Empowered by Innovation

NEC

UNIVERGE

NEAX 2400 IPX

Internet Protocol eXchange

Flexible Networking for Your Business

NEC enables cost-effective migration to IP telephony

NEC's NEAX 2400 Internet Protocol eXchange (IPX), represents the fusion of existing NEC technologies with dynamic advances in hardware and software to satisfy the most stringent system requirements.
The NEAX2400 IPX's modular design, combined with the benefits of Internet Protocol (IP), results in virtually unparalleled expansion capability. The system also offers the full range of PBX features using Dterm Series IP or digital terminals.

- **Full IP-based Telephony System**
  System supports peer-to-peer connection not only between IP terminals within a LAN, but also across an IP network.
- **Supports TDM Interface**
  The IP system supports TDM interface allowing graceful IP migration.
- **Flexible System Configuration**
  Customer can deploy any combination of TDM based lines and IP based lines desired and add lines as needed.
- **No Forklift Upgrade Necessary**
  NEAX2400 IPX enables gradual migration to IP while ensuring protection of investment in existing assets.

NEAX2400 IPX

What the NEAX2400 IPX Can Do For Your Business

The NEAX2400 IPX provides a unique set of benefits to users seeking an advanced information system that is both highly flexible and highly reliable. Through the use of state-of-the-art computer-controlled telecommunications technology, the NEAX2400 IPX is able to offer a wide range of features.

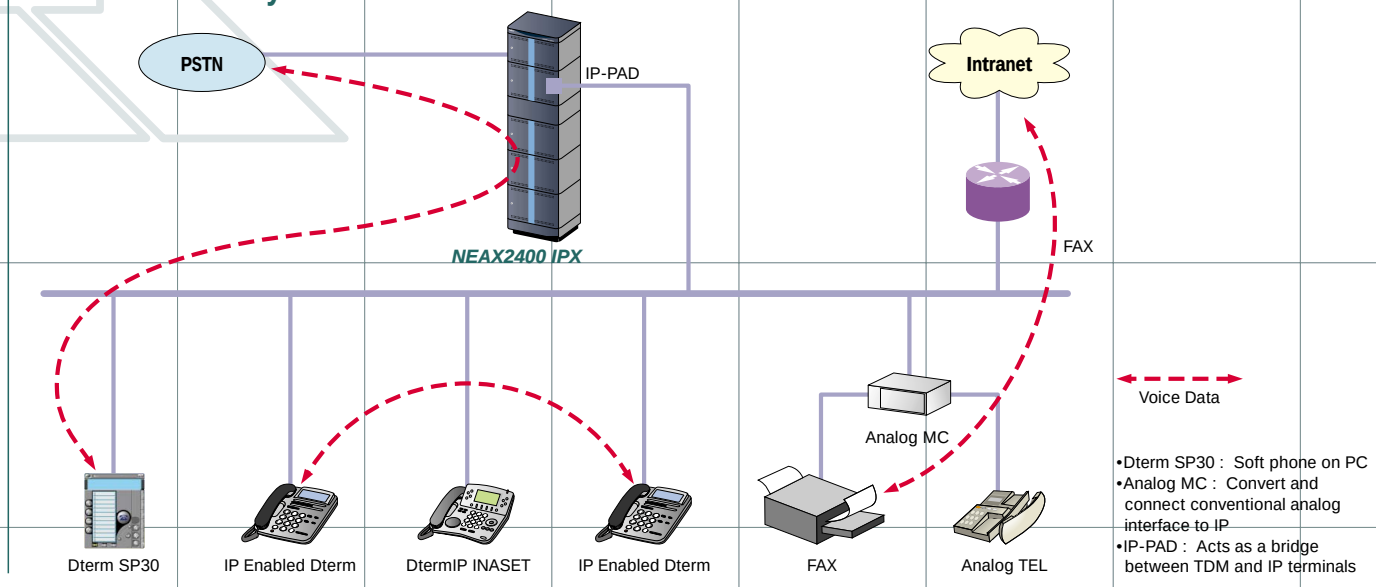
Scalability: Current NEC customers can deploy IP capability with simple upgrades, and our fully IP-ready communications systems are ideal for new customers.
Fully Featured System: NEAX2400 IPX station users have access to more than 750 service features that enhance productivity, reduce costs and improve communication efficiency.
Flexible Line Size: The modular design of the NEAX2400 IPX enables the growth of the system in a cost-effective manner as your requirements demand.
Flexible Configuration: Customers can use the combination of TDM and IP lines that best suits their communications environment.
Flexible Numbering Plan: The use of a flexible numbering assignment meets all forms of IP network integration services.
Cost Controls: Features such as Least Cost Routing (LCR), Class of Service (COS) and Station Message Detail Recording (SMDR) allow you to control and even reduce costs.

