

# Quadro<sup>®</sup>M32x



## QuadroM32x: The Enterprise IP PBX Solution

The QuadroM32x is designed to deliver greater IP Line capacity, reaching 192 registered extensions and 64 concurrent calls. Epygi's largest IP PBX continues to deliver all the features currently found on our existing Quadro line with the addition of some vital enterprise grade tools.

Conferencing and Automatic Call Distribution are a few of the unique features to this product. Third party integration with Unified Multimedia Communications platforms is another key solution for large businesses.

Expanding the digital and analog trunking capacity of the QuadroM32x is simple using Epygi Quadro Gateways. Epygi's FXO, ISDN, and E1/T1 Gateways with the Quadro and QuadroM IP PBX line. This flexibility will allow our customers to satisfy any configuration need.

### Integrated Conference Server

Conferencing is a common feature used by today's large organizations. The QuadroM32x features an optional 64 person conference bridge with the same features found on our standalone Quadro Conference Server. The presenter can mute participants, assign speakers and track overall activity. Regular participants can also view the active meeting and can indicate a request to speak during a muted session. This productivity enhancing tool is easily enabled using a software license key.

### Redundancy Options

The QuadroM32x also offers a built-in E1/T1 digital trunk interface. This link can be used as the primary interface or as a redundant link while utilizing an ITSP as the primary service. Redundant Ethernet links are also included for secondary failover networks or a voice DMZ.

## What are Your VoIP BENEFITS?

- Large capacity
- Increased reliability & redundancy
- True Enterprise grade solution

## Telephony

### 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  
 Unified messaging  
 3-way conferencing  
 Hotline service  
 T.38 fax, fax relay and clear channel fax  
 Unified Fax Messaging  
 Busy auto-redial  
 Directory assistance  
 Dial plans (call routing)  
 Time of day routing  
 Call Queue  
 Redundancy  
 Voice Mail profile  
 Automatic Call Distribution\*  
 Call Recording (32 ports) \*  
 Barge-in \*  
 Audio (64 ports)/Video (16 ports)  
 Conference Server \*

\*Requires a software license key

### Voice and Video Features

Voice Coding:  
 G.711, G.726 (16, 24, 32, 40 Kbps),  
 G.729A, iLBC (13,33 kbit/s, 15.2 kbit/s);  
 VAD, CNG, G.168 echo cancellation  
 G.722 Pass-through Point-to-point HD call  
Video Coding:  
 H.263 and H.264 Pass-through Point-to-point video call  
VoIP Encryption:  
 SRTP  
VoIP Signaling  
 SIP, SIP/TLS  
 DTMF  
 In band & out of band signaling support.

### VoIP Data and Signaling Protocols

ITU-T G711, G.726, G729 Annex A;  
 IETF RFC 3951- iLBC; ITU-T Q.23, Q.24;  
 Bellcore GR.506, GR.181; ITU-T G.168-2000, 2002; ETS\_300659\_1,2,3;  
 SIP, SIPS/TLS (RFCs: 2246, 3261, 3263, 3265, 3311, 3323, 3324, 3325, 3428, 3515, 3578, 3581, 3725, 3842, 3856, 3863, 3891, 3892, 4028, 4235)  
 SDP (RFC: 2327, 4568)  
 RTP/SRTP (RFCs: 1889, 1890, 2833, 3389, 3550, 3551, 3555, 3711, 4733, 3952),  
 Fax over IP (ITU-T: T4, T30, T38, V17, V21, V27 ter, V29)

### CCS Signaling

ITU-T: Q.921, Q.931 (DSS1), Q.951;  
 ETSI ETS300 102 (NET5); ECMA-143- (QSIG); SR-NWT-002120 (NI2)  
 NTT INS1500 for Japan  
 PRI switch types: DSS1, NET5, QSIG, 5ESS,  
 NTT INS1500, DMS 100

### CAS Signaling

CAS (MELCAS, ITU, ITU-T2, ITU-T: Q.400, Q.411, Q.421, Q.422, Q.440-Q.442, Q.450-Q.452, Q.454, Q.455, Q.457, Q.458, Q.460-Q.468, Q.470-Q.476  
 Types: Loop Start, Ground Start; E&M Delay Dial, E&M Wink Start, E&M Immediate Start, E&M FGD  
 R2 DTMF, R2 compelled, R2 non-compelled, R2 compelled with ANI, R2 non-compelled with ANI;  
 R2 Parameters for Brazil and Mexico etc.)  
 ANSI T1.403.02-199, T1.403.02a-2001

## Connectivity

### Physical interfaces

Premise connections:  
 2 short-loop FXS ports (RJ-11)  
 1 LAN Ethernet 10/100 BASE T port (RJ45)  
 1 Ethernet 10/100 BASE T port (RJ45)  
Uplink connections:  
 1 E1/T1 port to the Central Office (RJ45)  
 1 WAN Ethernet 10/100 BASE T (RJ45)

### Phones

IP phones:  
 32 SIP phones by default  
 Up to 160 additional SIP phones may be added with feature keys  
 All SIP phones can be connected both from LAN or WAN side  
 Plug-and-Play with select IP Phone manufacturers  
Analog phones:  
 2 Analog phones (or other analog devices) to connect via FXS ports

### Auto Attendants and Virtual Extensions

Auto Attendants:  
 Up to 400 standard and custom AA can be registered  
Virtual Extensions:  
 Up to 400 Virtual Extensions can be registered\*\*

\*\*The total number of extensions used for IP phones, Analog phones, AA and virtual extensions can not exceed 400 extensions.

### System Capacity

Up to 64 simultaneous VoIP calls with external parties  
 Unlimited station to station calling for IP phones  
 Unlimited station to station calling for analog phones  
 30/24 PSTN calls via E1/T1 with external parties

### External Storage

Compact Flash

## 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:  
 Intrusion Detection System  
 NAT (Network Address Translation)  
 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  
 Virtual LAN (VLAN/IEEE 802.1Q)  
 Mail client to send voice and fax messages as e-mail attachments (.wav and .tif) and system notifications  
 DNS (DYNDNS) support with third party NAT/Router with port forwarding and port translation.

## System

### Management

Multilingual WEB interface accessible from LAN and WAN (HTTP/HTTPS)  
 Password control  
 Remote diagnostics and software upgrade  
 Auto-provisioning  
 VoIP Carrier Wizard  
 Download/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 and Windows ActiveX interface)  
 Reset button with factory reset option  
 Custom Language Pack

### Diagnostics/Testing

LEDs: Busy, Info, Fault, LAN, WAN, Loop settings  
 Remote testing

### Billing and Statistic

Radius Client (RFCs: 2865, 2866), CDRs

## Environmental

### Physical Dimensions

Rack-mountable devices:  
 Measurements: 19" x 7.56" x 1.77"  
 (48.0 x 19.2 x 4.5 cm)  
 Weight: 2.47 lbs.(1090 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

### Regulatory Compliance

Telecom: TBR12/TBR13; AS/ACIF



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