QuadroFXO
THE ANALOG GATEWAY

QuadroFXO: The Gateway to PSTN, FXO Extension and/or Mini POP

Gateway to the PSTN

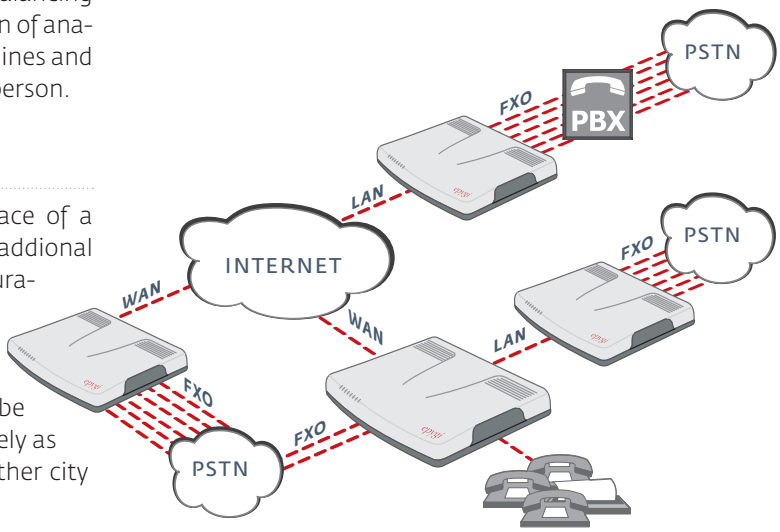
The QuadroFXO is a modular approach to adding additional outside PSTN lines (POTS) to a corporate phone network that utilizes an Epygi Quadro IP PBX. Each QuadroFXO is a stand-alone SIP gateway device with 6 outside POTS lines. Multiple QuadroFXO gateways can be added to a Quadro IP PBX depending on how many additional lines are required. Uses include the addition of inbound lines, the balancing of outbound call volumes from a combination of analog and IP phones, fax lines, E911 emergency lines and individual direct dial numbers for each salesperson.

FXO Extension for Quadro IP PBX

Connected via Ethernet to the LAN interface of a Quadro IP PBX, QuadroFXO delivers six addional POTS lines for PSTN calls. Minimal configuration is needed, the Quadro IP PBX will automatically use the new POTS ports and present them within its management system as additional FXO lines. These lines may be co-located with the IP PBX or located remotely as an "extension cord" to another office in another city or even another country.

Mini Point of Presence (POP)

The QuadroFXO can be used as a low cost, mini Point of Presence (POP). In this configuration you remove the IP PBX altogether by assigning VoIP network DID numbers from an ITSP directly to the QuadroFXO lines. Think of it as a smaller scale alternative to the QuadroE1/T1 gateway. It truly is the lowest cost for creating a local presence anywhere on the globe.



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Telephony

Voice Features

Voice Coding G.711, G.723 (5.3, 6.3 kbit/s), G.726 (16, 24, 32, 40 Kbps), G.729, iLBC (13,33 kbit/s, 15,2 kbit/s); (RFC 3951, ITU-T: G711, G.723.1 Annex A, G.726, G729 Annex A; IETF; ITU-T, Bellcore GR.506, GR.181; ITU-T G.168-2000, 2002; ETS_300659_1,2,3; A-law, m-law coding)

NAT traversal (both manually and STUN) VAD, CNG, G.168 echo cancellation

Bandwidth Requirements

Per call WAN bandwidth requirements for the following codecs (non-encrypted):

G.711a/G.711u	20 msec	84 kbps
G.726-16	20 msec	37 kbps
G.726-24	20 msec	45 kbps
G.726-32	20 msec	52 kbps
G.726-40	20 msec	60 kbps
G.729a	20 msec	29 kbps
G.723	30 msec	21 kbps
iLBC	30 msec	27 kbp

PBX Features

Call block, unconditional forwarding
Call statistics
Call routing
Auto Attendant
T.38 fax, fax relay and clear channel fax

Call Signaling

SIP (RFCs: 3261, 3263, 3265, 3311, 3323, 3324, 3325, 3428, 3515, 3578, 3581, 3725, 3891, 3892, 3842, 3856, 3863, 4028, 4235)
SDP (RFC 2327)
RTP (RFCs: 1889, 1890, 2833, 3389, 3550, 3551, 3555, draft-ietf-avt-rfc2833bis-05, draft-ietf-avt-rtp-ilbc-05) in band and out of band signaling support
Fax over IP (ITU-T: T4, T30, T38, V17, V21, V27 ter, V29)

POTSS signaling

Loop start
FSK and DTMF Caller ID support

Connectivity

System Capacity

6 simultaneous IP-PSTN calls

Premise Connections

1 Ethernet 10/100BASE T port (RJ45)

Uplink Connection

6 FXO ports to the Central Office (RJ11)
1 Ethernet 10BASE T (RJ45)

Billing

Radius Client (RFCS: 2865, 2866)

Internet

STUN/NAT traversal (RFC 3489)
Firewall security via:
- NAT (Network Address Translation)
- Policy and service-based filtering

DHCP server on the LAN side
DHCP client on the WAN side
DNS server with forwarding functionality
SNTP (Simple Network Time Protocol) server/client for computer clock synchronization
PPPoE connection to the ISP with PAP/(MS)CHAP authentication
IP DIFFSERV for QoS
DNS support with third party
Port forwarding
Port translation

System

Management

WEB interface accessible from LAN and WAN (HTTP/HTTPS), the WAN management access can be switched off
Password control
Remote diagnostics and software upgrade
Downoad/restore configuration
Reset button with factory reset option

Diagnostics/Testing

LEDs: Busy, Info/Fault, FXO1, FXO2, FXO3, FXO4, FXO5, FXO6, LAN, WAN
Remote testing and VoIP diagnostics
Power-up diagnostics

Environmental

Physical Dimensions

Desktop devices, wall-mountable:
Measurements: 7.41" x 6.24" x 1.77" (19 x 16 x 4.5 cm)
Weight: 13 ounces (360 g)

Conditions

41°F - 104°F (5°C - 40°C) operating temperature
41°F - 140°F (5°C - 60°C) storage temperature
5% - 90% non-condensing humidity

Power Supply

Input 100 - 240 VAC; 50/60 Hz; 0.5 A
Output 12.0 VDC; 1.5 A

Regulatory Compliance

EMC: FCC Part 15 Class B; EN55022 Class B, EN55024;
Telecom: CTR21/TBR21

CE
FC

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