Peer-to-Peer IP Connectivity

The NEAX2400 IPX can support IP switching (peer-to-peer), TDM switching, and IP/TDM switching. Peer-to-peer IP connectivity offers benefits such as:

- **High-quality VoIP communications with full telephony services**
- **Automatic Terminal Registration**
  An IP terminal is automatically registered once it's connected to a LAN (DHCP support provided)
- **High reliability and security**
  Proprietary operating system enhances operational reliability and security

NEAX2400 IPX System Overview



Networking

Convergence of data, voice and other information over a common IP network is the future of communications. NEC's IP Telephony solutions have been created in direct response to the growing demand for these capabilities.

NEAX2400 IPX Core Networking Features

Private Networking...Telephony Service over IP

- FCCS (Fusion Call Control Signaling) or CCIS (Common Channel Interoffice Signaling) makes it possible for multi-site systems to work together as if they were a single system
- H. 323 (Internet/Intranet industry standard)
- IP terminals at remote offices can be connected over WAN as internal extension
- Failover to Alternate Node

Public Connectivity

- Integrated Services Digital Network (ISDN)
- Q-SIG (Circuit-Switched Basic Call — ETSI Version)
- Digital Multi-Frequency Compelled Signaling R2 (MFC-R2)

Survivability

- SR-MGC
- MC & MG with PFT

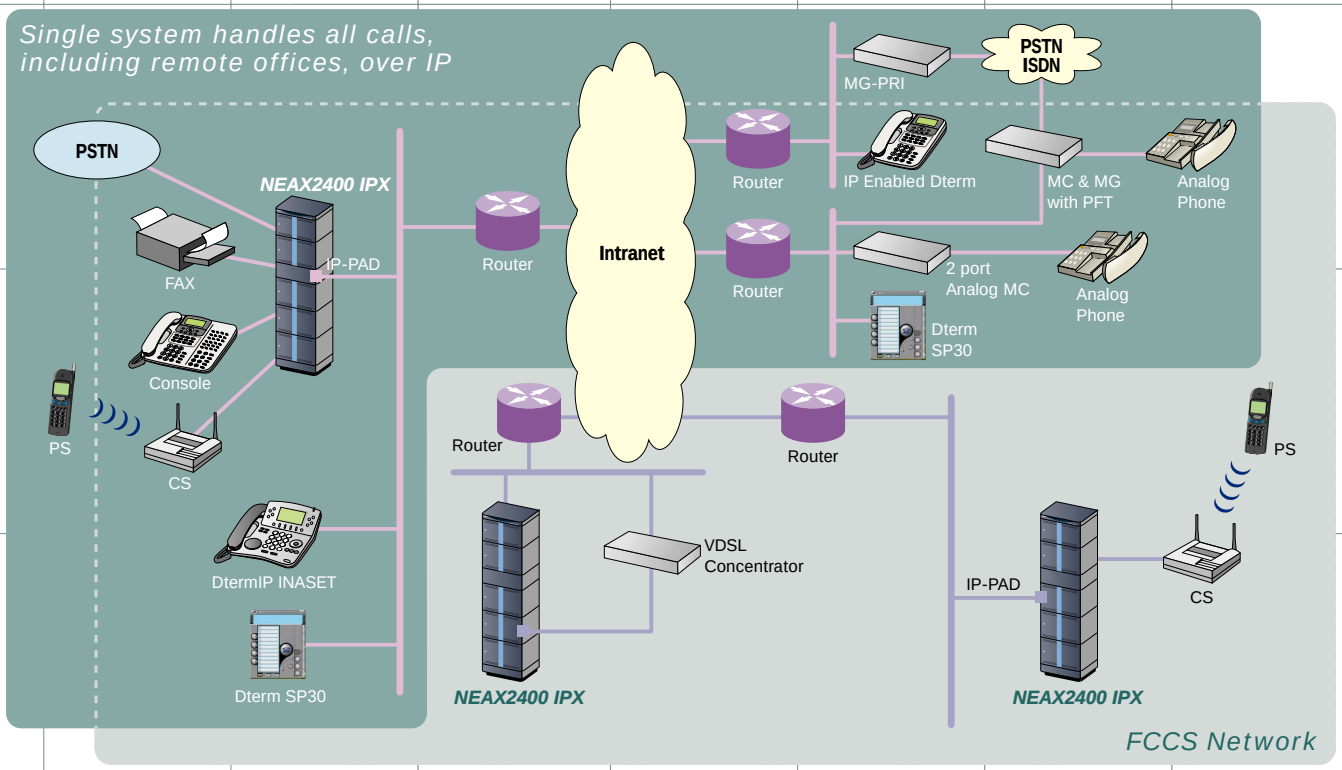
NEAX2400 IPX's Wireless Communications System affords invaluable mobility, for enhanced productivity and efficiency

Mobilizing your work force has become amazingly simple. With personal handsets and a wireless communications system, employees can travel throughout a multi-storied building or across a large industrial complex and continue to stay in constant touch with customers and colleagues.

