



## DATA SHEET

# NBX® 100 Communications System R4.0

## Key Benefits

The scalable and affordable telephony solution for small/mid-sized businesses and remote offices

### Extensive Applications

Runs speech recognition, customer relationship management, automatic provisioning, accounting, softphone, and other applications based on industry standards. Has voice mail, automated attendant, hunt/calling group, call detail reporting, computer telephony integration, and unified messaging applications—and robust PBX functions—built in.

### Simple to Use and Administer

Designed with non-technical staff in mind. Adds/moves/changes are self-directed. Features work right out of the box. A Web browser and the NBX NetSet™ utility make administration fast and easy, from anywhere on the network. Just one person can manage both the voice and data networks.

The 3Com® NBX® 100 Communications System is ideal for organizations and remote offices with 10 to 100 telephone users. The most popular IP-PBX system in the world, it delivers exceptional investment assurance.

It supports up to 200 devices/100 PSTN lines. It connects your remote workers directly through their Internet router, and reliably connects multiple intra-company sites—across town or around the globe—with low-cost IP virtual tie lines. Adding locations and capacity is easy: the 3Com NBX 100 and SuperStack® 3 NBX solutions both use the same system software.

### Open Architecture

Lets you respond adroitly to changes in your business environment. Change your network, quickly moving or adding users and offices. Easily integrate new technologies, such as wireless Ethernet. Based on voice and data networking standards, it lets you choose the network equipment and applications that fit your needs and budget.

### Proven Availability

Ensures high availability of voice services, even when network servers are down, via an independent real-time operating system. The solution's high reliability matches that of traditional PBXs.

With a 3Com NBX solution, you can combine your voice and data systems on a single network infrastructure. You save the overhead of having two separate networks, and can take advantage of powerful new applications—many already built in.

The award-winning NBX 100 solution delivers crystal-clear, toll-quality voice communications. It brings 10/100 Mbps performance to users' worktops, and is radically simple to use. It delivers the benefits of voice-over-IP (VoIP) and advanced voice messaging—without the high costs and operational complexity of TDM PBX or proprietary IP systems.

## 3Com NBX 100 Communications System Features and Benefits

Features	Benefits
<b>Scalable</b>	
Supports up to 200 devices (line cards and stations)	Can mix and match up to 200 user phones and PCs, public or leased lines, and services
Supports IP, Ethernet, and analog (2500 series compatible) phones and devices	Use whatever you like: 10/100 Mbps or 10 Mbps Ethernet NBX phones, routers, switches, hubs; G3 faxes, analog phones, cordless phones, or NBX pcXset PC softphones
Supports 200 voice mail (VM) boxes and up to 150 phantom mailboxes, 80 hours message storage, and 12 automated attendant (AA) ports	Adding to the built-in 30 minutes of VM storage and 4 AA ports is fast and cost-effective with upgrade software
Supports up to 25 analog CO cards, 3 T1/PRI cards, 3 E1/PRI cards, 12 ISDN BRI-ST cards; plus H.323 and PRI QSIG	Can connect worldwide: up to 100 analog CO lines, 72 T1/PRI channels, 90 E1/PRI channels, 96 ISDN BRI-ST channels; plus create intra-company tie lines
Multisite networking via NBX IP Virtual Tie Line licenses*	Creates IP-based virtual tie line to other NBX solutions; homogeneous signaling over IP reduces toll charges
Multisite networking via NBX ConneXtions H.323 Gateway licenses*	Creates IP-based connections to PBXs and other NBX solutions; simple software gateway reduces toll charges
<b>Extensive Applications</b>	
Already built in: voice mail and automated attendant (both available in multiple languages), unified messaging, CDR, CTI, and more	Saves you money and implementation time; languages for your multinational offices
Off-the-shelf applications* from 3Com NBX Providers (SPs) and other 3rd-party vendors: automated provisioning, call accounting and billing, CRM, CTI, TAPI/WAV, speech recognition, and more	Increase productivity, customer satisfaction, and revenues; applications are affordable and work right out of the box
NBX Call Center application*	Brings small/mid-sized call centers and their remote agents high-end capabilities—including real-time reporting, alarms
NBX VPIM Multisite Messaging Exchange license*	Connect intra-company messaging systems worldwide: provides NBX sites with voice-mail exchange over IP
NBX 3rd-Party Messaging license*	Connects NBX solutions to messaging systems from SPs and other 3rd-party vendors over IP
Built-in Palm PDA support	Use your infrared Palm PDA for dialing and CTI applications (requires NBX 2102-IR business phone)
Built-in Hunt and Calling Group services support up to 48 groups; are password protected	Ensure no inbound calls are missed; ideal for sales, support, and customer service groups, and offices without attendants
<b>Open Architecture: Based on Voice and Data Network Standards</b>	
Supports Quality of Service (QoS), IEEE 802.11, 802.1p/Q, 802.3, IP ToS, IP DiffServ	Prioritizes and expedites both voice and data traffic on the LAN/WAN, ensuring crystal-clear voice communications
Built-in computer telephony integration (CTI) for all users	Supports TAPI 2.x and TAPI/WAV applications, allowing implementation of business-enhancing applications
Built-in unified messaging (IMAP4) support	Presents voice and e-mail messages in a single inbox, making employees more efficient
<b>Simple to Administer, Simple to Use</b>	
Administration is Web browser-based (Netscape Navigator or Microsoft Internet Explorer)	Dramatically reduces administration costs; administer from anywhere on the network—locally or remotely
Built-in NBX NetSet™ administration utility	Guides you expertly through administrative tasks with easy-to-use GUI; provides users with phone training and customization tips
Supported by 3Com Network Supervisor Version 3.0	Simplifies networking mapping and monitoring
Traditional PBX functions and call features	Includes services and features familiar to PBX users
Built-in 3Com NBX Voice Mail software	Save time and money with intuitive voice mail and automated attendant
Built-in call detail reporting (CDR)	Makes it easy to monitor and manage call flow, as well as track usage
<b>High Availability</b>	
Real-time operating system (WindRiver VxWorks) is proven in mission-critical applications	Ensures system availability; works independently of the NOS; server or PC failures do not impact phone service; high reliability matches or exceeds that of traditional PBXs
3Com Ethernet Power Source*	Powers 3Com Ethernet devices via 10/100 Mbps LAN cabling, avoiding dependence on outlets and desktop power sources

