



## 3Com® NBX® 100 IP Telephony Solution

*Brochure*



# 3Com® NBX® IP Telephony: Changing the Way Business Speaks

## **Robust 3Com NBX Hardware**

- **System Capacity**

*Scalable to support up to 200 devices per location (including up to 100 PSTN lines)*

- **Voice Network Connectivity**

*Loop start analog lines with caller ID capability; T1, T1/PRI, E1/PRI, ISDN BRI-ST, and Q.SIG/PRI*

- **Traditional Telephones**

*Analog Terminal Cards for multiple traditional (2500) phones or G3 fax machine; Legacy Link digital gateways for reuse of existing Nortel handsets*

- **3Com IP Worktops**

*Featuring the 3Com 3100 Entry Phone, 3101 Basic Phone, 3101 Basic Phone with Speaker, 3102 Business Phone, 3103 Manager Phone, 3105 Attendant Console, and 3106C and 3107C Cordless IP Phones*

Thirty years ago, researcher Robert Metcalfe had a vision that there was a more cost-effective method of connecting computers so that people could better share information and be more productive. His pioneering work revolutionized computer networking—creating both Ethernet technology and a global, industry-leading networking company, 3Com Corporation.

Building on this initial innovation in data networking and true to its founders' focus on **Computers, Communication, and Compatibility**, 3Com became an early supporter of converged communications. In 1998, the company developed the NBX® 100 system, the first practical IP telephony solution that would operate reliably across data networks. Now in its fifth generation, this platform is the foundation of the 3Com® NBX 100 IP Telephony Solution.

The 3Com NBX and VCX™ platforms comprise the IP Telephony module of the 3Com Convergence Applications Suite—the most recent proof of 3Com's commitment to high-value solutions. The suite allows businesses to choose

the communications solutions that best meet their needs. Its modular design lets them immediately gain the benefits of convergence: lowered costs, increased productivity, and improved customer interactions.

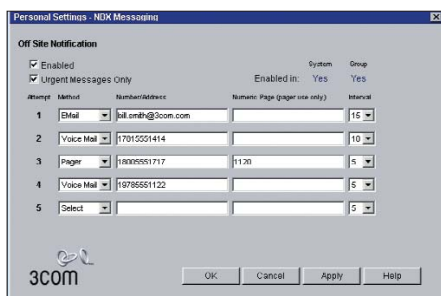
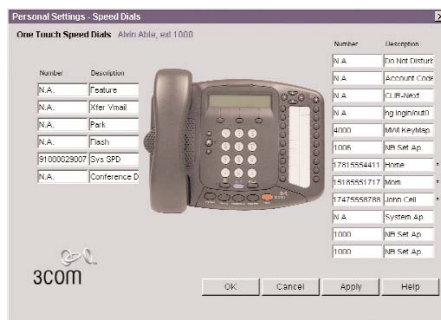
With over 20,000 IP telephony systems installed worldwide, over 1,200 patents, approximately 1,900 employees, and operations in over 45 countries, 3Com is the market leader in IP telephony for small to medium enterprises. Because its IP telephony solutions deliver enhanced capabilities and sophisticated applications that cost less and do more than traditional phone systems, businesses around the world choose 3Com voice and data systems for small offices or as part of a larger virtual campus converged network.

The full-featured and exceptionally affordable NBX 100 system joins the award-winning 3Com portfolio, further demonstrating how the company applies technological innovation to communication challenges, changing the way business speaks.



Interface cards for the 3Com NBX 100 Communications System offer a number of connectivity choices.

# NBX 100—The Perfect Choice for Small and Medium Businesses



NBX NetSet gives users control over frequently needed capabilities, such as customizing speed dials or creating off-site notification for new or urgent voicemail messages.

Supported by the latest 3Com NBX software, Release 5.0, the 3Com NBX 100 platform offers a wealth of capabilities and power to meet and exceed the networking expectations of small and medium businesses. It includes call processing and optional automated attendant and voice mail, analog FXO and FXS ports, as well as a suite of NBX capabilities such as Automatic Call Distribution (ACD), graphical Call Detail Recording (CDR), voicemail integration with e-mail, up to nine separate paging zones, and the option of creating a personal operator for customized call coverage.

## Reliability You Can Count On

The NBX 100 system isolates telephone functionality from the everyday issues associated with desktop PCs and servers. Its real-time operating system, VxWorks—so dependable it is also used in heart pace-makers—and its high-availability hardware deliver reliability that can be counted on.