Examples of Wireless Communications System Applications

- **Business Offices**
- **Medical Centers/Hospitals**
- **Factories/Plants**
- **Department Stores**
- **Hotels**

NEAX Enterprise IP Network



CTI Solutions

NEC's NEAX family of communications systems offers rich functionality and valuable benefits to today's information-driven businesses. By providing an OAI (Open Application Interface) between external processors, such as servers and personal computers, with the internal processors of NEC's voice platforms, NEC brings control of telephony features and related call information right to the user's desktop.

PHS Short Message Application*

You can display the same short message on a PHS LCD screen as appears on a pager.

Q-Master$_{EX}$: Flexible Contact Center Solution

This application combines the high reliability of the NEAX2400 IPX with the power and flexibility of a LAN-based CTI architecture. Fully modular in design, Q-MasterEX allows Contact Center managers to select the components customers need to best meet their operational and budgetary objectives.

Automatic Call Distribution/Management Information System (ACD/MIS)

Through its Universal Call Distribution (UCD) capabilities or its basic ACD and MIS software, the NEAX2400 IPX can meet the simplest needs of the small-scale or new contact center or help desk. It also offers easy expansion and cost-effective performance. By loading ACD (Automatic Call Distribution) functions into a FCCS system, we can...

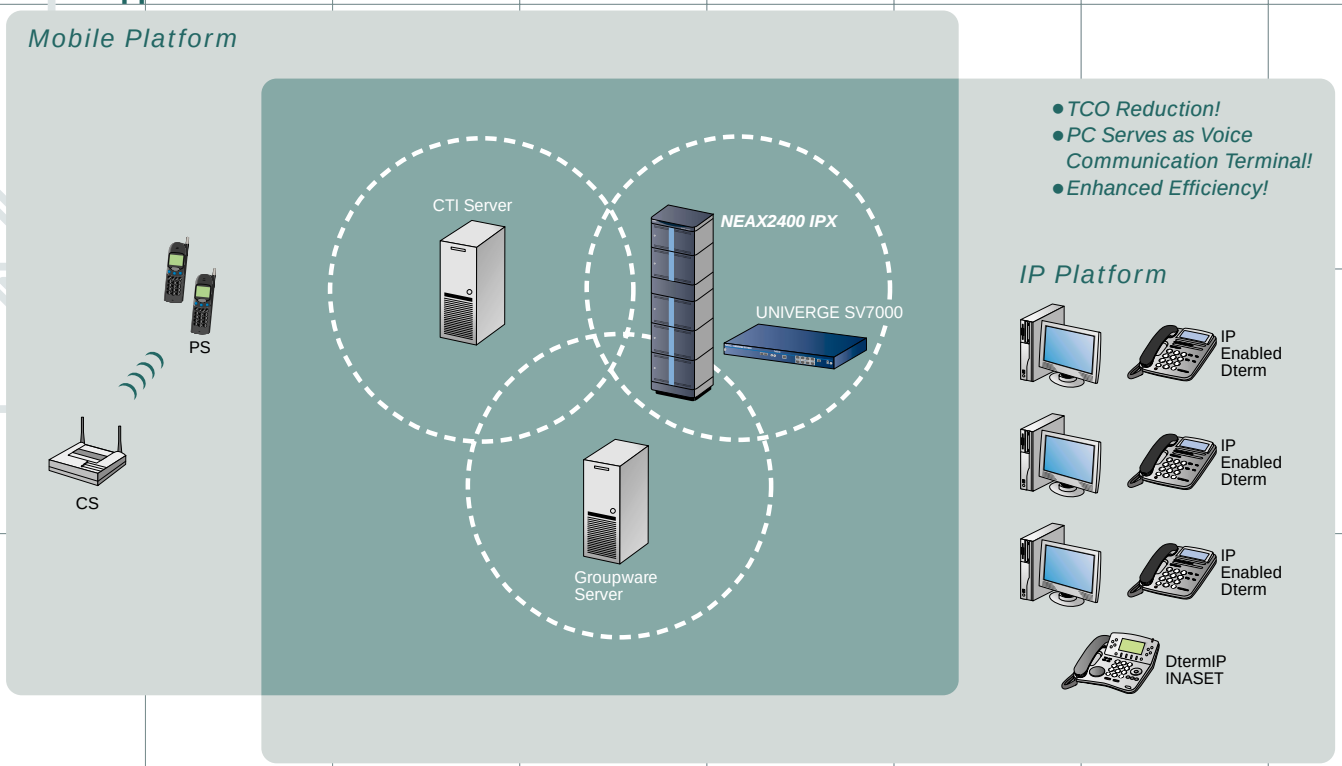
...Concentrate calls made to an agent into one network node;

