

# CADNETPRO

## HIGH-PERFORMANCE EMBEDDED INTERNET TELEPHONY GATEWAY



### Features:

- Supports 4 channels of real-time voice and fax in a single embedded box.
- Modular design to accommodate various types of telephony interfaces.
- Field programmable CP tone detection and generation to support PBX and CO line interconnections.
- Supports programmable line interfaces with country specific telephone settings.
- Supports ITU standard vocoders and voice processing algorithms including G.711, G.723.1, and G.729 A/B, and G.168 Echo Cancellation.
- User friendly management including console port interface, HTTP and Telnet servers, and Elite Server for VoIP related management such as call control and dial plan set up.
- Built-in TFTP and flash memory for software download and upgrade via network.
- H.323 call control protocol compliant.
- QoS support for VoIP packets.

### Specification: SOFTWARE

#### Speech

Compression algorithms: ITU G. 711, G.723.1, and G.729A/B.  
Hybrid echo cancellation G.168 (16 ms)  
Auto switch between Fax and voice  
DTMF tone detection/regeneration  
Comfort Noise Generation (CNG)  
User programmable Call Progress detection/generation  
Voice Activity Detection (VAD)  
User programmable Gain Control

#### Fax

Facsimile protocol: T.30 Group 3, T.38  
Modulation formats: V.21, V.27ter, V.29, V.17  
Real-time fax over IP  
DTMF tone detection/regeneration

#### Management Tools

RS 232 console port interface  
HTTP Server  
Telnet Server  
Elite Server for RAS and dial plan management  
TFTP and flash memory for remote software download and upgrade

#### H.323 Protocol Stack

RAS sub-stack for Terminals and Gatekeepers: supports all mandatory and optional messages (Tx and Rx) as specified in table 19/H.255.0  
H.245 sub-stack: supports the Signaling Entities of Master Slave Determination, Capability Exchange, Open Logical Channels, and Close Logical Channels  
Q.931 sub-stack: supports all mandatory messages as specified in table 4/H.255.0  
Compliant with H.323 Version 1, Version 2, and Version 3.

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# TELEPHONY GATE

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## HARDWARE

### Digital Signal Processors

One TI TMS320VC5409 DSP  
100 MIPS per DSP processor  
On-chip memory: 32K word of SRAM, 16K word of ROM  
Local SRAM 128K x 16 for each DSP

### Control Processor

32-bit ARM7 TDMI core  
8K byte unified cache  
4K words Write buffer  
Embedded on-chip Ethernet MAC with associated BDMA  
Local 2M x 16 SDRAM and 1M x 16 Flash

### I / O

Standard 10/100 BaseTX RJ 45 interface  
RJ 11 Loop Start interfaces for FXS / FXO

### Mechanical, Environment & Power

Dimension: L x W x H = 240.60 x 134.40 x 45.00 mm  
Operating temperature: 32 to 122 °F (0°C to 50°C)  
Operating humidity: 10% to 95% (non-condensing)  
Storage temperature: 14 to 140 °F (-10 to 60°C)  
AC-to-DC power supply (90-260 VAC, auto-ranging, 50-60 Hz.)

### Compliant

CE  
FCC part 15 A  
FXS/FXO (Compliant with ITU-T G.712)  
UL

## Ordering Information:

**CNP-ITG-400 : 4-Port Internet Telephony Gateway  
(2\*FXO / 2\*FXS interface)**

**CNP-ITG-404 : 4-Port Internet Telephony Gateway  
(4\*FXO interface)**

**CNP-ITG-404S : 4-Port Internet Telephony Gateway  
(4\*FXS interface)**

\* Product specification subject to change without notice.

## Line Specifications

	FXO	FXS
Signaling:	Loop Start / DTMF	Loop Start / DTMF
No. of Channels:	2	2
Interface Connectors:	2 RJ 11 2-pin modular jacks.	2 RJ 11 2-pin modular jacks.
Line Impedance :	600Ω 900Ω Complex line impedance	600Ω 900Ω Complex line impedance
Insertion Loss:	2 dB nominal (Adjustable)	2 dB nominal (Adjustable)
Frequency Response:	300Hz ~ 3400Hz+/- 2dBw.r.t. 1004Hz.	300Hz ~ 3400Hz+/- 2dBw.r.t. 1004Hz.
Return Loss:	≥ 18 dB	≥ 18 dB
Input Level Adjustment:	-6 dB to +6 dB.	-6 dB to +6 dB.
Output Attenuation:	0 dB to 13 dB.	0 dB to 13 dB.
Longitudinal Balance:	≥ 45 dB	≥ 45 dB
Loop Current:	N/A	25mA nominal
Ring Voltage:	N/A	40Vrms Nominal
Ring Tone:	N/A	16.67Hz, 20Hz(default), 25Hz or 50Hz

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