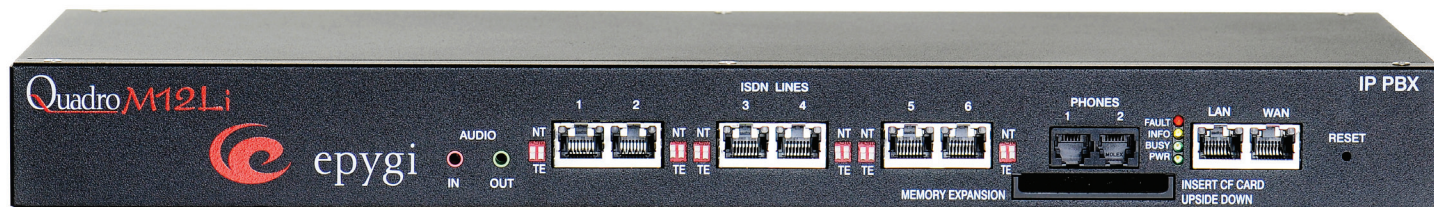# Quadro® M12Li

QuadroM12Li: SIP solution for ISDN BRI users

Many countries still primarily use ISDN BRI for their outside lines. However, the users of this type of service demand the new features and flexibility available on SIP-based IP PBX products. The Epygi QuadroM12Li allows the user to connect a traditional outside trunk while also utilizing SIP as an alternative route or main route. In addition, IP phones are supported for all users up to 96 IP users. Forty-five simultaneous calls can be supported via a SIP trunk provider and the six (6) ISDN BRI connects. The ISDN BRI ports support NT and TE selectable mode options and is intended for non-USA markets with ISDN BRI network providers. The QuadroM12Li is also equipped with two (2) FXS ports for analog devices and audio input/output jacks for music on hold and paging.

The QuadroM12Li includes many of the advanced features found in our enterprise-level products. These features include call recording, audio conferencing, Automatic Call Distribution (ACD) for call centers and the barge-in feature pack. Advanced features are purchasable items, so customers can choose what they pay for instead of being locked into a one-size-fits-all solution. An additional value included with the QuadroM12Li is support for HD audio, point-to-point video and other desktop productivity tools. To further simplify a customer's needs, this product includes an integrated firewall, DHCP server and router for LAN management.

SIP Flexibility, Traditional Stability

True SIP solution with ISDN BRI trunk ports for peace of mind. This product has a high density IP phone capacity utilizing traditional ISDN BRI or SIP trunks from an ITSP or remote location. Purpose built appliance with solid state components for added stability.

Enterprise Features for Smaller Offices

This solution is intended for small to medium offices that demand features and reliability that is normally reserved for very large enterprise customers. The QuadroM12Li can cost effectively provide that enterprise-grade product at a small business price.

What are Your VoIP BENEFITS?

- True SIP solution
- Enterprise-level features
- IP phone flexibility
- Video and HD audio

Telephony

Voice 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 Features:
- H.263 and H.264 Pass-through
- Point-to-Point video call

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
- Global speed dial
- Find me/Follow me
- 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
- Voice Mail profile
- Automatic Call Distribution
- Conference Server
- Call Recording
- Barge-in

Supported VoIP Data and Signaling Protocols
- 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 (RFCs: 1889, 1890, 2833, 3389, 3550, 3551, 3555, 3711, draft-ietf-avt-rfc-2833bis-05, draft-ietf-avt-rtp-ilbc-o5),
- Fax over IP (ITU-T: T4, T30, T38, V17, V21, V27 ter, V29)
- Voice Coding (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)
- ISDN (ITU-T: Q.921, Q.931 (DSS1), Q.951;ETSI ETS300 102 (NET5); NTT INS1500 for Japan)

POTS
- Loop start, FSK and DTMF Caller ID support

DTMF
- In band & out of band signaling support

Connectivity

Physical interfaces

Premise connections:
- 2 FXS short-loop FXS ports (RJ-11)
- 1 LAN Ethernet 10/100 BASE-T port (RJ-45)

Uplink connections:
- 1 WAN Ethernet 10/100 BASE-T (RJ45)

Uplink connections:
- 6 ISDN BRI ports to the Central Office or local PBX (RJ45), NT and TE modes supported

Audio port connections:
- Line-in/Line-out (Line-in Signal Level- 0,5 V RMS, Line-out Load Resistance - 600 Ohm to 10K Ohm)

Phones

IP phones:
- 32 SIP phones by default
- 64 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 manufactures

Analog phones:
- 2 Analog phones (or other analog devices) to connect via FXS ports

Auto Attendants and Virtual Extensions

Auto Attendants:
- Up to 200 standard and custom AA can be registered

Virtual Extensions:
- Up to 200 Virtual Extensions can be registered*

System Capacity
- Up to 45 simultaneous VoIP calls with external parties
- Unlimited station to station calling for IP phones
- Unlimited station to station calling for analog phones
- 12 ISDN calls with external parties

*The total number of extensions used for IP phones, Analog phones, AA and virtual extensions can not exceed 200 extensions.

External Storage
- Compact Flash

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
- Reset button with factory reset option

Custom Language Pack

Billing
Radius Client (RFCS: 2865, 2866)

Diagnostics/Testing
- LEDs: Busy, Info, Fault, LAN, WAN, Loop settings
- Remote testing

Internet

- STUN/NAT traversal (RFC 3489)
- IPSec VPN with 3DES and AES encryption in tunnel mode. 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.

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: TBR3 (ISDN)

Epygi Technologies, Ltd.
6900 Dallas Parkway, Suite 850
Plano, Texas 75024
Tel/Fax: (+1)972.692.1166
Web: www.epygi.com
E-mail: sales@epygi.com

please contact

Technical Data: QuadroM12Li Version 01

VoIPon   www.voipon.co.uk   sales@voipon.co.uk   Tel: +44 (0)1245 808195   Fax: +44 (0)1245 808299