

Nexus *VoIP*<sup>TM</sup>  
VOICE/FAX  
IP GATEWAY

ASCE  
NETWORKS<sup>®</sup>  
SUPERIOR IN IP TECHNOLOGY.

# What's it do?

NexusVOIP is specifically targeted at businesses looking to reduce toll charges between frequently called sites. NexusVOIP is a point-to-point 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.

## Office-to-office communication

A NexusVOIP network can be as small as two offices or as large as hundreds of offices. Each office installs and configures a NexusVOIP on their network and connects it to their existing phone equipment to begin placing calls or sending faxes to the other offices on the VOIP network.

## Faxing

The NexusVOIP supports 14.4Kbps real-time faxing over an IP network. For businesses with a heavy fax load between offices, reducing faxing costs may be the primary use for the NexusVOIP network.

## Off-net calling

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

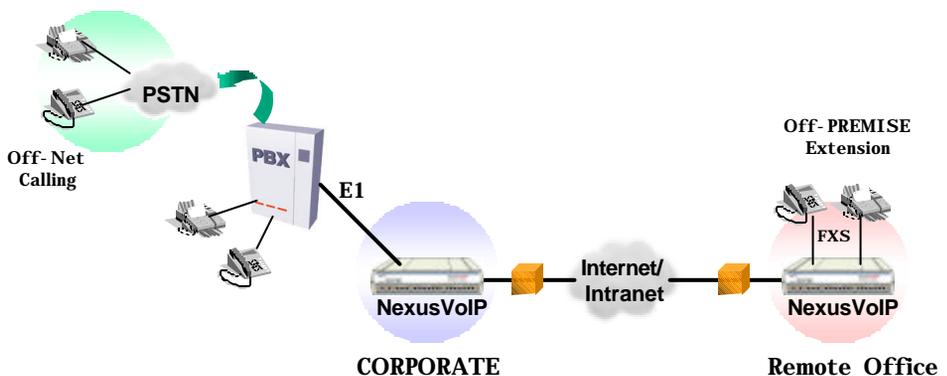
## Create off-premise extensions

Extend the reach of your PBX into home office locations. Simply connect a NexusVOIP gateway to the PBX at the corporate office, and another NexusVOIP gateway at the remote office. Now, anyone can place calls to the remote office by simply dialing an extension number. To extend your 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 paying 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.

