# **GSM Gateway Series**



FXO Service Features (Clear-Down-Tone)



AddPac Technology

Sales and Marketing

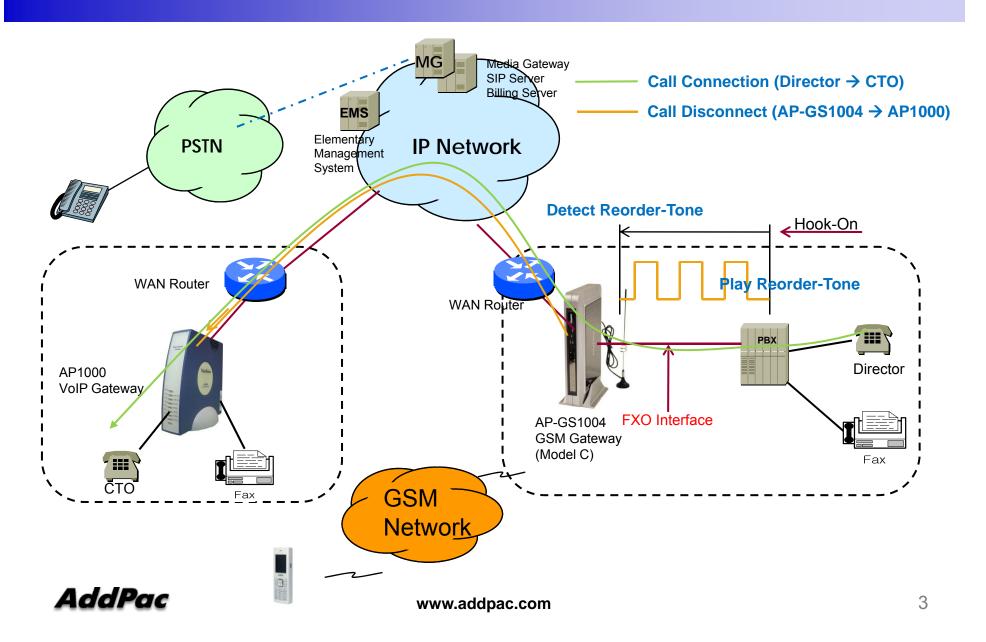
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# Clear-Down-Tone Detection Network Diagram



#### Clear-Down-Tone Overview

- Clear-Down-Tone
  - Playing tone types for FXO call clear(disconnect) between PBX(or Keyphone) and VoIP Gateway
    - Line Busy Tone
    - Reorder Tone
    - Line Lock Tone
    - User Defined Clear Down Tone
  - If user know about tone frequency and cadence of PBX clear-downtone, AddPac VoIP gateway provide the call clear function by easy configuration via CLI

Tag Low(Hz) High(Hz) On1(ms) Off1(ms) On2(ms) Off2(ms) dBm Description

|   |      |      |       |      |   |   | _                 |
|---|------|------|-------|------|---|---|-------------------|
| - | 350  | 440  | 10000 | 0    | 0 | 0 | -18 Dial tone     |
| - | 440  | 480  | 1000  | 2000 | 0 | 0 | -12 RingBack tone |
| - | 480  | 620  | 500   | 500  | 0 | 0 | -12 LineBusy tone |
| - | 480  | 620  | 300   | 200  | 0 | 0 | -12 Reorder tone  |
| - | 1400 | 2060 | 100   | 100  | 0 | 0 | 0 LineLock tone   |



# Clear-Down-Tone Trouble Shooting

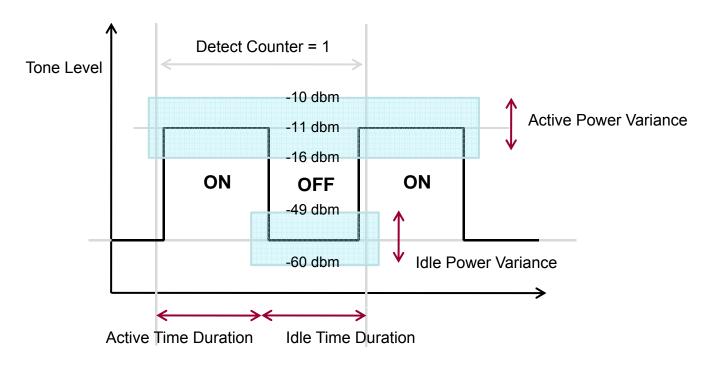
- Clear-Down-Tone
  - Clear-Down-Cadence
    - Usage: If FXO interface of VoIP gateway does not detect or recognize Clear-Down-Tone incoming from PBX side, VoIP Gateway can not perform Call Release procedure even though end user terminal in PBX is already hook on.

This function detect Clear-Down-Tone by tone level not frequency, and clear call pending of FXO interface.

- Force-Clear-Down
  - Usage: FXO call clear using Voice Mute Detect Function.
    If tone level is lower than a specific value for some time in FXO interface, perform call clear procedure.



### Clear-Down-Cadence Feature

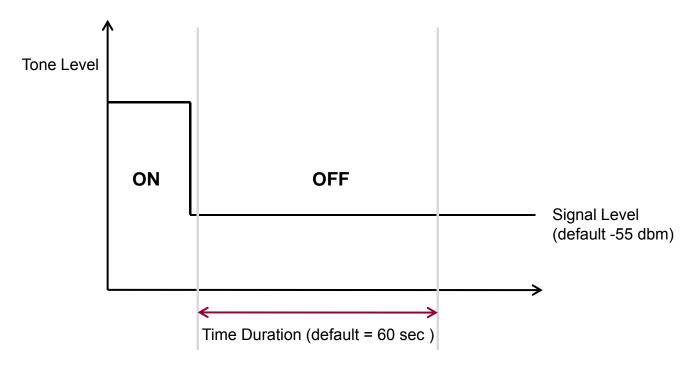


#### Clear-Down-Cadence

- Detect and analyze clear-down-tone incoming from PBX
- Using detected clear-down-tone data, Active / Idle Time Duration and Active / Idle Power Variance information is applied to Clear-Down-Cadence parameter.
- And then, Call Clear is possible by Clear-Down-Cadence Parameter.
- Clear-down-cadency detection is performed more accurately using Detect Counter parameter (1,2,3, etc) for Call Clear.



## Force-Clear-Down Feature



#### Force-Clear-Down

- If FXO port call is not cleared or disconnected by Clear-Down-Tone and Clear-Down-Cadence configuration, this Force-Clear-Down function can be used.
- If tone level is lower than a specific value for some time in FXO interface after hook on, perform call clear procedure.



# Thank you!

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