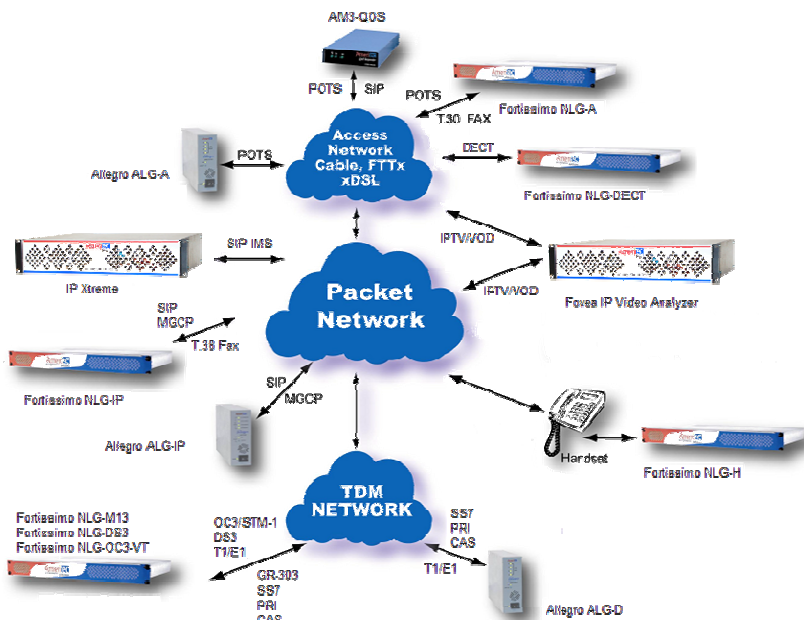# Ameritec

**IP Xtreme
SIP Load Generator**

♦ IP Xtreme is the world's smallest, high-capacity network load generation product designed to test and qualify the voice and packet network.

♦ IP Xtreme speeds up your system integration, functional and performance testing at an unbeatable price/performance ratio.

♦ IP Xtreme is designed to compliment other Allegro, Fortissimo and AM3-QoS units to provide a complete test system of call generation and Quality of Service (QoS) measurements.

The IP Xtreme represents a significant technological advancement in high-capacity call generation. Designed to meet the requirements of today's developer of both legacy and new generation switches including hardware and software modules. Operators focusing on system integration or revenue and quality assurance will also enjoy the functionality, ergonomics and costs of this solution. The IP Xtreme Call Generator can be configured to generate traffic loads exceeding 60,000 endpoints.

Other Fortissimo models are also available, each with the ability to support Ameritec's industry leading QoS measurement package:
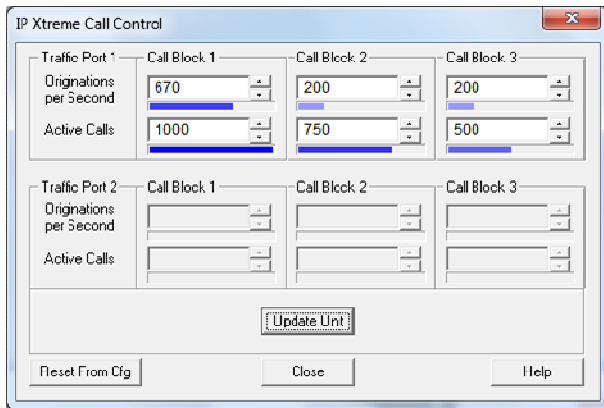
♦ Up to 100 2-wire analog loop/ground lines
♦ 1 DS3 circuit supporting CAS, PRI, SS7, GR303
♦ Up to 28 T1/E1 circuits
♦ Up to 192 SIP/MGCP circuits
♦ 1 OC3/STM-1 circuit
♦ Up to 50 4-wire handset/headset circuits
♦ Up to 32 FAX circuits
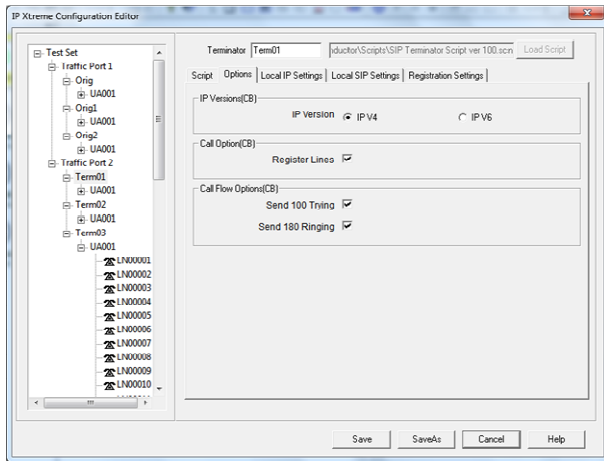♦ Up to 20 DECT HD circuits

SIP Load Generator

♦ Ameritec's latest addition to the call generation product family is the IP Xtreme SIP Load Generator. Up to 60,000 SIP endpoints can be simulated in a single unit.

