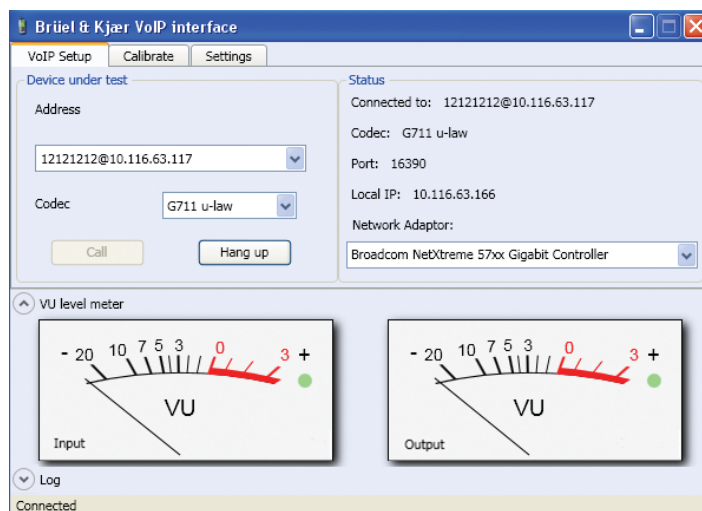## VoIP Interface BZ-5828

Uses
- Telephone exchange for Voice over Internet Protocol (VoIP) terminals
- As a calibration tool for calibrating the audio interface used with the VoIP terminal

Features
- Analogue input and output using USB Audio Interface ZE-0948
- Monitoring of digital input and output level

Benefits
- Easy to set up and use
- Allows accurate compensation for gain/attenuation of sound card

Description
The VoIP Interface is a network simulator for VoIP terminals that supports SIP.

It uses a PC and a high-precision PC sound card (we recommend USB Audio Interface ZE-0948).

The VoIP Interface can establish an audio connection to the VoIP terminal, which is required before any acoustical measurements on the VoIP terminal can be conducted.

A flow diagram is provided in Fig. 1.

The interface implements SIP and RTP for transfer of audio. It is also equipped with a codec that takes care of encoding and decoding the audio.

The interface allows you to set up relevant VoIP terminal parameters, enable calibration capabilities and access other system settings.

A dedicated calibration procedure has been designed for the VoIP Interface, which allows accurate compensation for the gain (or attenuation) presented by the sound card.

Calibration uses a built-in generator to output a 1025 Hz sinusoidal signal to the USB Audio Interface at a level of 2.2 dBm0.

The two level meters provide "analogue" displays of the input and output of the USB Audio Interface, with small digital readouts in dBm (see main figure and Fig. 1).

Brüel & Kjær

Fig. 1 *VoIP Interface flow diagram*

150028
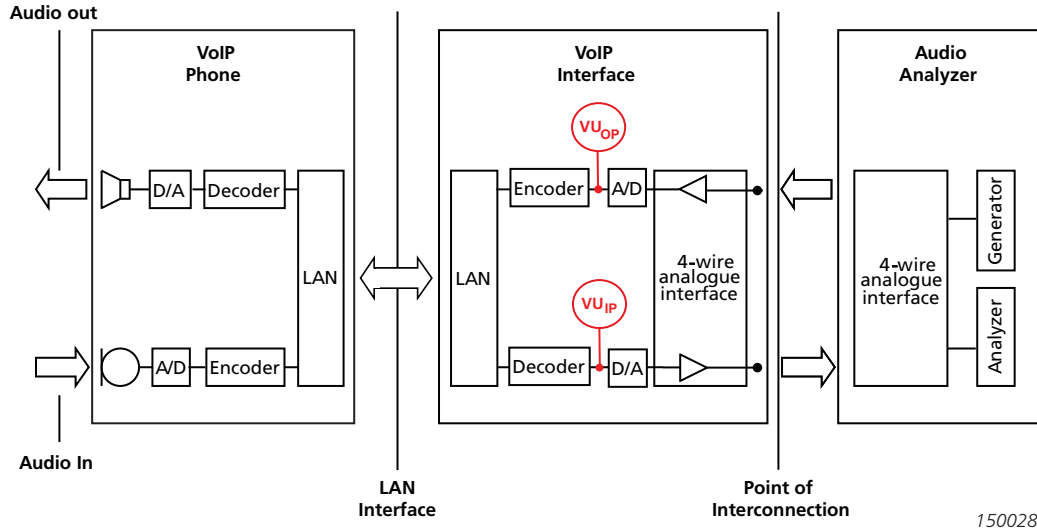
Specifications – VoIP Interface

SYSTEM TOPOLOGY
- VoIP interface on same PC as PULSE™ LabShop and PULSE Reflex
- Can be used with a PC that uses Microsoft® Windows® 7

CONTROL OF THE INTERFACE
- Selection of IP address
- Selection of CODEC
- Establish connection from system to device
- No connection can be established from device to system due to possible firewall issues
- Terminate connection from system to device
- Terminate connection from device to system

CODECS SUPPORTED
- PCM

- ITUT Rec. G.711 μ-LAW
- ITUT Rec. G.711 a-LAW
- ITUT Rec. G.722

PROTOCOLS SUPPORTED
- SIP

DELAY
- Max. 500 ms

DROPOUTS
- None

CALIBRATION
- Calibration signal 1025 Hz at 2.2 dBm0

SIGNAL ROUTINGS
- Output calibration: Calibration signal to analogue out

- Input calibration: Analogue in to analogue out
- Test mode: Analogue in to VoIP out and VoIP in to analogue out

CONTROL MODE
- Manual control enabled by dedicated GUI
- Selection of network adaptor with serialization of settings

CONNECTION STATUS FEEDBACK
- IP-address of device under test
- Codec used during call
- Port used for communication
- PC local IP-address

NETWORK ACTIVITY MONITOR
- Log holding all SIP commands

Ordering Information

BZ-5828	VoIP Interface	M1-5828-X	Software Maintenance and Support Agreement for BZ-5828
ZE-0948	USB Audio Interface		

Brüel & Kjær and all other trademarks, service marks, trade names, logos and product names are the property of Brüel & Kjær or a third-party company.

2015-03

BP 2526 – 11

Brüel & Kjær