### TELECOMMUTER



# Why NexusVOIP?

**TOLL-FREE VOICE/FAX COMMUNICATIONS**

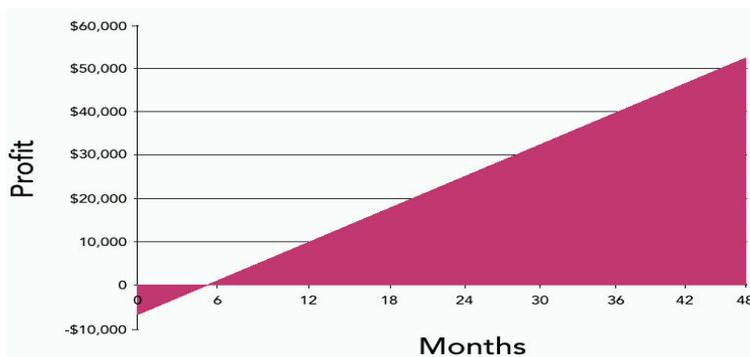
**PSTN VOICE QUALITY**

**CONNECTS DIRECTLY TO PHONES, FAX OR PBX**

**TURNKEY SOLUTION**

## Save thousands of dollars each month

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



## Easy integration

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

- Ethernet network
- WAN connection
- One static IP address at headquarters

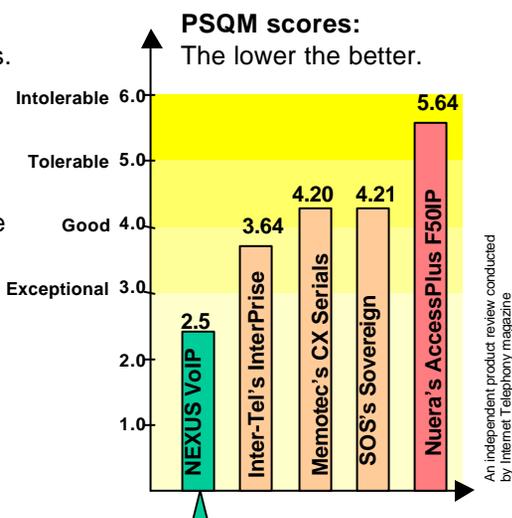
## Award-winning voice quality

With NexusVOIP, you'll experience consistent toll-quality voice connections.

Using the Perceptual Speech Quality Measurement (PSQM) Internet Telephony magazine found that NexusVOIP delivered exceptional voice quality. In fact, NexusVOIP outranked the competition.

## Interoperability

NexusVOIP utilizes the H.323 protocol providing complete interoperability among other H.323 telephony solutions.



## Advanced speech technologies

NexusVOIP supports the Differentiated Services (DiffServ) Quality of Service (QoS) protocol which sets priorities for voice and fax traffic and allowstransparent 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 NexusVOIP two, four and eight-port models accommodate changing communication needs by providing an FXS, FXO and E&M interface for each port. With the right interface, the NexusVOIP connects directly to phones, fax machines, key phone systems or a PBX. With this range of support, you can connect a phone directly to a port today, and tomorrow connect your PBX trunk. A single port NexusVOIP supports either FXS or FXO interfaces depending on model while T1/E1models connect directly to a PBX or PSTN line.



## 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, NexusVOIP also offers Comfort Noise Generation (CNG) at the receiving end so the user knows the line has not dropped. In addition, NexusVOIP 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 5.3Kbps (plus an added 7.7Kbps for IP overhead). Even at maximum compression, your VOIP solution will still provide toll-quality voice.

## Uniform Dialing Plan

NexusVOIP utilizes Asce Networks' Uniform Dialing Plan (MUDP), with a centralized database, that is consistent with the E.164 (PSTN) standard numbering plan. This allows for single stage dialing and ensures that users will not require additional training to make VOIP calls. The centralized database allows the phone books of all VOIP gateways on the network to be configured from a single predefined gateway.

## Management

NexusVOIP is easily managed locally or remotely by the central office with a web browser\*, Windows 95/98/Me/2000, Windows NT software, tftp, Telnet or SNMP. Asce Networks also includes its own SNMP management software called NexusVOIP Manager which provides central site configuration, management and call monitoring for all NexusVOIP 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. Call detail records may also be transferred to third-party billing software.

\* not available on digital models.

## No user training

Placing calls with the NexusVOIP is like using your existing phone system. No end-user training is required. Users can begin making calls immediately with a published VOIP phone list and simple calling procedures.

## Security

Your NexusVOIP network uses the same security as your data network. Therefore, if you have strong data security, your voice security will be strong as well. NexusVOIP also allows administrators to place it behind a compliant firewall to further enhance security. In addition, NexusVOIP provides interoperability with Virtual Private Network (VPN) products. And, when using NexusVOIP in proprietary mode, proprietary protocols make it difficult for hackers to access the VOIP network.

## Access voice mail

Dual Tone Multifrequency (DTMF) support allows users to access their voice mail over the VOIP network.

## Optional H.323 IP Telephony Gatekeeper

The NexusVOIP Gatekeeper is a complementary product to the NexusVOIP Voice over IP gateway. The turnkey hardware and software solution provides corporate enterprise network managers and Intranet managers the power to define and control how H.323 voice traffic is managed over IP networks. With the NexusVOIP Gatekeeper, network managers have the ability to configure, monitor and manage the activity of registered network end points. In addition, managers can set policies and control network resources, such as bandwidth usage, to ensure optimal implementation. For more information on the NexusVOIP Gatekeeper, go to: [www.ascenetworks.com/products](http://www.ascenetworks.com/products).



