VOICE/FAX OVER IP GATEWAY

MultiVOIP

MultiTech Systems

what's it do?

MultiVOIP is ideal for multi-location businesses looking to reduce toll charges between frequently called sites. MultiVOIP is a voice over IP gateway that integrates seamlessly into your data network and operates alongside existing PBXs, or other phone equipment to simply extend voice capabilities to remote locations. It is designed to help you maximize investments you've already made in your data and voice network infrastructure.

Toll bypass long distance calling

For multi-location businesses, inter-office calling typically represents 25–40% of a company's total long distance bill. To bypass these charges, each office installs and configures a MultiVOIP on their network and connects it to their existing phone equipment to place calls, send faxes, or make modem connections to the other offices on the VOIP network.

Off-net calling

Telecommuters or customers off the IP network can make free long distance calls by dialing into a local MultiVOIP and placing toll-free calls to any location on the VOIP network. You can even have a MultiVOIP at a remote site dial a local phone number for a free person-to-person long distance call.

Off-premise voice extensions

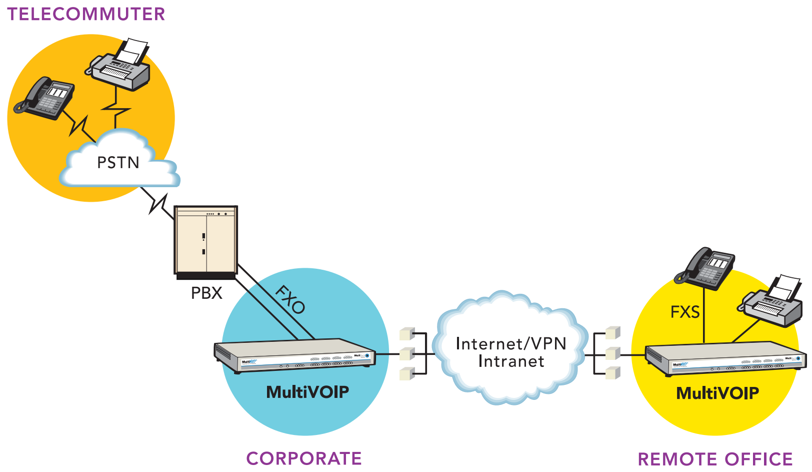
MultiVOIP extends the reach of a company's PBX into remote office/SOHO locations without installing another PBX. Now, anyone can place calls to the remote office by simply dialing an extension number.

Wireless voice extensions

To extend a PBX to a building across the street, utilize a wireless bridge to connect the two networks. Now, you have voice and data connectivity without having to lay cables or pay monthly charges for dedicated lines.

Replace expensive tie lines

A corporation that utilizes tie lines to connect branch office PBXs to the corporate PBX can now use the company's IP-based Wide Area Network to complete the call.



why MultiVOIP?

TOLL-FREE VOICE/FAX COMMUNICATIONS
PSTN VOICE QUALITY
CONNECTS DIRECTLY TO PHONES, FAX OR PBX
TURNKEY SOLUTION

Save thousands of dollars each month

MultiVOIP can save your company substantial amounts in long distance charges. Even if your company uses one of the most inexpensive calling plans, a MultiVOIP network can quickly return your investment and begin paying you back.

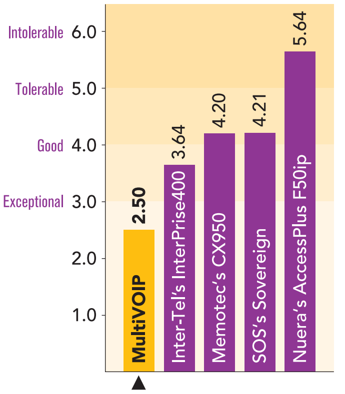
LOCATIONS	MULTIVOIP COST	LONG DISTANCE COST/MINUTE	MINUTES/ LINE/DAY	MULTIVOIP PAYBACK
Central Site/ California	$1799 MVP410 (4 lines)	$0.04	90	125 days
Remote Site/ Chicago	$999 MVP210 (2 lines)	$0.06	60	139 days
Partner Site/ United Kingdom	$999 MVP210 (2 lines)	$0.08	60	104 days

Easy integration

With MultiVOIP, you avoid the hassle and expense of replacing your existing routers, WAN connections or phone systems required by other VOIP solutions. MultiVOIP simply plugs into your Ethernet network. Neither your phone service or network is placed at risk. Minimum requirements:

- Ethernet network
- WAN connection
- IP addresses

PSQM SCORES:
The lower the better.



