

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.



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
4Kword 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

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 (Compliant with ITU-T G.712)
UL

Line Specifications

	FXS
Signaling:	Loop Start / DTMF
No. of Channels:	4
Interface Connectors:	4 RJ 11 2-pin modular jacks.
Line Impedance :	600Ω 900Ω Complex line impedance
Insertion Loss:	2 dB nominal (Adjustable)
Frequency Response:	300Hz ~ 3400Hz+/- 2dBw.r.t. 1004Hz.
Return Loss:	≥18 dB
Input Level Adjustment:	-6 dB to +6 dB.
Output Attenuation:	0 dB to 13 dB.
Longitudinal Balance:	≥45 dB
Loop Current:	N/A
Ring Voltage:	N/A
Ring Tone:	N/A

Ordering Information:

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

* Product specification subject to change without notice.