The latest digital signal processor (DSP) technology powers IP phones, ensuring that every device is capable of maximum performance. The IP phones share the data network with PCs and servers, but don't use the PCs or servers for voice traffic. It's like operating two cars on the same multi-lane highway—even if the PC stalls, the voice traffic is able to pass by unimpeded.

## Easy to Install, Use, and Manage

3Com understands that most telephone systems seem like a mystery to everyday users and often to the staff assigned to administer them. The result is often lost productivity and lost opportunity.

An incredibly intuitive administrative portal, 3Com NBX NetSet™, lets individual users and administrators fully customize the NBX 100 solution. This password-protected, browser-based utility features pull-down menu choices tailored to each facet of the system. Time-saving tools simplify creation of departmental profiles for managing telephone users, further easing system administration.

3Com voice communications technology completely eliminates the high costs and high anxiety normally associated with moving an office telephone. Anyone who has ever had to wait days for an expensive service call merely to get a telephone moved will truly appreciate the self-locating capabilities of 3Com IP phones. Simply unplug a phone from one location and plug it into another network jack. The user's extension number, voice mail, and personal settings move with the phone. It's that simple.



# Choices for Today, Flexibility for the Future

*"We were very confident choosing a 3Com solution as our experience of the company has been universally and consistently excellent. We've found that 3Com technology always 'overachieves,' delivering far more than was ever promised."*

**Keith Clayton,**  
IT Activities,  
Liskeard School and Community College,  
Cornwall, U.K.

*"The NBX system's reliability and ease of management are a major time and money saver for us. Our loan officers and processors are more productive, our service is better than ever, and our customers couldn't be happier. The 3Com voice solution is one of the most valuable investment decisions I've made."*

**Tim Ward,**  
President,  
Castlerock Lending,  
Newport Beach, CA, U.S.

## Open Architecture

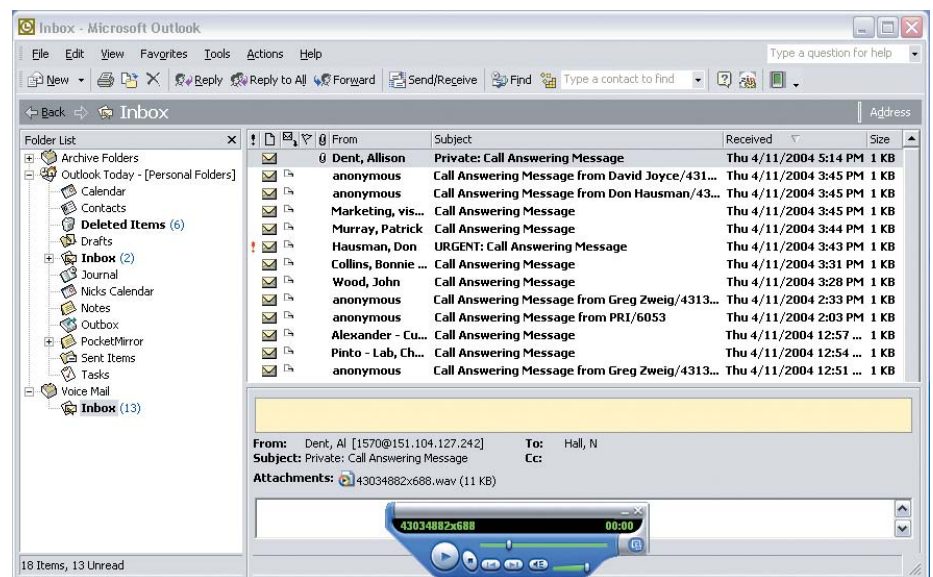
NBX solutions use standards-based interfaces to assure easy integration of new applications. From a foundation of IEEE 802.3 Ethernet that lets users plug 3Com IP phones into millions of Ethernet ports around the world, customers can easily grow their communications network by adding industry-standard switches and routers, expanding capabilities and size to meet evolving needs. 3Com NBX systems provide application flexibility with support for standards such as:

- IMAP4—enables viewing and listening to voice mail with standard e-mail clients (e.g., Microsoft Outlook, Eudora).
- TAPI—lets users dial numbers and manage active calls from a computer screen with built-in computer telephony integration (CTI).
- TAPI/WAV—supports seamless connections to call center and unified messaging applications.