\* Optional product(s)

## Specifications

### Dimensions and Weight (Chassis)

Height: 26.47 cm (10.5 in)  
 Width: 43.18 cm (17.3 in)  
 Depth: 22.56 cm (9 in)  
 Weight (empty): 10 kg (22 lb)  
 Weight (configured): 13.5 kg (30 lb)

### Language Support

Cantonese Chinese, Mandarin Chinese; Australian English, U.S. English, U.K. English; Parisian French; German; Italian; Castilian Spanish, Mexican Spanish

### Power Requirements

Chassis: 230/115 VAC, 60/50 Hz, 2/4 A

### Power Dissipation

Chassis: 200 W (maximum)  
 Phone: 5 W (maximum)

### Environmental Ranges

Operating temperature: 0 to 40°C (32 to 104°F)  
 Storage temperature: - 40° to +70°C (- 40° to +158°F)  
 Humidity: 5% to 85% noncondensing

### Network Access Standards

National Requirements FCC Part 68, Canada CS03  
 CTR4/A1 (Commission Decision 98/520/EC)

### Safety

UL/CUL 1950 3rd Edition  
 IEC 60950: 1991 + A1, A2, A3 and A4. National deviations for Europe and Australia.

### Emissions

FCC Part 15 Class A and B  
 EN 55022:1994/A1:  
 1995/A2:1997 Class A  
 VCCI Class A  
 AS/NZS 3548:1995 Class A

### Immunity

EN 55024:1998

## Ordering Information

### NBX 100 Call Processor

One required per system; manages all call traffic. Embedded application hosting, external application gateway connectivity, and telephony adjunct connectors for Music on Hold (1/8" RCA) and Paging (RJ-11). One 10BASE-T MDI uplink port. Includes one system hard disk, 10 languages to choose from, and one NBX 100 Resource Pack Kit (3C10174R4.0).

3C10110

### NBX 100 Chassis

Five universal card slots plus one call processor card slot; NBX Voice Mail system license for four automated attendant (AA)/voice mail (VM) ports and 30 minutes of message storage; one switchable 110/220 V, 50/60 Hz AC power supply; one 2.43 m/8 ft U.S. power cord; and 48.26 cm/19 in rack/wall mounting ears.

3C10111

### NBX Analog Line Card

Terminates up to four Loop Start PSTN telephone lines to the NBX system via four RJ-11 interfaces. Includes built-in Caller ID support (service must be purchased from your telco/PTT) and built-in power failure transfer jack.

