New Rock Technologies VoIP Gateways

MX8 Multi-Purpose

VoIP Gateway Series

MX8 is one product of VoIP MX series by New Rock Technologies. MX8 is a perfect product for the telecom carriers to provide the residential telephony and fax services through the broadband networks such as FTTB, HFC, and ADSL. MX8 can be connected to the traditional PBXs to provide the voice solutions for enterprises, government, and schools. MX8 can also serve as a remote SIP terminal for IP-PBX solutions.

MX8 has four standard configurations: 4FXS ports, 8FXS ports, 4FXO ports, and 4FXS/FXO ports. MX8 shares the same software design as other New Rock's carrier class VoIP gateway products MX100-AG and MX100-TG. MX8 offers rich features, high quality voice, high compatibilities, and many other advantages. MX8 hardware uses the MPC852 from Motorola as its central processor and high performance C5509 DSP from Texas Instruments for voice and fax processing. MX8 powerful hardware platform provides sufficient power for IP packetization, voice compression and echo cancellation even when the voice traffic is at the peak.

Intelligent and rich in features
MX8 is based on the embedded Linux operating system. With its powerful hardware platform and flexible software design, MX8 can meet various voice application requirements. MX8 supports a variety of supplementary services which include Caller ID, Call Forward, Forward No Answer, Forward Busy Line, Call Waiting, and fashion ring-back, as well as many distinguishing features which include Routing Selection, RADIUS Billing Interface, Two Stage Dialing, Calling/Called Number Mapping, and Auto Dial.

Easy to operate and maintain
MX8 supports both web-based and text-based configuration setup. Users can remotely upgrade the MX8 software, change the configuration parameters, download log files, and collect gateway performance data by using the New Rock's Element Management System (EMS).

High Interoperability
MX8 has passed the interoperability tests with many softswitch and gateway suppliers worldwide.

Investment Protection
One main challenge of purchasing new IP-based voice equipments is how to protect your investment. MX8 not only offers the best cost-effectiveness but also supports the latest VoIP technologies and standards. Users can take advantage of the newest VoIP technologies by upgrading MX8 software.

- The ideal gateway for IP-PBX and residential VoIP application

- High voice quality

- Highly compact yet truly reliable

- User-friendly provision tools

- Featuring fashion ringing tones, auto dialing, dual phone numbers, RADIUS billing interface, and etc

- Advanced VoIP technologies including SIP/MGCP protocols, iLBC, and signaling/voice encrpytion

- In-house R&D

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System Specification

Key Features

Configuration	4 or 8 FXS analog ports; 4 FXO analog ports, mixed 4FXS/FXO analog ports
Voice Processing	Voice Codec: G.711, G.729A, G.723.1, GSM, iLBC Echo Cancellation: G.168; Tail Length: 8/16/32 milliseconds Dynamic Jitter buffer; Voice Activity Detector (VAD); and Comfort Noise Generator (CNG)
Calling Control	Called/Calling Number Mapping; Line Hunting
Fax Processing	T.30, T.38 Fax Relay
Billing	RADIUS Interface; Polarity Reverse
Gateway Configuration	Web Based User Interface; Text Based Configuration
Remote Provisioning	HTTP/WEB Mode; Remote Configuration Using New Rock EMS; Remote Software Upgrade, Alarm, Performance Data

Signaling

Off Hook Detection	FXS Loop Start, DDI (Hong Kong)
VoIP Protocol	SIP (RFC3261), MGCP (RFC2705)
DTMF	DTMF Digits Transmit: RFC2833, INFO (SIP)

Other Special Feature

FXO Bypass Line	A bypass FXO line is selected during a network failure or power outage
Auto Dial	DTMF mode
Dual Telephone Number	Each line can be configured with two numbers: a PSTN number and an extension number
Support Primary and Backup SoftSwitch	The gateway can be configured and controlled by multiple softswitches
Fashion Ring-back Tones	The gateway can download and store up to twenty fashion ring-back tones

Hardware

Maximum User Line Length	3000 Meters
Ringer Equivalence Number	5 for short loop (300 meters), 3 for long loop (1500 meters)
Ringing Voltage	60V RMS
FXO Interface Connector	RJ-11
Ethernet Interface Connector	RJ-45, 10/100 Base-T, 10/100 Auto Sensing
System Memory	32 MB
Flash Memory	8 MB
Central Processor	Motorola PowerPC 852
Digital Signal Processor	TI C5509
Input Voltage	5V/3A DC (A AC/DC convector is provided)
Power Consumption	15 Watt (Max)
Dimension (H x W x D)	195 x 118 x 24 millimeters
Weight	0.65 kg

Environment Requirement

Operation Humidity	10% to 90%, non-condensing
Operation Temperature	0 degree to 45 degree Celsius
Non Operation Temperature	110 degree to 60 degree Celsius

Other Rules and Regulations

Telecommunication Standard	FCC Part 15

MX Product Series

- MX100-AG VoIP Gateway: 24/48 FXS
- MX50 VoIP Gateway: 8/24 FXS/FXO
- MX100-TG Trunking Gateway: 1/4 E1/T1
- SIP Server
- Billing System
- Element Management System

About New Rock Technologies, Inc.

Newrock Technologies, Inc. is an innovative provider of IP-based voice communications equipments. Our customers range from service providers, enterprises, system integrators, to independent software vendors. We also have OEM partners worldwide. Headquartered in the Greater Boston area in the United States. We have expanded our Research and Development, marketing and sales, and manufacturing operations to Shanghai, China. We are fully founded by IDG Technology Venture Investment, Inc and other investors. New Rock Technologies offers a full line of VoIP products from voice access gateway, to digital trunking gateway, gateway management system, billing system, and application software platform.

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