3Com Voice Solution Providers offer numerous out-of-the-box software as well as applications for custom business requirements. Actively supported by 3Com, a host of third-party developers work to enhance the capabilities of NBX systems.

## Upgradeable Software

Traditional PBX products often require customers to pay extra for capacity that may never be needed or for capabilities designed originally for large systems. The NBX 100 solution offers pay-as-you-grow scalability, economical for twenty users and powerful enough for more than a thousand users per site. Business needs inevitably change, so this 3Com solution is software upgradeable for easy expansion and maximum flexibility. New functionality, even documentation, can be available in minutes and automatically distributed to every system device and user. When business needs dictate additional capabilities, they can be added simply with software licenses.



Voice mail can be viewed and managed from PC monitors with standard IMAP4-compatible clients.

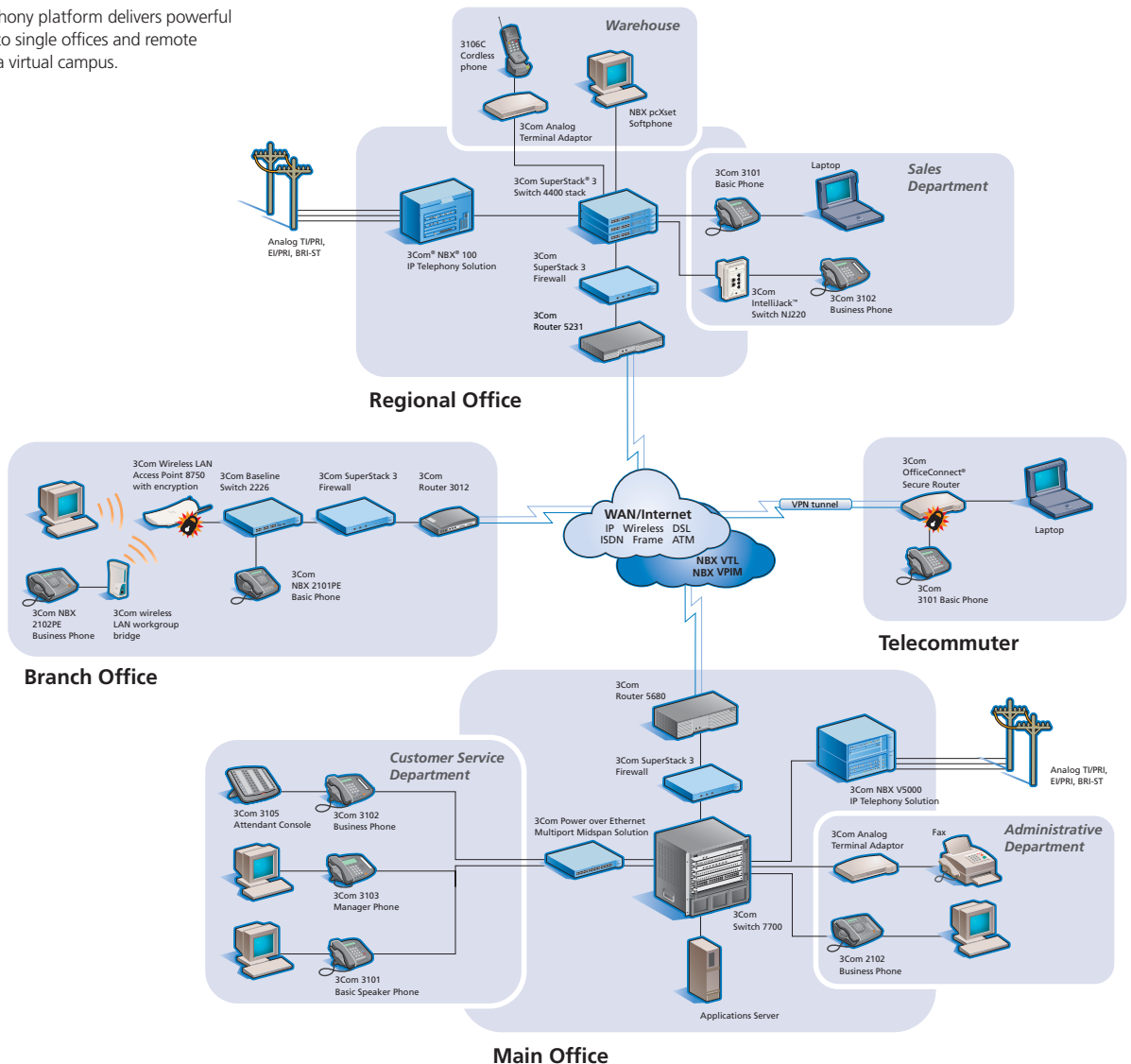
# Optimized Communications Among Work Locations

## Money-Saving Solutions

Many organizations are challenged by the need for voice communications among staff and resources that are spread across multiple locations. These requirements can be as basic as connecting offices across the street, or as sophisticated as linking multiple campuses across the world. 3Com offers affordable and scalable solutions for seamless telephony services among dispersed offices.

