18.0) - excluding F-connector
Weight lbs (kg)	1.20 (0.54)
Diagnostic LEDs	Power, DS, US, Online, Link, Telephone

Interfaces

RF Interface	External 'F' type connector
Data Interfaces	10/100 Base-T Ethernet RJ-45
Telephony Interface	RJ-11 Input
Power (nominal)	100/240 VAC, 50/60 Hz

Telephony

Supervisory Voltage	48 V dc nominal
Maximum Loop Length to CPE	500 ft (457M) of 26 AWG (0.4 mm) wire
Ringing Load Capacity	5 REN total
Provisionable High Loop Current Mode	No
Telcordia™ GR 1089 (Lightning and Power Surge) Tested	No
Programmable Interface for Worldwide Applications	Yes (supports multiple country templates)

RF Downstream

Frequency Range (MHz)	88 - 1002
Modulation (QAM)	64 or 256
Data Rate (Mbps) (Max.)	up to 42
RF Input Sensitivity Level (dBmV)	-15 to +15
Bandwidth (MHz)	8

RF Upstream

Frequency Range (MHz)	5-65
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)
Automatic Level Adjust	Yes
Gain Control Range (dB)	50
Frequency Stability (kHz)	±5
Output Impedance (Ohms)	75

Standards

Codec: G.711, 64 kbps, μ and A-law encoded speech; T.38 Fax Relay; Enhanced codec software support planned (G.726, G.728, G.729)
PacketCable 1.0 / 1.5 Based = EroPacketCable 1.0/1.5; DOCSIS 2.0/EuroDOCSIS 2.0 Based; RFC3261 SIP: Session Initiation Protocol; UL® 60950, IEC60950 (CB Scheme), IRAM, NOM;
FCC Part 15 Class B, CE EMC; RoHS, WEEE

*The ARRIS SIP software has been interoperability tested and ready for commercial deployment with the following SIP Proxy servers: Nortel, Cisco, CedarPoint, Seimens, Asterisk. Due to large number of brands on the market today with varying implementations of the SIP protocol, ARRIS cannot guarantee full interoperability with all vendors. Please contact your sales representative for the latest list of compatible SIP Proxy servers.

Ordering Information

Part Number	Description
721050	Touchstone Telephony Modem TM601B/DM (Gift Pack of 1 modem, Dual Mode Operation (DOCSIS 2.0 and EuroDOCSIS 2.0 supported), NCS based, Integrated Universal 100-240V Power Supply, Power Cord with CEE7 Style Plug included)
721197	European Power Cord, CEE7/16 Plug

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