An independent product review conducted by Internet Telephony *magazine (March 1999).*

Award-winning voice quality

With MultiVOIP, you'll experience consistent toll-quality voice connections. Using the Perceptual Speech Quality Measurement (PSQM), Internet Telephony magazine found that MultiVOIP delivered exceptional voice quality. In fact, MultiVOIP outranked the competition.

Interoperability

MultiVOIP utilizes the H.323 and SIP protocols to provide complete interoperability with other Internet telephony solutions. The inbound IP call protocol is automatically detected and the voice channel is dynamically configured to match. The outbound IP call protocol is configured with the phone number allowing you the flexibility to call H.323 or SIP devices from the same port. In addition, MultiVOIP also supports T.38 real-time fax relay for interoperability among other VOIP equipment.

PSTN fail-over

PSTN fail-over allows MultiVOIP to automatically route calls over the PSTN network when the IP network is congested or completely down. This feature heightens reliability and augments QoS when conditions threaten to undermine voice quality. Utilizing user definable controls, MultiVOIP continually checks if the LAN/WAN is threatened by packet loss or latency, or to see if the network is completely down. If it detects a problem, MultiVOIP switches to “survivability mode” transparently routing all calls over PSTN lines connected to the MultiVOIP gateway. MultiVOIP continues to monitor the connection and automatically switches back to the LAN/WAN once the conditions improve.

Advanced speech technologies

MultiVOIP supports the Differentiated Services (DiffServ) Quality of Service (QoS) protocol which sets priorities for voice and fax traffic and allows transparent delivery. DiffServ helps move time-sensitive voice traffic across even low-bandwidth WAN connections, like 56K and ISDN, with the priority and quality required by voice. Other features such as adaptive echo cancellation, forward error correction, bad frame interpolation, tunable latency and dynamic jitter buffers, further enhance voice quality.

Complete support for multiple telephony interfaces

For maximum investment protection, the MultiVOIP two, four and eight-port models accommodate changing communication needs by providing a programmable FXS/FXO and an E&M interface for each port. This allows MultiVOIP to connect directly to a phone, fax machine, key phone system or PBX. It automatically detects whether the incoming call is a voice or fax call. The single port MultiVOIP supports FXS and FXO interfaces, while the digital MultiVOIP connects directly to a PBX or PSTN line via BRI, T1, E1 or PRI.

Bandwidth management

Bandwidth is used only when someone is speaking. The silence suppression/ Voice Activity Detection (VAD) feature is an option that frees unused call bandwidth for data traffic. This is significant, since callers are usually silent for 60 percent of a call. When using silence suppression, MultiVOIP also offers Comfort Noise Generation (CNG) at the receiving end so the user knows the line has not dropped. In addition, MultiVOIP supports voice compression standards like G.729 (8:1) and G.723 (10:1). These standards help minimize the bandwidth required for voice. G.723, for instance, is the maximum compression rate and requires only 5.3K bps (plus an added 7-8K bps for IP overhead). Even at maximum compression, your VOIP solution will still provide toll-quality voice.

No user training required

MultiVOIP provides single stage dialing by utilizing a Uniform Dialing Plan that is consistent with the E.164 (PSTN) standard numbering plan. This includes automatic appending and stripping of digits to dialed numbers to ensure that users will not require additional training to make VOIP calls. In fact, placing calls with MultiVOIP is like using your existing phone system.