NBX systems let organizations dramatically reduce intra-company long-distance phone charges, while improving customer service. By leveraging a data network that today may only move e-mail and files, users can affordably call between sites, transfer callers, and send voice-mail messages to one or more users located in multiple offices. These capabilities yield faster, easier, more effective communications and customer service.

The 3Com NBX IP telephony platform delivers powerful voice communications to single offices and remote offices that are part of a virtual campus.



## NBX Release 5.0 Software Advantages

**Zone Paging:** To eliminate the need for external software/hardware for zone paging, administrators can customize their NBX 100 system by creating up to nine paging zones. They can disable paging on individual phones and define zone membership so that only members can page their own group and only members can view the other people in their zone.

**Personal Operator:** Another advanced feature of the NBX 100 solution, users can choose a phone number to be their call coverage rather than relying on a default system operator. Callers can be given the option of contacting a live person in the event they are transferred to voice mail. NBX NetSet lets users easily define the number as an internal extension or external phone number, such as a cell phone.

**Automatic Call Distribution (ACD):** With ACD, businesses can efficiently track incoming calls to operators, an 800 number used for sales, or a service department that needs to evenly distribute incoming calls to agents. The standard ACD package includes two agents, expandable up to a total of 199 agents and 100 supervisors. Call monitor/whisper/barge-in capabilities allow supervisors to assist agents as needed; historical reporting can help optimize call center staffing during peak hours.

## Array of Advanced Applications

The built-in functionality of 3Com NBX solutions is impressive, yet there are always organizations that need even more capabilities. 3Com offers solutions for further customization, created both from within 3Com and by some of the best third-party application developers in the world. If an organization requires world-class conference room phones, powerful call centers, the ability to record and monitor calls, or even voice-activated dialing services, 3Com Voice Solution Providers can meet its needs. 3Com's support for standard Application Protocol Interfaces (APIs) makes the NBX platform compelling to developers, ensuring that users can easily reap the benefits of innovation. Solutions are rigorously tested to assure complete integration and superior performance.

## VoIP and Toll By-pass Applications

The NBX 100 solution provides low-cost, high quality Voice over IP (VoIP) using a WAN, VPN, or the Internet. By connecting multiple offices with NBX Virtual Tie Lines, the least expensive long-distance option is used, with calls able to "hop on" the company WAN and "hop off" at the location that offers the most savings.

Multisite connectivity options include traditional analog, T1/PRI/QSIG, or NBX ConneXtions H.323 gateway software.

## Multisite Voice Mail Exchange

Multisite Voice Mail Exchange allows the composition and distribution of voice mails to co-workers at other sites where multiple voice messaging systems are used. It also enables communication directly with third-party VPIM-compliant messaging systems.

With the NBX 100 solution, employee and customer satisfaction can be increased with transparent multisite communications. Support for uniform dialing plans makes reaching another office as simple as calling a co-worker across the aisle.

## Advanced Voice Services for Remote Staff and Telecommuters

For years remote workers have enjoyed seamless access to corporate e-mail, but access to the corporate phone system was nearly impossible. 3Com solutions have practically made the term "remote" worker a thing of the past. A broadband connection, router, and a 3Com IP phone allow off-site workers to make and receive calls as if they were in the office. Customers and co-workers can reach formerly "remote" workers with ease. And telecommuters can count on NBX voice mail to professionally answer calls as if they were in the main office.

