



Touchstone®

Telephony Modem TM601B

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)



Applications

Based on the success of the Touchstone TM501 product family, ARRIS introduces the Touchstone Telephony Modem TM601. The Touchstone TM601 provides operators an economical converged platform that offers a single line of Voice over IP (VoIP) along with High-Speed Data Access. The Touchstone 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 Touchstone TM601 supports 5 REN on its single voice line into 500-foot loop length. This means that multiple customer premises equipment (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. Do not put your trust in reference designs that cannot deliver the performance and requirements for your telephony service.

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.

ARRIS Touchstone® Telephony Modem TM601B

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) 220/240 VAC, 50 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..... 8 MHz
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 + EuroPacketCable 1.0 / 1.5 DOCSIS 2.0 / EuroDOCSIS 2.0 Based RFC3261 SIP: Session Initiation Protocol UL® 60950, IEC60950 (CB Scheme) 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 #	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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24 October 2008

ARRIS-D-TM601B-081024