**The Asce Networks' NexusVoIP 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 NexusVoIP family is available in one, two, four, eight and 24/30 port models. All NexusVoIP products connect directly to phones, fax machines, 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:	FX0, FXS & E&M Support on each port *
FXS Interface:	KTS, telephone set, or fax; ground & loop start
FX0 Interface:	PBX station; CO line, loop start, 2 - wire
E&M Interface:	PBX E&M trunk; 2- or 4- wire
E&M Signaling Type:	, / , or
Signaling:	AC is DTMF; DC is pulsed
Connectors:	1 RJ-48(E&M); 2 RJ-11 (FX0&FXS) per port

## Digital Models

Number of Trunks:	1(T1 - 24 Channels, E1 - 30 Channels)
Port Interface:	T1 - CAS/Robbed bit signaling; E&M wink start, Immediate Start, delay start, loop start and ground start E1 - MFC/R2
Line Code:	T1 - AMI or B8Zs E1 - AMI or HDB3
Frame Format:	T1 - ESF or D4 (SF) E1 - 16 frame plus CRC
Connector:	1- RJ48

## LAN Port

Interface:	10BaseT
Format:	Ethernet/Ethernet 或 SNAP

## Command Port

1-, 2- Port and Digital Interface:	RS-232C/D, RJ-45 (RJ-45 to B9 cable include )
4- & 8- Port Interface:	RS-232C/D; DB25
Speed & Format:	19.2K bps Asynchronous

## PROTOCOLS

DiffServ, H.323  
RTP, RTCP Q.931, Group 3 fax relay.

## BANDWIDTH MANAGEMENT

G.729, G.723, G.726, G.727  
Silence suppression, VAD, CNG

## VOICE QUALITY

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

## MANAGEMENT

Web browser\*, Windows 95/98/2000  
Windows NT, TFTP  
Telnet or SNMP management  
Flash upgradeable

## APPROVALS

FCC Part 15 & 68: UL 1950  
CTR-21 IC CE Mark

## POWER

Voltage & Frequency: 115v/240v AC, 50/60 Hz  
Power Consumption: 1 - Port: 4.5W; 2 - Port:  
18W; 4- & 8 - Port: 30W; Digital models: 16W

## DIMENSIONS

1 - Port Model:  
4.3"W X 1.0"H X 5.6"D: 8 oz  
10.8cm X 2.5cm X 14.2cm: 0.23kg  
2- Port and Digital Model:  
6.2"W X 1.4"H X 9.0"D: 2 lbs  
15.8cm X 3.6cm X 22.9cm: 0.92kg  
4 - & 8- Port Model:  
17.4"W X 3.8"H X 8"D: 7.4 lbs  
44.2cm X 9.5cm X 20.3cm: 3.4kg

## ORDERING INFORMATION

ANALOG	DESCRIPTION	REGION
Nexus800	1 - Port VoIP FXS	Global
Nexus801	1 - Port VoIP FX0	Global
Nexus820	2 - Port VoIP Gateway	Global
Nexus840	4 - Port VoIP Gateway	Global
Nexus880	8 - Port VoIP Gateway	Global
Nexus4-8	4 - Port Expansion Card	Global
DIGITAL	DESCRIPTION	REGION
Nexus1000	24 - Port T1 VoIP Gateway	US/CAN
Nexus1100	30 - Port E1 VoIP Gateway	EURO/ROW

**ASCE**  
**NETWORKS**®  
SUPERIOR IN IP TECHNOLOGY.

All specifications are subject to change without notice.  
Nexus, and Asce Networks are registered  
trademarks of Asce Networks, Inc.  
©Copyright 2000 Asce Networks, Inc. All Rights Reserved.