

- Significantly expanded set of codecs, including AMR-WB, EVRC, EVRC-WB, Skype / SLIK, G.711 and G.729
- Designed to handle more complex end-to-end network architectures and quality management techniques such as smart loss concealment and time stretching
- Two operational modes to distinctly address narrowband and super-wideband communication
- Three-fold increase in evaluation set used compared to PESQ, resulting in considerably smaller residual prediction errors even as the application range has expanded substantially
- Seamless upgrade path from, and backward compatibility with, PESQ

SPIRENT NOMAD HD

CALL AND VOICE MEASUREMENT SYSTEM

ADVANTAGES OF POLQA

The worldwide prevailing standard for mobile voice quality analysis has been ITU-T P.862, known as Perceptual Evaluation of Speech Quality (PESQ). PESQ implements automated testing of telecommunications using actual speech samples, comparison of the reference signal (transmitting side) to the degraded signal (listening side), and generation of mean opinion scores (MOS) to model subjective listening patterns.

This technique has been widely adopted due to its capability to automate collection of large sample sets simulating real-world subscriber experience.

As network technologies mature and evolve, the drivers of performance change, and new methodologies for measuring and assuring quality are required. PESQ is logically being succeeded by ITU-T P.863, Perceptual Objective Listening Quality Analysis (POLQA).

POLQA provides more robust quality predictions for:

- Cross-technology quality benchmarking (such as GSM vs. CDMA)
- Noise reduction and voice quality enhancement
- Time-scaling, unified communication and VoIP
- Non-optimal presentation levels
- Filtering and spectral shaping
- Recordings made at an ear simulator

PESQ VS POLQA			
	PESQ	POLQA	
Codecs	<ul style="list-style-type: none">• AMR• EFR	<ul style="list-style-type: none">• AMR• AMR-WB• EFR• EVRC• EVRC-B• EVRC-WB	<ul style="list-style-type: none">• iLBC• AMB+• AAC• Skype / SLIK• G.711• G.729
Reference Speech Material (sampling frequency)	8 kHz	<ul style="list-style-type: none">• 8 kHz• 48 kHz	
Applications	<ul style="list-style-type: none">• POTS• VoIP• 3G	<ul style="list-style-type: none">• HD Voice• Voice Enhancement Devices	<ul style="list-style-type: none">• Skype calls• Benchmarking CDMA and GSM



Nomad HD is an upgrade for VoLTE voice quality testing and requires new hardware that is HD-ready and POLQA-certified.

TECHNICAL SPECIFICATIONS

Specification

ITU-T P.863 Certified

Wideband and legacy ports for enhanced performance while maintaining backwards compatibility

Wideband ports provide 20 KHz bandwidth and superior THD performance

Bluetooth Hands-free profile v1.6 support

Supports mixed mode operation with some channels connected via analog and others via Bluetooth

Supports both CVSD and mSBC Bluetooth codecs

Bluetooth protocol stack runs on host PC for maximum flexibility and easy upgrades

4 MB per channel of full-duplex on-board buffering provides over 20 seconds of drop-out protection when the host PC is busy

Selectable sample rates of 8, 16, 32, and 48 KHz

24-bit sample width

Improved ESD protection on USB ports

SPIRENT SERVICES

Spirent Global Services provides a variety of professional services, support services and education services—all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at www.spirent.com or contact your Spirent sales representative.

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