Management

MultiVOIP is easily managed using a Windows-based software application, web browser, or SNMP. Multi-Tech also includes its own SNMP management software called MultiVOIPManager which provides central site configuration, management and call monitoring for all MultiVOIP gateways on the network. It utilizes a Windows interface that makes it easy to view events like usage tracking, live use reporting, call history, and voice quality statistics. In addition, MultiVOIPManager eases administration by automatically e-mailing call logs based on volume or time.

Supplementary services

MultiVOIP supports H.450 supplementary services to provide for call transfer, call forwarding, call hold, call waiting, and name identification. It also supports Q.SIG, an inter-PBX signaling protocol, for networking PBX supplementary services in a multi- or uni-vendor environment. In addition, MultiVOIP supports SIP extensions providing call forward, call transfer, call hold and call waiting capabilities.

Single-port protocol

The MultiVOIP family now includes models with SPP (single-port protocol), a non-standard protocol that has been developed by Multi-Tech. This new feature is ideal for those situations when a firewall is used in conjunction with MultiVOIP or when the use of dynamic IP address assignment is necessary. Using SPP allows your voice traffic to pass through your firewall by opening a single UDP port.

Avaya™ small office media gateway solution

Avaya and Multi-Tech have partnered together to provide an affordable small office media gateway solution that delivers the features of Avaya's Communication Manager software to small branch offices of large corporations. MultiVOIP also renders local office survivability, in the case of a LAN or WAN failure, by providing local, reliable PSTN trunking.

AVAYA DeveloperConnection Program

2003 Member of the Year

2003 Best of Show

Kudos!

Internet Telephony **Best of Show**

Teleconnect **Product of the Year**

Teleconnect **Editor's Choice**

Internet World **Best of Show**

Computer Reseller News
Test Center Recommended

Government Computer News
Editor's Choice

You be the judge.

Call our toll-free demo 1-877-TRYVOIP and hear for yourself how clear the connection can be!

who's Multi-Tech?

Success is about communication. Multi-Tech is about making it easier. We create better ways of sharing information—remotely and over the Internet. Multi-Tech solutions set the standard for efficient and effective communication in an information-hungry age. Our products are known for their reliability, performance and flexibility. With Internet access, remote access and telephony products, Multi-Tech is creating a world where technically, everything's possible.

The Multi-Tech MultiVOIP provides toll-free voice and fax communications over the Internet or Intranet. By integrating voice and fax into your existing data network, you can realize substantial savings on inter-office long distance toll charges. The MultiVOIP family is available in analog and digital models ranging from one to 60 ports. MultiVOIP products connect directly to phones, fax machines, modems, key systems, or a PBX to provide real-time, toll-quality voice connections to any office on your VOIP network.

ANALOG MODELS

NUMBER OF PORTS:	1, 2, 4, or 8
PORT INTERFACE:	FXS, FXO & E&M support on each port†
FXS INTERFACE:	KTS, telephone set, or fax; ground & loop start
FXO INTERFACE:	PBX station, CO line; 2-wire, loop start
E&M INTERFACE:	PBX E&M trunk; 2- or 4-wire
E&M SIGNAL TYPES:	I through V
DIALING:	DTMF or pulse; RFC 2833 (DTMF out-of-band)
CONNECTORS:	1 RJ-48 (E&M); 1 RJ-11 (programmable FXS or FXO) per port

DIGITAL MODELS

NUMBER OF TRUNKS:	1 or 2 (T1/PRI-24 or 48 Channels, E1/PRI-30 or 60 Channels) 2 or 4 (4 or 8 BRI Channels)
SIGNALING:	T1-CAS/Robbed bit signaling Clear Channel, Fractional; E1-MFC/R2; PRI-National ISDN 2, 4ESS, 5ESS, DMS100, Austel ISDN, ETSI, France Telcom, HK Telcom, NTT and KDD Japan, Korean Operator
LINE CODE:	T1-AMI or B8ZS; E1-AMI or HDB3; BRI-PSEUDOTERNARY (4-wire ST)
FRAME FORMAT:	T1-ESF or D4 (SF); E1-16 Frame plus CRC
CONNECTORS:	1, 2 or 4 RJ-48

