C T I - P R O
COMPUTER TELEPHONY

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HiZ interface Gradient®:

I have received the detailed technical specification. It was written originally in the Czech, so I must apologize for its English translation.

HiZ interface Gradient®:

General parameters:
Supply: 230V/50-60Hz
Ports: 8, 10
Analog signal bandwidth: 300Hz-3400Hz +/-3dB
Input signal range characteristics: -60 - +5,5 dBm
Input signal impedance AC, DC: >5 MOhm, >10MOhm

Phone line:
Nominal input voltage DC (state on): >3V, <14,5V
Nominal input voltage DC (state off): <3V, >13,5V

TTL control:
Decision level voltage: 3V
Nominal input current: 100 microA
Maximum input voltage: 5V
Maximum input current: 300 microA

Contact control:
Contact impedance decision value: 100 KOhm
Maximum voltage on contact: 15V
Maximum current on contact: 1,5 mA

It behaves like the regular phone line for the D/41D RJ socket. The full audio signal is passed through this module. The off-hook and outgoing call do not affect the connected phone line.

The module supports three different modes of call detection. From Dialogic board's point of view there are two possible states:
a) Loop-current on - there is an active call
b) Loop-current off - there is no activity.
You should detect these two states for the call logging reasons.

[1] Hook-switch state detection

A) Idle state: HiZ is waiting for loop current on, supply 15V on HiZ output is disconnected from Dialogic board
B) Off-hook detection: after off-hook the loop current on the HiZ input is detected (voltage decrease). The supply 15V on HiZ output is connected to Dialogic RJ socket (D/21D, D/41D, D/160SC-LS, ...) and the power supply in HiZ interface is activated. During the active call there is continually connected this voltage, so Dialogic board input is active (loop current).
The important note: HiZ input ignores incoming call ringing voltage, this is filtered from the call detection. The call is detected only in the case of setting hook switch off (in both incoming and outgoing call cases). This behavior is exceptional among the most HiZ modules available. Due this it has the improved quality of detection.

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C) On-hook detection: After the setting the hook switch on, there increases the HiZ input voltage. This is the loop current change and the HiZ interface disconnects 15V power supply from the output. The call is disconnected.

[2] External contact detection

You can use external input contact mode. When you connect the external contact, then 15V power supply is connected to HiZ output. After external contact disconnection, this power supply is disconnected.

[3] Input audio level control

The power supply 15V for HiZ output is continually connected. You can decide the call begin and end by the silence and nosilence detection with Dialogic voice board.