SIP Applications

Operation

The IP Xtreme allows the developer to simulate various types of SIP network traffic on up to 60,000 endpoints without having to consume a large amount of rack space. Maintaining full testing flexibility on a large line count is the premise behind IP Xtreme. Each unit is controlled via a PC workstation over a 10/100 MB Ethernet port and utilizes a Conductor graphical user interface (GUI) that is intuitive and easy to use. Alternately, a command set option allows the user to remotely control units via a Tcl or Telnet session for test automation applications. Full scripting of call scenarios is accommodated and manipulation of signaling protocols is provided to allow the user to fully test and debug equipment under test before releasing product to the next stage of development.

Measurements

Long known for providing the most comprehensive set of measurements in the call generation industry, Ameritec has incorporated into every IP Xtreme product the ability to simultaneously measure traditional call statistics such as calls originated and completed as well as a comprehensive set of QoS measurements designed to provide packet quality and voice quality scoring. The ability to utilize our GoldenVoice technology to measure packet loss, jitter, signal to noise ratio, clipping and delay while simultaneously providing R-factor, GMOS, G-PSQM, G-PESQ, and G-PESQ-LQ scoring on all lines makes this product an invaluable development tool.
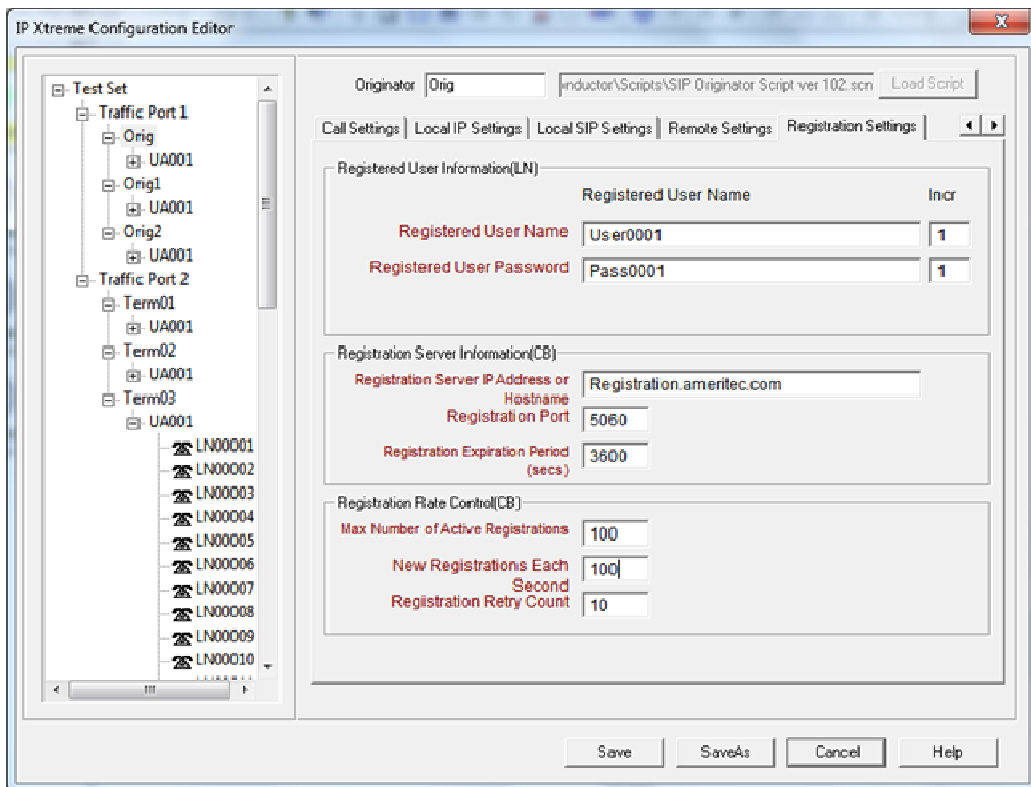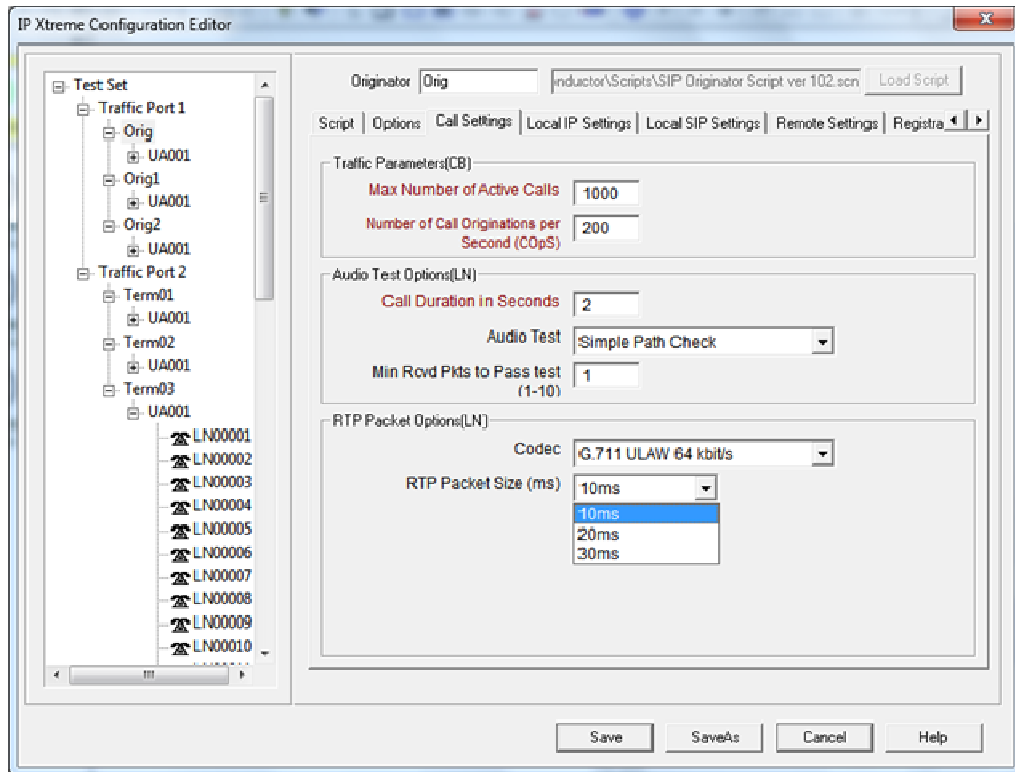
Supports IPv6 and IPv4

