



# Voice over IP Network Testing

# SmartVoIPQoS™

## Product Overview

Voice over IP is the latest powerful application for IP networks. The success of the VoIP industry depends on its ability to utilize IP Quality of Service (QoS) mechanisms to deliver inexpensive, toll-quality voice without significantly impacting data delivery in a converged network. If you are developing or deploying VoIP products, you must be able to guarantee solid performance even under the most adverse network conditions.

Spirent Communications' SmartVoIPQoS is the only application today that allows the user to fully stress a network and analyze the network's ability to deliver both voice and data. The VoIP Snap-in generates voice traffic packets, supporting a wide range of commonly-used Codecs and IP priority schemes. The IP forwarding results, as well as the expected voice quality, are reported for each flow. All results are presented in a variety of formats that facilitate rapid user interpretation.

With SmartVoIPQoS, the user can answer the following questions:

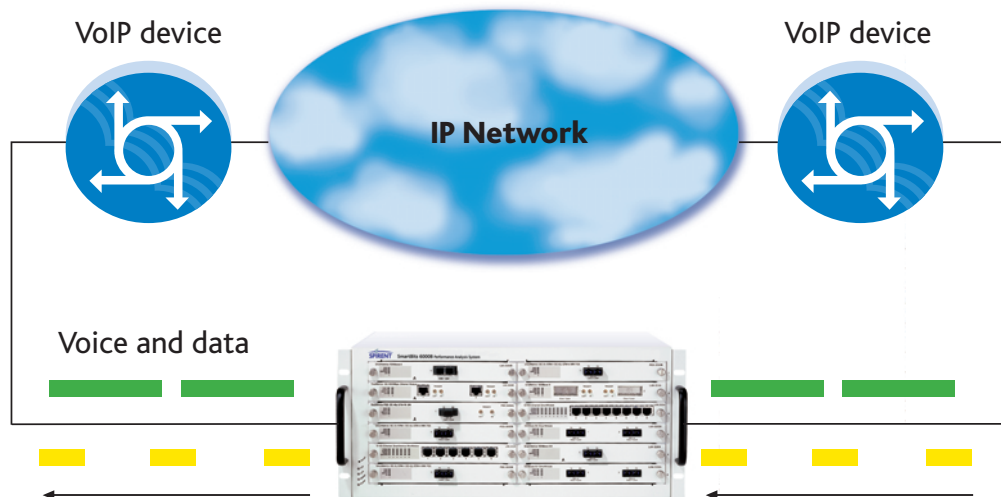
- Can my network support VoIP?
- What Codec/priority scheme works best to deliver voice and data over a converged network?
- What level of voice quality can I expect my network to deliver when VoIP is deployed?
- What will happen to the data quality when VoIP is deployed in my data network?

## SmartVoIPQoS is Designed...

- To evaluate key performance parameters of QoS-enabled routers and IP PBXs under typical or extreme traffic load conditions.
- To qualify QoS-enabled routers and IP PBXs during development, quality assurance, and final regression testing.
- To perform comparative analysis of QoS-enabled routers and IP PBXs.
- To re-qualify QoS-enabled routers and IP PBXs after firmware upgrades.
- To qualify a network for delivering VoIP services.

## Test Descriptions

SmartVoIPQoS includes a Voice QoS test, as well as packet loss, latency, and latency histograms. The Voice QoS test supports generation of RTP voice flows, as well as traditional data flows. This test simultaneously measures loss, one-way latency, and latency jitter of voice and data flows as they traverse the device under test. Furthermore, these measured parameters are used to generate an estimated voice quality score for each of the voice flows.



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### Key Features

- Provides ITU-T P.861 Perceptual Speech Quality Measurement (PSQM) voice quality scoring for each voice flow in the test.
- Generates RTP packets with realistic timing for both constant bit rate and variable bit rate Codecs.
- Supports ITU-T G.711  $\mu$ -Law, G.711 A-Law, G.723.1, G.726, and G.729 Codecs.
- Sets IP/DiffServ and IP/TOS precedence per flow.
- Simultaneously reports the quality of both the voice and the data delivery of the network.
- Generates and analyzes up to 1,000 total flows per port.
- Generates and analyzes up to 500 voice flows per port.
- Supports up to 640 10/100 Mbps Ethernet ports.
- Supports geographically-distributed testing via GPS synchronization.
- Setup Wizard facilitates the easy entry of many voice flows between all ports in a full-mesh, fan-out arrangement, and supports port pair traffic configuration across all priorities and across all Codecs.
- Reporting formats for test results include both graphical and tabular formats, with multiple levels of detail.