3C10114

### NBX T1/PRI Trunk Card

Terminates a standard voice T1 or T1/PRI circuit into the NBX system. Supports 24 DSO (T1) voice channels. Includes one RJ-45 port and one 10 Mbps MDIX (switch) port for load balancing.

3C10116B

### NBX E1/PRI Trunk Card

Terminates a standard voice E1 circuit into the NBX system. Supports 30 E1 voice channels. Includes one RJ-45 port and one 10 Mbps MDIX (switch) port for load balancing.

3C10165\*\*

### NBX BRI-ST Trunk Card

Terminates up to eight ISDN BRI-ST lines into the NBX system. Includes four RJ-45 ports and one serial diagnostics port.

3C10164-ST\*\*

### NBX 10BASE-T Hub Card

Includes eight shared 10BASE-T (RJ-45) ports and one 10BASE2 BNC uplink port.

3C10115

### NBX Analog Terminal Card

Terminates up to four tip/ring (2500 series compatible) analog devices, such as analog phone, cordless phone, Group 3 fax machine, speakerphone adjunct, etc. Includes four RJ-11 ports. Does not support modems.

3C10117

### NBX Analog Adapter

Terminates one tip/ring (2500 series compatible) analog device. Includes one RJ-11 port and one 10BASE-T (RJ-45) hub port for connecting an NBX phone, computer, printer, or other Ethernet device. Does not support modems.

3C10120

### NBX 1102 Business Phone

Includes 10BASE-T (RJ-45) hub port, 2-line 16-character LCD display with 3 soft keys, 18 programmable buttons, 10 feature buttons, LEDs, and an external AC power brick. Charcoal gray.

3C10121

### NBX 2102 Business Phone

Includes switched 10BASE-T/100BASE-TX (RJ-45) port, 2-line 24-character LCD display with 3 soft keys, 18 programmable buttons, 10 feature buttons, LEDs, and an external AC power brick. Charcoal gray. Requires NBX solution with R3.0 or later.

3C10226A-XX\*

### NBX 2102-IR Business Phone

Includes wireless infrared port for Palm PDA dialing and CTI, switched 10BASE-T/100BASE-TX (RJ-45) port, 2-line 24-character LCD display with 3 soft keys, 18 programmable buttons, 10 feature buttons, LEDs, and an external AC power brick. Charcoal gray. Requires NBX solution with R3.0 or later.

3C10228IRA-XX\*

### NBX 2101 Basic Phone

Includes switched 10BASE-T/100BASE-TX (RJ-45) port, 2-line 24-character LCD display with 3 soft keys, 3 programmable buttons, and an external AC power brick. Charcoal gray. Requires NBX solution with R4.0 or later.

3C10248B-XX\*

### NBX 1105 Attendant Console

Supports up to 100 programmable functions via a dedicated BLF button with status LED (50 buttons with high/low shift position). Includes 10BASE-T (RJ-45) port and an external AC power brick. Charcoal gray.

3C10123

### NBX Phone Wall Mount Bracket

Makes wall mounting of NBX phones easier and sturdier; allows the use of a standard telco wall plate. Charcoal gray.

3C10247

### Ethernet Power Source (EPS)

Supplies electrical power directly to 3Com 10BASE-T and 100BASE-TX devices (such as NBX phones, NBX attendant consoles, and 3Com wireless access points) from a central location via twisted-pair Ethernet cable, eliminating the need to dedicate a local power outlet and a power cable to each device. Note: Each NBX phone or attendant console requires one NBX telephone power splitter.

12-port (up to 12 devices) 3C10220-XX\*

24-port (up to 24 devices) 3C10222-XX\*

### NBX Telephone Power Splitter (12-pack)

For use with the 3Com EPS. Enables power transfer from the powered pairs in the LAN cable to the power jack on the telephone set; each NBX phone or console requires one splitter. Includes 12 splitters.

3C10223

**NBX Analog Power Adapter Kit**

Supplies electrical power to one NBX phone or attendant console via the twisted-pair Ethernet cable that extends from the local LAN dropout to the device, eliminating the need to dedicate a power cable. Includes one NBX telephone power splitter.

3C10125

**NBX Voice Mail Upgrade Licenses**

The NBX 100 chassis includes 30 minutes of voice-mail (VM) storage and four automated attendant (AA) ports. Added to the storage and AA ports, these options offer the price/capacity choices that ensure growth is efficient and economical. Each requires a keycode to activate.

