Analog VoIP Gateways

DW-GTW-AC-FXO008
DW-GTW-AC-FXS008
DW-GTW-AC-FXS024

The **DW-GTW-AC Series Analog VoIP Gateways** are cost-effective, best-of-breed technology products. These stand-alone analog VoIP Gateways provide superior voice technology for connecting legacy telephones, fax machines and PBX systems with IP-based telephony networks, as well as for integration with IP PBX systems. They are designed and tested to be fully interoperable with leading softswitches, SIP servers and gatekeepers.

Deliver Feature-rich Solutions

DW-GTW-AC are third generation products that have been designed to meet real market needs. In addition to superior voice technology, the products provide advanced telephony features such as long-haul, metering tones generation, country dependent MWI and Caller ID for true integration with the existing telephony infrastructure. A variety of management and provisioning tools, such as Denwa EMS, embedded web server, Telnet and SNMP enable fast deployment and management of large and complex networks.

Provide Interoperability

DW-GTW-AC are part of Denwa's complete family of stand-alone VoIP Gateways for OEM system integration. Throughout the years, Denwa has invested significant effort in complying with the leading and evolving VoIP standards. Support of multiple VoIP control protocols has been tested with leading Softswitch vendors. As a provider for OEMs, System Integrators and Network Equipment Providers, Denwa offers short time-to-market with field-proven products.

MAIN FEATURES

- **Provides voice, fax and modem support.**
- **Offers toll quality voice compression.**
- **Enhanced capabilities including MWI, long haul, Metering Tones Generation and, Caller ID.**
- **Allows fallback to PSTN for E911 (Emergency number PSTN breakthrough) or upon net work/power failure (FXO and/or FXS) configurations.**
- **Supports Standalone Survivability (SAS) for hosted communications services and centralized IP-PBX deployments.**
- **Supports SIP, MGCP and MEGACO standard control protocols.**
- **Proven integration with leading PBXs, IP-PBXs, and softswitches.**

⚙ System Specification

	FXO008	FXS008	FXS024
Interfaces			
Voice Ports	8 ports	8 ports	24 ports
Telephone Interfaces	FXO, RJ11	FXS, RJ11	FXS, 50-pin Telco / Connector
Lifeline	Automatic cut through of a single analog line		
Network Interface	10/100 BASE-T, RJ45		
Indicators	Channel status and activity LEDs		
Voice, Fax, Modem			
Voice over Packet Capabilities	G.168-2004 Echo Cancelation, VAD, CNG, Dynamic programmable Jitter Buffer, modem detection and auto-switch to PCM		
Voice Compression	G.711, G.723.1, G.726 ADPCM, G.727 ADPCM, G.729A/B, G.722		
Fax over	IP T.38 compliant Group 3 fax relay up to 14.4 kbps with automatic switching to PCM or ADPCM		
3-Way	Conference 3-Way conference with local mixing		
VLAN QoS	DiffServ, TOS, 802.1 p/Q VLAN tagging, RTCP-XR		
IP Transport (bandwidth)	RTP/RTCP per IETF RFC 3550 and 3551		
Signaling			
Signaling	FXO Loop-start	FXS Loop-start	FXS Loop-start
In-band Signaling	DTMF (TIA 464B) User-defined and call progress tones		
Out-of-Band Signaling	DTMF Relay (RFC 2833), DTMF via SIP INFO/NOTIFY		
Control	SIP (RFC 3261), MGCP (RFC 2- 05)		
Provisioning			
Protocols	BootP, DHCP, TFTP and HTTP for Automatic Installation DHCP options 66.67 in auto update mode Remote management using Web browser D-EMS (Denwa Element Management System) / SNMP V3 RS-232 for basic configuration (via CLI) Voice Menu using touch tone phone for basic configuration		
Security			
Media	SRTP		
Control	IPSEC, TLS/SIPS, SIP (RFC 3261), MGCP (RFC 2- 05), MEGACO (H.248)		
Management	HTTPS, Access List, IPSEC		
Additional Features			
Message Waiting Indication	Applying 90 VDC online for lighting bulb in handset, FSK, Stutter Dial Tone		
PSTN Fallback	Support of PSTN fallback due to Power failure, if the IP connection is down or due to customer defined IP QOS thresholds		
Stand Alone	Survivability (SAS) Supports SAS of up to 25 SIP users (UA) per MediaPack		
Ring voltage	Sine: 54 VRMS typical (balanced ringing only)		
Ring Frequency	25-100Hz		
Voice Quality Monitoring	Denwa Session Experience Manager (D-SEM)		
Maximum Ringer Load	REN3		
Loop Impedance (including phone impedance)	Up to 1500 ohm for the FXS008, Up to 1600 ohm for the FXS024		
Line current	up to 32 MA on 4 ports		
Lifeline	Supported in FXS008 using special Lifeline cable		
Caller ID	Bellcore GR-30-CORE Type 1 using Bell 202 FSK modulation, ETSI Type 1, NTT, Denmark, India, Brazil, British and DTMF ETSI CID (ETS 300-659-1)		
Polarity Reversal / Wink	Immediate or smooth to prevent erroneous ringing		
Metering Tones	12/16 KHz sinusoidal bursts, Generation on FXS		
Distinctive Ringing	By frequency (15-100 Hz) and cadence patterns		
Management			
OAM&P	Browser-based GUI, SNMP, INI Configuration file, TR-069		
Outdoor Protection			
Over-voltage protection and surge immunity	Routing of FXS telephony cables outdoors can be done only in conjunction with AudioCodes' approved primary surge protector and proper installation and grounding. When done correctly, the installation will meet ITU-T K.21 (basic) standards.		
Physical			
Power	100-240 V AC/50-60 Hz or -48V DC*		
Environmental	Operational: 5 to 40o C 41 to 104o F Storage: -25 to 85o C -13 to 185o F Humidity: 10 to 90% non-condensing		
Dimensions (HxWxD)	42x172x220mm	42x172x220mm	44x445x269mm.
Mounting	Rack mount, Table top, Wall mount		
Weight	0.5 kg (1.1 lbs.) approx.	0.5 kg (1.1 lbs.) approx.	1.8 kg (4 lbs.)
Homologation			
EMC	EN55022 Class B , CFR Part 15 Class B, EN55024, EN61000-3-3, EN61000-3-2, VCCI Class X1 (equal to class B)		
Safety	EN60950-1 Safety of information technology equipment Telecom TBR-21, TIA-968		

* -48V DC is supported only on the MP-124