ApplianX IP Gateway

ApplianX IP Gateway is an easy to deploy, standards-based SIP to TDM gateway, often installed within an enterprise or service centre. It can be used to bridge between an internal VoIP or packet-switched telecoms network and the external PSTN, a PBX or private circuit switched network – helping reduce operational costs, extend the life of existing TDM-based equipment and advantage to be taken from new IP-based services and endpoints.

Telephone network interfaces

On the PSTN side, ApplianX IP Gateway provides 1, 2 or 4 universal T1/E1 (USA, Japan, Europe and worldwide) interfaces, with a wide range of per-circuit selectable signalling protocols, including PRI/ISDN types, T1 robbed bit and E1 CAS, R1, R2 and DTMF, plus many PBX inter-working protocols, such as Q.SIG and DPNSS.

IP interfaces

On the IP side, ApplianX IP Gateway provides dual-redundant traffic interfaces for SIP signalling, with RTP voice. Within the RTP stream there is support for G.711, G.723.1, G.726, G.729AB and GSM-FR codecs. Stand-alone it can provide the essential functions of a SIP proxy and registrar, but will also support the use of an external SIP proxy and registrar. ApplianX IP Gateway also supports access to an external RADIUS server, allowing integration into centralised authorisation and authentication strategies, and the production of call data records**.

Traffic routing

Controlling traffic between IP and TDM is a comprehensive call routing engine, allowing configuration of a variety of routing strategies: implementing and routing upon trunk groups; editing to construct SIP addresses from DDI (DID) digits; and strategies for handling call progress information.

Comprehensive management

A private (non-traffic) Ethernet port gives access to the integral HTTP server and provides an HTML web browser interface with separate password protected access levels, to allow configuration, administration, and traffic monitoring and diagnosis. A comprehensive set of SNMP facilities (including traps) provide management facilities within a traditional network management environment.

Applications of ApplianX IP Gateway

- Interfacing enterprise VoIP telecoms to the PSTN, PBXs or private networks
- Enabling a transitional strategy from TDM to VoIP
- Integrating next-generation VoIP equipment into existing TDM infrastructure:
  - IP-based call centres with centralised or distributed agents
  - Telephony access points for multi-tenanted managed facilities
- Providing PSTN access points for corporate IP wide-area VoIP networks
- Providing fall-back PSTN access points for telco provided VoIP access services

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Features

Benefits

Features	Benefits
This deployment-ready solution, which can bridge between various TDM and IP endpoints, comes with a comprehensive management suite including: an HTML web browser configuration tool; support for SNMP; and access to external RADIUS server	Utilises familiar interface tools making ApplianX IP Gateway easy to install, configure, maintain and manage
Extensive portfolio of worldwide protocols supported including: PRI/ISDN types; T1 robbed-bit; E1 CAS; R1; R2; AT&T, NI2, and DTMF	ApplianX IP Gateway will support the protocol needed to connect to the TDM network, wherever it is installed in the world
Comprehensive support for many PBX inter-working protocols, such as Q.SIG and DPNSS	Allows investment in legacy equipment such as PBXs to be protected, they can remain in service while new IP-based services and endpoints can be taken advantage of
Broad range of voice codecs supported including; G.711, G.723.1, G.726, G.729AB	You have the flexibility to trade between voice quality and network bandwidth
Controlling traffic between IP and TDM is a comprehensive call routing engine	You have complete control over the routing strategies used to connect your IP network to the PSTN or PBX
Dual IP traffic interfaces, hot swap power supplies, RAID arrays, or where possible use of reliable solid-state Flash memory	Resilience and robustness is assured by the use of replicated facilities in areas that are critical, or traditionally prone to failure

Technical specification

Network interfaces		Feature detail
Ethernet		Dual redundant 10/100 BASE-T & separate private management interface via front panel RJ45 connectors
Telephony		1, 2 or 4 E1/T1 trunks via front panel RJ45 connectors
Signalling and control protocols		
IP		SIP, RTP, TCP, UDP
PSTN	ISDN	A wide range of protocols* including; Euro ISDN/ETS 300, Q.SIG, DPNSS, NI2, AT&T and SS7**
	CAS	A wide range of protocols* including; R2 MFC and T1 robbed bit
Capacity		24/30, 48/60, or 96/120 (T1/E1) independent voice calls
Security**		SRTP, TLS, SIPS, HTTPS
Feature support		
Voice codecs		G.711, G.723.1, G.726, G.729AB, GSM-FR (GSM6.10, MSGSM) dynamically selected on a per channel basis
DTMF		DTMF detection and generation; inband; pass-through; DTMF relay and user indications (RFC 2833); DTMF out-of-band (SIP INFO, RFC 2976**)
Fax**		T.30 and T.38 fax receive and transmit; fax over G.711
Echo cancellation		G.168 compliant
QoS		Enhanced jitter buffer, packet loss concealment
Supplementary services**		Call forwarding, call transfer, call divert, message waiting indicator and caller ID
Additional functionality		Comfort noise generation, voice activity detection, silence suppression
Operational management		
Configuration		Via easy to use embedded web/HTTP interface
Management		Via SNMP, RADIUS, DHCP
Hardware		
Dimensions		1U high, 19” wide rack mount
Power		Dual redundant 110-230V AC or 48V DC power supplies
Regulatory		EC Directive 2002/96/EC (WEEE); RoHS compliance
	EMC standards	EU – EN55022; EN55024; USA – FCC part 15
	Safety	CB certification; UL/CUL
Operating environment		Operating temperature: 0°C to +50°C; storage temperature: -20°C to +70°C; humidity: 10% to 95% RH non-condensing

* Visit www.applianx.com to view the full range of protocols supported ** Planned release