Graphs

IP Xtreme provides the user with the ability to graph any metric over the duration of the test. The user may choose to graph the metric over all endpoints or Callblocks. If an anomaly is seen in the report data or in the graph, the user may change the scale to zoom in and pinpoint its time of occurrence. Any two measurements may be presented on the same graph to allow correlation of results. Multiple graphs may be viewed simultaneously, providing further comparison and analysis capabilities. IP Xtreme graphs may be used to assess system performance in real-time or as a tool for post-analysis of the data.

Performance

With the IP Xtreme the user gets both high capacity call generation and high performance. Utilizing independent resources, each unit can generate as many calls as your equipment can support. The IP Xtreme can configure nearly every parameter associated with the generation or answering of a call and therefore it is possible to test for load related issues as well as fundamental integrity issues. Additionally, multiple IP Xtreme units can be used in a rack to increase call volumes without significantly increasing your investment.

Conductor View of Call Settings

Conductor View of Reports

Column Settings

Column Headings not in Report

- CB Call
- CB Reg
- CB PathChk
- CB QOS
- CB DHCP
- + User Agent
- + Line Call
- + Line Reg
- + Line PathChk
- - Line QOS
  - %Drop Last
  - G-LQ Last
  - GMOS Last
  - G-PESQ Last
  - G-PSQM Last
  - MaxDInt Last
  - RFac Last
  - RTrip Last

Display >>
<< Hide
Hide All
Select All
Move Column Up Down
Thresholds

Column Headings in Report

- Traf Port
- Call Block
- CB Orig Atmpts
- CB Orig Cmplt
- CB COpS Avg
- CB COpS
- CB Active
- CB Active Avg
- CB Con Fail
- CB Rel Fail
- CB Orig %Cmplt
- CB REG Atmpts
- CB REG Pass
- CB REG Retry
- CB REG Fail
- CB REG %Pass
- CB QOS Atmpts
- CB %Drop Avg
- CB %Drop Max
- CB RFac Avg
- CB RFac Min
- CB RFac Max
- CB GMOS Avg
- CB GMOS Min
- CB GMOS Max
- CB G-PESQ Avg