## Voice Messaging Features

A powerful voice messaging system built into the NBX 100 system ensures that important communications are never missed. Listen over the phone or use a PC with either a browser or a standard IMAP4-compatible e-mail client to hear and manage voicemail messages. Voice mails are saved as .WAV file attachments in the e-mail client and can be detached, shared, and stored indefinitely. Save messages to record transactions or important information—a perfect solution for law offices and financial or customer service organizations. Dozens of built-in voice messaging options include:

- **System Capacity.** Base system supports four automated attendant (AA) ports and 30 minutes of voicemail (VM) storage, scalable up to 12 AA ports and 80 hours VM storage. Software-based expansion can be activated via keycode.
- **Automated Attendant (AA) Services.** Multiple, multilevel AA services provide callers with information and messaging directions when phones are unattended, allowing them to dial by name, number, or department. The automated attendant can support up to 20 menu layers and as many as 1,000 phantom/1,500 station voice mailboxes.
- **Off-Site Notification.** Users can be notified of new or urgent messages via pager, phone, cell phone, or SMTP e-mail client. Cascading notification provides for up to five external destinations.
- **Voice Profile for Internet Mail (VPIM).** When activated, support for this protocol allows multiple NBX voicemail systems to seamlessly send and receive messages across a secure corporate WAN or the Internet. The NBX system is standards-based, so it can support voicemail communications with any third-party VPIM-compliant system.

# Business-Enhancing Desktop Phones and Software

3Com understands that an organization may have unique requirements. That's why the family of 3Com IP phones provides a full range of powerful telephony services and built-in CTI capabilities. Most models support IEEE 802.3af Power over Ethernet (PoE) and the Session Initiation Protocol (SIP) standard. SIP compatibility lets businesses easily migrate from the 3Com NBX platform to the 3Com VCX platform, protecting

their worktop investment—traditionally between 40% to 50% of an initial telephony system outlay.

3Com IP phones operate dynamically as Layer 2 (Ethernet) or Layer 3 (IP) devices that users can self-locate—plug into any network port without losing personalized configurations and calling privileges. All phones have LCD displays that can access the company directory as well as

personal call logs for dialed, received, and missed calls. A variety of models offer varying degrees of sophistication.

## Controlling Phone Usage

NBX systems include a powerful call detail reporting (CDR) package to monitor and control business operations. Organizations can track phone usage by internal account numbers to accurately charge clients for phone consultations.

## 3COM IP PHONES PORTFOLIO AT A GLANCE

	3100 Entry Phone	3101 Basic Phone	3101 Basic Phone with Speaker	3102 Business Phone	3103 Manager Phone	3105 Attendant Console	3106 Cordless Phone	3107 Cordless Phone
Maximum system (line) appearances	1	4	4	18	12	50	4	4
Programmable buttons with lights	No	4	4	18	8	50 / 100 with Shift Button	4	4
Fixed feature buttons	4	5	6	10	10	4	8	9
Display softkeys	No	3	3	3	10	No	No	No
Four-way cursor control	No	Yes	Yes	Yes	Yes	No	No	No
Display size	No	160 x 33 pixels	160 x 33 pixels	160 x 33 pixels	320 x 120 pixels	No	2 lines	2 lines
Ethernet ports	1 - 10/100	2 - 10/100	2 - 10/100	2 - 10/100	2 - 10/100/1000 (Gigabit)	1 - 10/100	1 - 10/100	1 - 10/100
Power over Ethernet support (802.3af)	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Speakerphone	No	Listen-only	Half duplex	Full duplex	Full duplex	No	No	No
Wideband audio support	Handset only	Handset only	Handset only	Yes	Yes	No	No	No
Definable ring tones	No	9	9	9	9	No	No	No
Headset jack	No	No	No	Yes	Yes	No	Yes	Yes
Codecs G.711, ADPCM, G729 A/B	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
G.722 codec-ready handset	Yes	Yes	Yes	Yes	Yes	No	No	No
G.722 codec-ready speakerphone	No	No	No	Yes	Yes	No	No	No
Adaptive jitter buffer	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
QoS: IP-ToS, 802.1p	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
TAPI support	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DHCP, Option 184	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjustable stand: 15 to 45 degrees with wall mount	Wall-mount only	Yes	Yes	Yes	Yes	Yes	Base unit	Base unit
Removable faceplate for localization	No	No	No	Yes	Yes	No	No	No
Browser-based administration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*Implementation of VCX (SIP-based) support expected summer, 2005.

## Need more information?

The 3Com NBX 100 IP Telephony Solution is available from 3Com Voice Authorized Partners in more than 60 countries with voicemail prompts and end-user documentation in 12 languages.

For additional details, please visit [www.3com.com/iptelephony](http://www.3com.com/iptelephony)



**3COM**

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To learn more about 3Com solutions, visit [www.3com.com](http://www.3com.com). 3Com is publicly traded on NASDAQ under the symbol COMS.

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