<i>From VM storage/ AA ports</i>	<i>To VM storage/ AA ports</i>	
30 minutes/4 ports	4 hours/4 ports	3C10137
30 minutes/4 ports	20 hours/6 ports	3C10134
30 minutes/4 ports	80 hours/12 ports	3C10135
4 hours/4 ports	20 hours/6 ports	3C10138
4 hours/4 ports	80 hours/12 ports	3C10139
20 hours/6 ports	80 hours/12 ports	3C10136

**NBX IP On-the-Fly Site License**

Lets local and remote NBX phones and Analog Line Card ports operate as "IP Phones" at Layer 3 on a per-call basis, with LAN-based devices returning their IP addresses to the "pool" on the NCP after call completion. Requires a keycode to activate.

3C10132

**NBX IP Serve Site License**

Lets local and remote NBX phones and Analog Line Card ports operate as "IP Phones" at Layer 3 via static or DHCP IP addressing. Requires a keycode to activate. Requires one IP address per MAC address (each device and CO port) in the system.

3C10131

**NBX IP Site License Upgrade**

Upgrades an NBX solution from NBX IP Serve to NBX IP On-the-Fly mode. Requires a keycode to activate.

3C10133

**NBX IP Virtual Tie Line Licenses**

Creates an IP-based multisite tie line that links NBX solutions via homogeneous VoIP signaling, without external servers or transcoding gateways. Requires NBX solution with R4.0 or later and NBX IP On-the-Fly or NBX IP Serve Site License.

One-port 60-day trial license	3C10270
Two-port license	3C10271
Four-port license	3C10272
Eight-port license	3C10273

**NBX VPIM Multisite Messaging Exchange Licenses**

Lets NBX solutions exchange voice mail via homogeneous VoIP. Requires NBX solution with R4.0 or later and NBX IP On-the-Fly or NBX IP Serve Site License.

60-day trial license	3C10276
Site license	3C10277

**NBX 3rd-Party Messaging Licenses**

Lets the NBX solution connect a messaging system from a 3Com NBX Solution Provider or other 3rd-party vendor over IP. Requires NBX solution with R4.0 or later and NBX WAV Application Port License.

60-day trial license	3C10278
Site license	3C10279

**NBX ConneXtions H.323 Gateway Licenses**

Delivers a software-based H.323 gateway that creates an IP-based connection for linking the NBX solution to PBXs and other H.323 gateways. Options offer a varied number of concurrent VoIP H.323 sessions. Requires a keycode to activate; requires a dedicated Windows 2000/NT PC or server.

Two-port license	3C10141
Four-port license	3C10142
Eight-port license	3C10143
Sixteen-port license	3C10144

**NBX WAV Application Port Licenses**

Integrates any TAPI/WAV-based CTI application on the LAN via an IP link between the NBX solution and 3rd-party application server. Requires NBX solution with R3.0 or later and a Windows 95/98/NT/2000 PC.

Two-port license	3C10260
Four-port license	3C10261
Eight-port license	3C10262
Sixteen-port license	3C10263
Twenty-four port license	3C10264
Forty-eight-port license	3C10265
Ninety-six-port license	3C10266

**NBX pcXset Licenses**

Turns PCs and laptops into softphones that give users the same features and functions as NBX business phones. Requires a keycode to activate; requires a Windows 95/98/NT/2000 PC or laptop and good-quality USB headset.

Three-concurrent-users license	3C10151
Ten-concurrent-users license	3C10152
Twenty-five-concurrent-users license	3C10153
Site license for up to 196 concurrent users	3C10154

**NBX 100 Resource CD**

Includes NBX 100 R4.0 system software, language packs, and product documentation

3C10172R4.0

**NBX 100 Resource Pack Kit**

Includes one Installation Guide, one Administrator's Guide, one Telephone Guide, and one Resource CD

3C10174R4.0

**NBX Telephone Guide**

Ten-pack	3C10178
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**NBX Business Phone Quick Reference Cards**

Ten-pack	3C10179
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**NBX Basic Phone Quick Reference Cards**

Ten-pack	3C10180
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\*When ordering, replace XX with the applicable country/region suffix:

- AA = Australia, New Zealand
- ME = Europe
- SA = South Africa
- UK = United Kingdom
- US = Canada, Latin America, United States

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