# Quadro®



# Quadro6L: The IP PBX with 6 FXO Ports

Epygi designed the Quadro 6L for environments that require multiple ringing phones and shared trunk appearance visibility. It economically delivers a wealth of PBX features like voice mail, auto attendant, on-hold music or messaging, caller ID with distinctive ringing, call pickup, paging and intercom while providing key-system features in the default setup.

The Quadro 6L provides for as many as ten local IP extensions via the LAN connection. Users choose from a variety of Aastra IP telephone sets\* with buttons that can be programmed for incoming phone lines and additional features. The Quadro 6L includes six separate FXO ports for PSTN lines, plus a WAN port for optional Internet calls. \*Aastra 55i, 57i, 9133, and 480i models as of February, 2008

# Legacy Phone System Replacement

Epygi designed the Quadro 6L for deployment right out of the box as a turnkey solution. Using advanced plug-andplay IP phones and multiple FXO ports for PSTN access, this IP PBX functions as a key-system by default. As a bonus, Epygi delivers features not found on traditional key systems. Business enhancements include after-hours auto attendant and unified messaging among many others.

# Effortless Administration

Sophisticated auto-recognition and auto-configuration capabilities between the Quadro 6L and Aastra phones simplify installation and operation. The administrator can modify automatic assignments through the graphical user interface.

# What are Your VoIP BENEFITS?

- Key System Simplicity
- True IP Solution
- Turn Key Installation
- No Expensive Licenses



# Telephony Voice Features

Voice Coding G.711, G.726 (16, 24, 32, 40 Kbps), G.729, iLBC (13,33 kbit/s, 15,2 kbit/s); (ITU-T: G711, G.726, G729 Annex A; RFC 3951 :iLBC; IETF;ITU-T Q.23, Q.24, Bellcore GR.506, GR.181; ITU-T G.168-2000, 2002; ETS\_300659\_1,2,3) 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/ VPN encrypted): G.711 20 msec 84 kbps/105 kbps G.726-16 20 msec 37 kbps/59 kbps G.726-24 20 msec 45 kbps/65 kbps G.726-32 20 msec 52 kbps/74 kbps

60 kbps/80 kbps G.726-40 20 msec 29 kbps/49 kbps G.729a 20 msec il BC 30 msec 27 kbps/41 kbps

**PBX** Features

Call blocking\*, Forwarding, Hold, Transfer\* Call relay\*, Call waiting\* Caller ID Detection, Voice mail\* Call park\*, Pickup\*, Paging\*, Intercom\* Multilevel auto attendant with Interactive Voice Response (IVR) and VoiceXMLv2 support\* Voice mail with SMS notification\* Distinctive ringing\* Speed dialing\* Many extension ringing\* Receptionist Call hunting\*, Hiding Caller ID\* Automated Call back from Auto Attendant\* Hold music Call statistics Do Not Disturb service\* Unified messaging\* 3-way conferencing\* T.38 fax, fax relay and clear channel fax\* Unified Fax Messaging\* Busy auto-redial\* Directory assistance\* Dial plans (call routing)\* IP Routing\* Call Queue\* Key System Emulation

Call Signaling SIP on the WAN and LAN side (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-o5), in band and out of band signaling support RTP Proxy Fax over IP (ITU\_T: T4, T30, T38, V17, V21, V27 ter, V29).

POTS Signaling Loop start FSK and DTMF caller ID support

\* Features not available in Key System Emulation Mode

# Connectivity

LAN IP Phones 10 SIP phones Remote IP extensions may be enabled for all IP phones.

System Capacity 10 simultaneous VoIP calls with external parties Remote IP extensions may be enabled for all IP phones.

Premise Connection

**IP** Phones

1 Ethernet 100BASE T (RJ45).

Uplink Connection

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

Billing

Radius Client (RFCS: 2865, 2866)

Extensions Up to 100 extensions including virtual, remote and local. Extensions can be registered on different SIP servers.

## Internet

STUN/NAT traversal (RFC 3489) IPSec VPN with DES, 3DES and AES encryption in tunnel mode (RFCs: 2402, 2406, 2409). Manual and automatic IKE key support PPTP VPN L2TP VPN Firewall security via: NAT (Network Address Translation) IDS Policy and service-based filtering Stateful inspection firewall 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 Mail client to send voice and fax messages (.wav and .tif) as e-mail attachments and system notifications. DNS (DYNDNS) support with third party NAT/Router with port forwarding and port translation

IP phones

LAN

Admin PC

LAN

# System

Management Multilingual WEB interface accessible from LAN and WAN (HTTP/HTTPS), Password control Remote diagnostics and software upgrade Auto-provisioning VoIP Carrier Wizard Downoad/restore configuration Legible and editable configuration files Auto-configuration of IP phones via TFTP and HTTP. SNMP monitoring and configuration Third Party Call Control XML RPC is available to order Reset button with factory reset option Custom Language Pack Outlook Feature Hot Call

Diagnostics/Testing LEDs: Busy, Info/Fault, FXO1, FXO2, FXO3, FXO4, FXO5, FXO6. 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** UL 60950; CSA 22; Safety: EMC: FCC Part 15 Class B; EN55022 Class B, EN55024; Telecom: CTR21/TBR21, AS/ACIF

> Local PSTN

FXO Trunks

w/SIp

Quadro6L

Router

System

Key

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LAN

Internet WAN ITSP

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