



ARRIS Touchstone®

Telephony Modem TM602G with Integrated Battery Back-up



ARRIS is pleased to release the Touchstone Telephony Modem TM602 as the next generation residential product family. Like the industry leading TM502 product family, the TM602 delivers two lines of carrier-grade Voice over IP (VoIP) along with High-Speed Data access. The TM602 maintains the same modem and battery form factors, but introduces two new battery options. The TM602 family offers the same product variants previously supported with the TM502 family.

Configuration

- DOCSIS® 2.0 and PacketCable™ 1.1/1.5 compliant design
- High Speed Internet via 10/100 Base-T Ethernet (RJ-45) or USB1.1 port
- Up to two lines of carrier-grade VoIP
- Firmware compatibility with legacy Touchstone TM402 and TM502 products – one load for new and legacy ARRIS Telephony Modems
- Simplified interoperability through PacketACE™ configuration file editor
- Multiple Protocol Support: PacketCable (NCS) and Session Initiation Protocol (SIP)

Performance

- Improved Line Card Performance over the industry leading TM502 – Greater than 20% increase in high loop current mode and 10% greater ringing voltage
- Loop Diagnostics for remote testing and troubleshooting of in-house wiring
- 1GHz Tuner – future proof toward future plant upgrades
- Toll grade, compression, and High Fidelity CODECs supported (High Fidelity supported in future firmware upgrade)

Leadership in Battery Technology

- More Battery Options – including the first and only 2-cell Li-Ion solution for up to 8-hours of standby battery hold time and a new 8-cell battery back for up to 24-hour of hold time!
- Firmware configurable battery management and reporting allows customization of operation parameters
- Boot from Battery – Operators or Subscribers can now boot the modem from a charged battery without needing AC Power.

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)	No battery included: 1.2 (0.54)	
	Battery: 4 Hour Back-up Option (Dark Grey Case)		
	Backup Capacity	Lithium-ion 2.2 Ah	
	Battery Dimensions in. (cm)	1.2 x 1.85 x 3.1 (3.0 x 4.7 x 7.9)	
	Weight lbs (kg)	1.5 (0.66)	
	Battery: 8 Hour Back-up Option (Light Grey Case)		
	Backup Capacity	Lithium-ion 2.4 Ah	
	Battery Dimensions in. (cm)	1.2 x 1.85 x 3.1 (3.0 x 4.7 x 7.9)	
	Weight lbs (kg)	1.5 (0.66)	
Battery: 12 Hour Back-up Option			
Backup Capacity	Lithium-ion 4.4 Ah		
Battery Dimensions in. (cm)	1.2 x 1.85 x 5.7 (3.0 x 4.7 x 14.5)		
Weight lbs (kg)	1.7 (0.77)		
Battery Storage Temperature °F (°C)	-4 to 140 (-20 to 60)		
<i>Note: Storage above 77°F (25°C) will significantly reduce life of the battery and is not recommended.</i>			
Telemetry	AC Fail, Battery Low, Battery Missing, Replace Battery		
Diagnostic LEDs	Power, DS, US, Online, Link, Telephone 1, Telephone 2, Battery		
Interfaces:	RF Interface	External F-connector	
	Data Interfaces (bridged)	10/100 Base-T Ethernet (RJ-45 connector), USB 1.1 Series B connector	
	Telephony Interface	2 lines; RJ-14 ("Line 1/2"), RJ-11 ("Line 2")	
	Input Voltage (nominal)	100-240 V _{AC} 50/60 Hz	
Telephony:	Supervisory Voltage	48 V _{DC} nominal	
	Maximum Loop Length to CPE	1000 ft (457m) of 26 AWG (0.4 mm) wire	
	Ringling Load Capacity	10 REN total; 5 per line	
	Provisionable High Loop Current Mode	Yes (40mA constant current source, NA templates ONLY)	
	Telcordia™ GR 1089 (Lightning and Power Surge) Tested	Yes	
	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.)	30 or 42	
	RF Input Sensitivity Level (dBmV)	-15 to 15	
	Bandwidth (MHz)	6	
RF Upstream:	Frequency Range (MHz)	5-42	
	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	
		Enhanced CODEC firmware support (G.726, G.728, G.729E)	
T.38 Fax Relay			
DOCSIS 2.0 based			
PacketCable 1.0 & 1.5 based			
RFC3261 SIP: Session Initiation Protocol UL® 60950, FCC Part, WHQL and USB-IF			

Battery back-up times are typical and can be influenced by the age of the battery, the charging state, storage conditions and operating temperature as well as factors such as data activity and length of active telephone calls. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.

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Ordering Information

Part #	Description
721057	Touchstone TM602G/NA-0 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Integrated 100-240 V _{AC} , 50/60 Hz Power supply with 6 foot power cord with NEMA 1-15 Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide. NO battery included
721058	Touchstone TM602G/NA-4 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Includes 2-cell 2.2Ahr Li-Ion Battery Pack for up to 6 hours of battery back-up Integrated 100-240 V _{AC} , 50/60 Hz Power supply w/ 6 foot power cord with NEMA 1-15 Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide.
721059	Touchstone TM602G/NA-8 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Includes 2-cell 2.4Ahr, Li-Ion Battery Pack for up to 8 hours of battery back-up Integrated 100-240 V _{AC} , 50/60 Hz Power supply w/ 6 foot power cord with NEMA 1-15 Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide.
722011	Touchstone TM602G/NA-12 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Includes 4-cell 2.2Ahr, Li-Ion Battery Pack for up to 12 hours of battery back-up Integrated 100-240 V _{AC} , 50/60 Hz Power supply w/ 6 foot power cord with NEMA 1-15 Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide
721060	Touchstone TM602G/CE-0 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Integrated 100-240 V _{AC} , 50/60 Hz Power supply w/ 6 foot power cord with CEE 7/16 "Euro" Power Plug Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide. NO battery included
721061	Touchstone TM602G/CE-4 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Includes 2-cell 2.2Ahr, Li-Ion Battery Pack for up to 6 hours of battery back-up Integrated 100-240 V _{AC} , 50/60 Hz Power supply w/ 6 foot power cord with CEE 7/16 "Euro" Power Plug Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide
721062	Touchstone TM602G/CE-8 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA Includes 2-cell 2.4Ahr, Li-Ion Battery Pack for up to 8 hours of battery back-up Integrated 100-240 V _{AC} , 50/60 Hz Power supply w/ 6 foot power cord with CEE 7/16 "Euro" Power Plug Includes Quick Install Guide, Ethernet Cable, USB Cable, and CD-ROM with Users Guide
718003	Replacement 2-Cell, 2.2 Ah, Li-Ion Battery Pack for TM502G/H, TM602G/H, and TM504G/H
721944	Replacement 2-Cell, 2.4 Ah, Li-Ion Battery Pack for TM502G/H, TM602G/H, and TM504G/H
718005	Replacement 4-Cell, 4.4 Ah, Li-Ion Battery Pack for TM502G/H, TM602G/H, and TM504G/H
721192	8-Cell, 8.8 Ah, Li-Ion Battery Pack for TM602G/H and TM504G/H (Cannot be used in TM502G/H). Sold separately, no kitted TM602 option available

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