### Requirements

- An SMB-200/2000 or SMB-600/6000B, with appropriate firmware.
- For voice traffic, at least two ports of an ML-7710, ML-7711, or LAN-3101 module.
- For data traffic, at least two ports of any other supported SmartMetrics™ module.
- An IBM compatible Pentium™ PC running Windows® 98/2000/NT, with mouse and color monitor.
- One RS-232 modem cable for system control via a serial connection.
- One RJ-45 straight-through cable with a 10 Mbps Ethernet controller card for system control via an Ethernet connection.

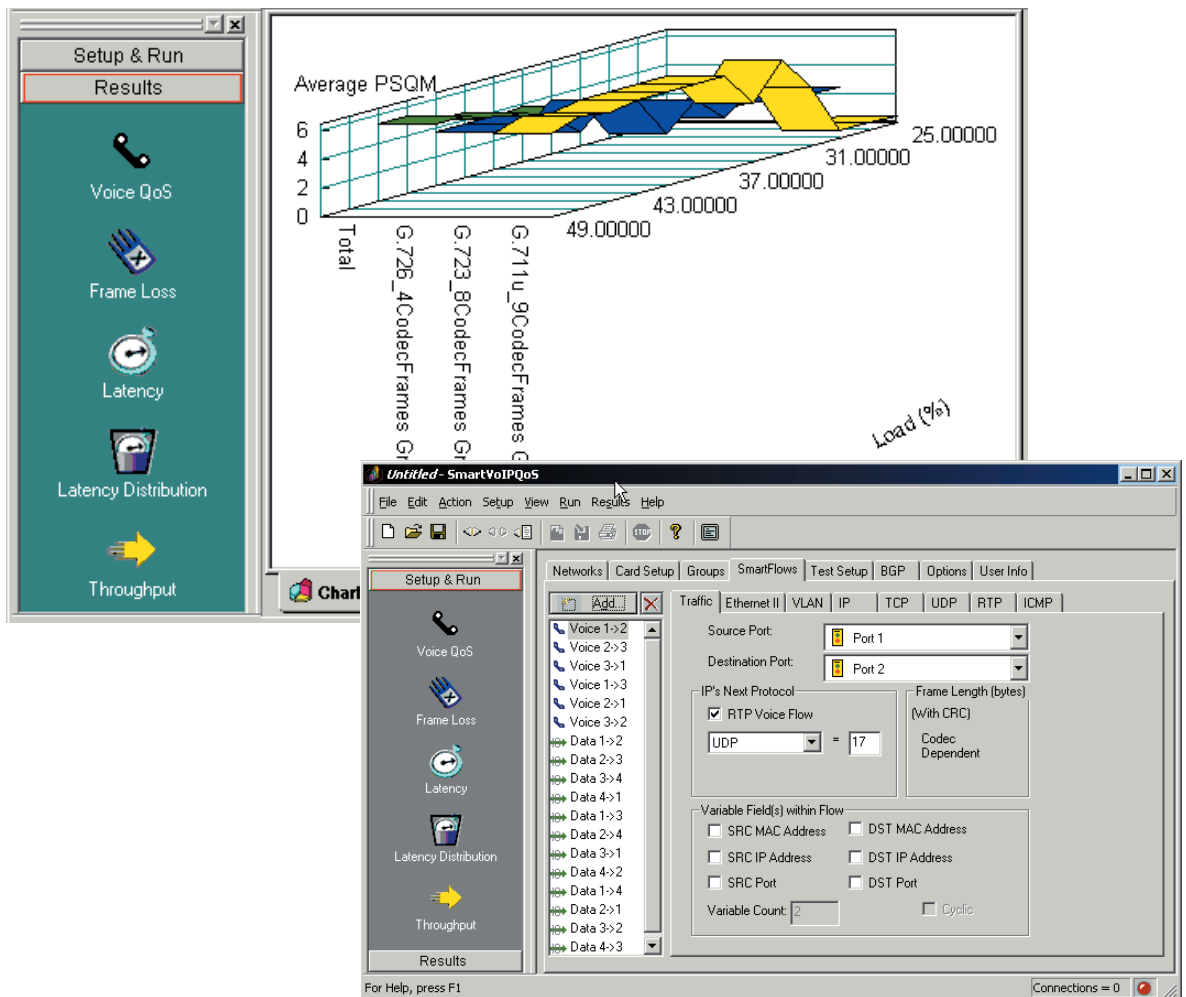
### Ordering Information

#### SWF-1208A

SmartVoIPQoS

#### SMB-SUS

12-month Software Update Support Service



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SmartVoIPQoS results and setup windows