☑ Expand Groups on Selection

OK Cancel Help

Report: CB Call Summary

Traf Port	Call Block	CB Orig Atmpts	CB Orig Cmplt	CB Orig %Cmplt	CB COpS	CB COpS Avg	CB Active	CB Active Avg	CB Con Fail	CB Rel Fail
		2,271,111,570	2,271,111,570		0		0	20,000	0	0
TP 1	CB01	113,516,120	113,516,120	100.0000	0	498	0	1,000	0	0
TP 1	CB02	113,492,649	113,492,649	100.0000	0	498	0	1,000	0	0
TP 1	CB03	113,495,276	113,495,276	100.0000	0	498	0	1,000	0	0
TP 1	CB04	113,538,999	113,538,999	100.0000	0	499	0	1,000	0	0
TP 1	CB05	113,556,983	113,556,983	100.0000	0	499	0	1,000	0	0
TP 1	CB06	113,556,207	113,556,207	100.0000	0	499	0	1,000	0	0
TP 1	CB07	113,629,828	113,629,828	100.0000	0	499	0	1,000	0	0
TP 1	CB08	113,520,028	113,520,028	100.0000	0	499	0	1,000	0	0
TP 1	CB09	113,561,546	113,561,546	100.0000	0	499	0	1,000	0	0
TP 1	CB10	113,554,643	113,554,643	100.0000	0	499	0	1,000	0	0
TP 2	CB01	113,598,479	113,598,479	100.0000	0	499	0	1,000	0	0
TP 2	CB02	113,514,253	113,514,253	100.0000	0	498	0	1,000	0	0
TP 2	CB03	113,508,643	113,508,643	100.0000	0	498	0	1,000	0	0
TP 2	CB04	113,510,334	113,510,334	100.0000	0	498	0	1,000	0	0
TP 2	CB05	113,509,952	113,509,952	100.0000	0	498	0	1,000	0	0
TP 2	CB06	113,540,767	113,540,767	100.0000	0	499	0	1,000	0	0
TP 2	CB07	113,709,121	113,709,121	100.0000	0	499	0	1,000	0	0
TP 2	CB08	113,526,254	113,526,254	100.0000	0	499	0	1,000	0	0
TP 2	CB09	113,710,864	113,710,864	100.0000	0	499	0	1,000	0	0
TP 2	CB10	113,560,624	113,560,624	100.0000	0	499	0	1,000	0	0

General Characteristics

User Interface	Windows XP, 7 based GUI Command set (SSH) test control with web based provisioning and reporting
Ethernet Port	One RJ45 connector and two LED indicators per network interface 10/100 BaseT interface Complies with IEEE 802.3
Dimensions	17" Wide x 3.5" High x 16" Deep
Power	90 – 264 VAC, 47 to 65 Hz
Weight	18.5 Pounds (8.4kg)

Call Programs and Scripts

Features	Commonly used scripts supplied with unit Scripts created and downloaded from workstation or PC

System

Capacity	Up to 60,000 SIP endpoints can be configured
Call Volume	Up to 1,000 Call Originates per Second per Call Block (20 Call Blocks per unit)
Line Types	SIP

Measurements, Printout and Reports

Packet Statistics	Receive Bandwidth (Mbits/sec) Transmit Bandwidth (Mbits/sec) TX Octets RX Octets TX Packets RX Packets
QoS Results (Per Originate Line)	Percent Drop Max Drop Interval (ms) Round Trip Delay (ms) R-Factor GMOS G-PESQ G-PSQM G-LQ

Pathcheck (Per Originate Line)	# of Packets Sent # of Packets Received Test Passed (Y or N)
Call Statistics (Per Originate Line)	Invite Messages Sent 100 Trying Received 180 Ringing Received 200 OK Received Connect Failures Bye Acks Received Release Failures
Registration Statistics (Per Line)	# of Registration Attempts # of Successful Registrations # of Registration Retries # of Failed Registration Attempts Percentage of Successful Registration Attempts
Call Block Originations Summary	Total Call Originations Avg. Number of Call Originations per second Call Originations per second Number of Active Calls Avg. Number of Active Calls
Call Block Registrations Summary	# of Registration Attempts # of Successful Registration Attempts # of Registration Retries # of Failed Registration Attempts Percentage of Successful Registration Attempts
Call Block QoS Summary	# of QoS Calls Avg Percentage Drop Max Percentage Drop Avg R-Factor Min R-Factor Max R-Factor Avg GMOS Min GMOS Max GMOS Avg G-PSQM Min G-PSQM Max G-PSQM Avg G-PESQ Min G-PESQ Max G-PESQ Avg G-LQ Min G-LQ Max G-LQ

Call Block Pathcheck
Summary   # of Pathcheck Calls
                            # of Successful Pathcheck Calls
                            Percentage of Successful Pathcheck
                            Calls

Call Block DHCP
Summary   # of DHCP Attempts
                            # of Successful DHCP Attempts
                            Percentage of Successful DHCP
                            Attempts

Call Block IP Address   IP Address of each UA

Ordering Information

NLG-IPX   IP Xtreme Network Load Generator