LAN PORT

INTERFACE:	10/100BaseT
FORMAT:	Ethernet/Ethernet II or SNAP

COMMAND PORT

1-, 2-PORT AND DIGITAL INTERFACE:	RS-232C/D; RJ-45 (RJ-45 to DB9 cable included)
4- & 8-PORT INTERFACE:	RS-232C/D; DB25
SPEED & FORMAT:	115.2K bps asynchronous

† MVP130 supports FXS and FXO.

PROTOCOLS

H.323 V4, SIP, H.450.2-H.450.4, H.450.6 and H.450.8, RTP, RTCP, SMTP, Q.931, Q.Sig, T.38 and Group 3 fax relay, modem relay, DTMF out-of-band (RFC 2833)

BANDWIDTH MANAGEMENT

G.711, G.723, G.726, G.727, G.729 and proprietary voice compression, silence suppression, VAD, CNG

VOICE QUALITY

DiffServ, G.165, G.168, adaptive echo cancellation, forward error correction, bad frame interpolation, tunable latency, dynamic jitter buffer

MANAGEMENT

Web browser, Windows, SNMP agent, MultiVOIPManager, Syslog, flash upgradeable

POWER

VOLTAGE & FREQUENCY: 115v/240v AC, 47-60 Hz

POWER CONSUMPTION: 1-PORT - 4.5W; 2-PORT - 19W; 4- & 8-PORT - 46W; T1/E1 models - 27W; BRI models - 18W

WORLD HEADQUARTERS

TEL: (763) 785-3500
(800) 328-9717
www.multitech.com

EMEA HEADQUARTERS – UK

MULTI-TECH SYSTEMS (EMEA)
TEL: +(44) 118 959 7774

SALES OFFICE – FRANCE

MULTI-TECH SYSTEMS (EMEA)
TEL: +(33) 01-64 61 09 81

2/04 86002030

DIMENSIONS

1-PORT MODEL:
4.3"w x 1.0"h x 5.6"d; 8 oz
10.8 cm x 2.5 cm x 14.2 cm; .23 kg

2-PORT MODELS:
6.2"w x 1.4"h x 9.0"d; 2 lbs
15.8 cm x 3.6 cm x 22.9 cm; 0.92 kg

4- & 8-PORT MODELS:
17.4"w x 1.75"h x 8.5"d; 7.7 lbs
44.2 cm x 4.5 cm x 21.6 cm; 3.5 kg

DIGITAL MODELS:
17.4"w x 1.75"h x 8.75"d; 7.5 lbs
44.2 cm x 4.5 cm x 22.2 cm; 3.4 kg

CERTIFICATION

EMC: FCC Part 15 Class A, EN55022 EN55024, EN61000-3-2, EN61000-3-3

SAFETY: CE, UL 60950, EN60950, cUL, TS001

TELCOM: FCC Part 68, CS-03, TBR21

ORDERING INFORMATION

PRODUCT	DESCRIPTION	REGION
MVP130	1-Port FXS/FXO VOIP Gateway	Global*
MVP210	2-Port VOIP Gateway	Global*
MVP410	4-Port VOIP Gateway	Global*
MVP410ST	4-channel BRI VOIP Gateway	EURO/ROW
MVP810	8-Port VOIP Gateway	Global*
MVP810ST	8-channel BRI VOIP Gateway	EURO/ROW
MVP2410	24-Port T1/PRI VOIP Gateway	US/CAN
MVP3010	30-Port E1/PRI VOIP Gateway	EURO/ROW
MVP428	4-Port Expansion Card	Global*
MVP24-48	24-Port T1/PRI Expansion Card	US/CAN
MVP30-60	30-Port E1/PRI Expansion Card	EURO/ROW

* Specify country when ordering.

MultiTech® Systems