Touchstone®
TM608G

Telephony Modem with Integrated Battery Back-up

Features

- DOCSIS® 2.0 and PacketCable™ 1.1/1.5 compliant design
- Wall or Rack Mountable
- Internal 115-240 VAC, 50/60 Hz AC-DC power supply
- High Speed Internet via 10/100 Base-T Ethernet
- Up to eight lines of carrier-grade VoIP with independent configuration of each line
- Flexible telephone wiring options with RJ11, RJ21, and Insulation Displacement (IDC) interface adapters
- Ability to add, delete, and modify line interfaces without impacting operation of operational lines
- Simplified interoperability through PacketACE™ configuration file editor
- Multiple Protocol Support: PacketCable (NCS) and Session Initiation Protocol (SIP)
- RIPv2 and MD5 authentication
- Improved Line Card Performance over the TM508 - 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

Applications

Building upon the success of the market leading TM508 and TM602 designs, ARRIS is pleased to introduce the TM608G. The TM608G delivers eight lines of carrier-grade Voice over IP (VoIP) along with High-Speed Data access. Featuring integrated Li-Ion battery packs and patent pending telephone interfaces adaptors, the TM608G sets a new benchmark for small business applications.

Leadership in Battery Technology

- Battery Options include a 4-cell Li-Ion solution for up to 8-hours of standby battery hold time and a 8-cell battery back for up to 16-hours of standby hold time
- Firmware configurable battery management and reporting allows customization of operational parameters
- Boot from Battery – Operators or Subscribers can start up the modem from a charged battery without AC Power.

Specifications

Physical

Operating Temperature °F (°C)	32 to 122 (0 to 50)
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)	10.3 x 2.0 x 7.4, (26.2 x 5.1 x 18.8) - excluding F-connector
Weight lbs (g)	No battery included: 1.20 (554)
Battery: 4 cell, 4.4AHr 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 (g)	0.50 (228)
Battery: 8 cell, 8.8AHr Option	
Backup Capacity	Lithium-ion 8.8 Ah
Battery Dimensions in. (cm)	2.0 x 2.0 x 6.9 (5.1 x 5.1 x 17.6)
Weight lbs (g)	1.0
Battery Storage Temperature °F (°C)	-4 to 140 (-20 to 60) Note: Storage above 77°F (25°C) will significantly reduce life of the battery and is not recommended.
Telemetry	AC Fail, Battery Low, Battery Missing, Replace Battery
Diagnostic LEDs	Power, DS, US, Online, Link, Telephone 1-8, Battery

Interfaces

RF Interface	External 'F' type connector
Data Interfaces	10/100 Base-T Ethernet RJ-45
Telephony Interface Adapters (not included)	RJ11, RJ14/RJ11, TII IDC (ROHS), Channel IDC (Non-ROHS), and RJ21
Power (nominal)	115/240 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
Ringing Load Capacity	15 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.)	up to 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	PacketCable 1.0 & 1.5 based
Enhanced codec firmware support (G.726, G.728, G.729E)	RFC3261 SIP: Session Initiation Protocol
T.38 Fax Relay	RIPv2 and MD5 Authentication
DOCSIS 2.0 based	UL® 60950, FCC Part 15 Class B, CE

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.

Ordering Information

Part #   Description

722827   Touchstone TM608G/NA-0 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA
Integrated 100-240 VAC, 50/60 HZ Power supply w/ 6 foot power cord with NEMA 1-15 Power Plug
Includes wall mounting brackets
Quick Install Guide, CD ROM with User Guide, Ethernet cable, Battery, 19 inch rack mounting brackets, and Telephone Interface Adaptor are not included

722828   Touchstone TM608G/NA-8 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA with 4-cell 4.4AHr Li-Ion Battery Pack
Integrated 100-240 VAC, 50/60 HZ Power supply w/ 6 foot power cord with NEMA 1-15 Power Plug
Includes wall mounting brackets
Quick Install Guide, CD ROM with User Guide, Ethernet cable, 19 inch rack mounting brackets, and Telephone Interface Adaptor are not included

722829   Touchstone TM608G/NA-16 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA with 8-cell 8.8AHr, Li-Ion Battery Pack
Integrated 100-240 VAC, 50/60 HZ Power supply w/ 6 foot power cord with NEMA 1-15 Power Plug
Includes wall mounting brackets
Quick Install Guide, CD ROM with User Guide, Ethernet cable, 19 inch rack mounting brackets, and Telephone Interface Adaptor are not included

722830   Touchstone TM608G/CE-0 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA
Integrated 100-240 VAC, 50/60 HZ Power supply w/ 6 foot power cord with CEE 7/16 "Euro" Power Plug
Includes wall mounting brackets
Quick Install Guide, CD ROM with User Guide, Ethernet cable, Battery, 19 inch rack mounting brackets, and Telephone Interface Adaptor are not included

722831   Touchstone TM608G/CE-8 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA with 4-cell 4.4AHr, Li-Ion Battery Pack
Integrated 100-240 VAC, 50/60 HZ Power supply w/ 6 foot power cord with CEE 7/16 "Euro" Power Plug
Includes wall mounting brackets
Quick Install Guide, CD ROM with User Guide, Ethernet cable, 19 inch rack mounting brackets and Telephone Interface Adaptor are not included

722834   Touchstone TM608G/CE-16 DOCSIS 2.0 / PacketCable 1.0/1.5 Compliant E-MTA with 8-cell 8.8 AHr, Li-Ion Battery Pack
Integrated 100-240 VAC, 50/60 HZ Power supply w/ 6 foot power cord with CEE 7/16 "Euro" Power Plug
Includes wall mounting brackets
Quick Install Guide, CD ROM with User Guide, Ethernet cable, 19 inch rack mounting brackets and Telephone Interface Adaptor are not included

Telephone Interface Adapter Description

728934   TM608 RJ11 Even / RJ14 Odd Telephone Interface Adaptor

728935   TM608 RJ11 Telephone Interface Adaptor

728936   TM608 RJ21 Telephone Interface Adaptor

728937   TM608 TII Insulation Displacement Connector (IDC) Telephone Interface Adaptor

728942   TM608 Channel Insulation Displacement Connector (IDC) Telephone Interface Adaptor

Battery Packs

718005   4-Cell, 4.4 Ah, Li-Ion Battery Pack for TM502G/H, TM504G/H, WTM552G/H, TM602G/H, TM604G, and TM608G

722842   8-Cell, 8.8 Ah, Li-Ion Battery Pack TM608G (Cannot be used in TM502G/H, TM504, WTM552, TM602, and TM604)

Mounting Brackets

728964   19 inch rack mounting brackets for the TM608

TM608 Base Units are shipped without a Telephone Interface Adaptor. ARRIS recommends all orders include:
Base Unit Part # + Telephone Interface Adaptor Part #

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