...Spread calls to agents across multiple nodes with one ACD;

...Achieve an improvement in call processing capability by establishing multiple ACDs in multiple nodes and dividing calls accordingly.

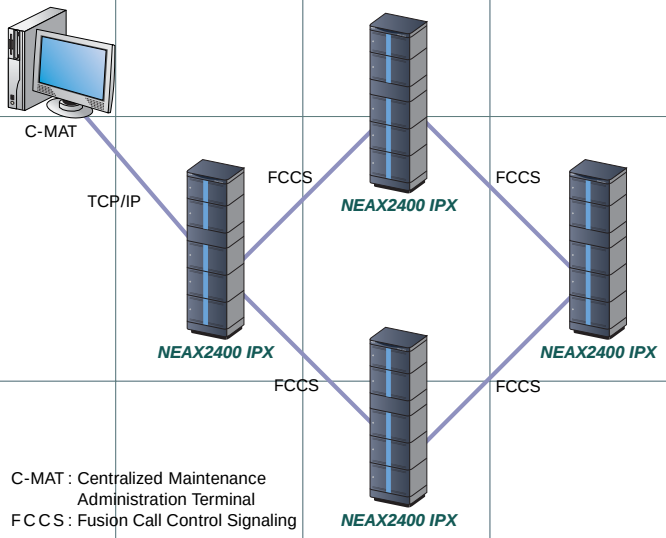
*Application software is required before these services can be used. You can create the necessary software, enlist the help of a vendor, or contact NEC for assistance.

Office Application Overview



Simple administration & Maintenance

The NEAX2400 IPX is designed to facilitate network management of operation and maintenance functions, and to enable maintenance personnel to isolate and resolve problems rapidly — even for remote locations — maximizing system uptime.



Station Message Detail Record (SMDR)

The SMDR allows the NEAX2400 IPX to record detailed call information on all outgoing and incoming calls and route this information through an RS-232C/Ethernet interface. SMDR-Printout sends call information such as calling station number, dialed number, call start time/date and call duration to an asynchronous ASCII printer equipped with an RS-232C interface, on a per-call basis.

Maintenance

The NEAX2400 IPX's modular system design and sophisticated software diagnostics enable maintenance personnel to isolate and correct problems in a minimum amount of time. They can interface with the system using the Maintenance Administration Terminal (MAT) on-site and/or from a remote site to determine overall system status.

Maintenance Administration Terminal (MAT)

The MAT is a PC-based tool which provides support for NEAX2400 IPX system management, and is compatible with Windows98/NT/Me/2000-based PCs (Windows2000 recommended).

The following tasks can be performed via the MAT (password available):

- System/office data management (move, add, change)
- System/office data back-up (floppy disk)
- Traffic data display
- System message display

Centralized Maintenance Administration Terminal (C-MAT)

The C-MAT is connected to one of the NEAX2400 IPX systems within an FCCS network. The C-MAT can access, and indicate the status of, all systems in the network on its display, and it can also perform the same functions handled by a standard MAT.

Remote Maintenance

All maintenance administration functions can be accomplished by a remotely located MAT over a Public Switched Telephone Network (PSTN) on a dialup or private-network basis. Tasks such as system diagnosis, automatic alarm reporting, fault detection and database reconfiguration can be performed from remote locations (ex. Maintenance Centers, Technical Assistance Service Centers).

Traffic Measurement

The NEAX2400 IPX provides sophisticated traffic management reports to be used for overall analysis of system performance. The MAT functions as a man-machine interface, and is used to request and display report type, measurement time period, and amount of time between reports.

System Diagnostics

The NEAX2400 IPX diagnostic software constantly monitors the operating system and automatically generates supervision and fault information on overall system performance to the MAT and related supporting hardware. The maintenance management system interacts with the System Processors, switching network interface section and various other sections — including Power, Fuse and Temperature — and reports fault indications.

Communication Station

Dterm IP INASET (240G/320C)

The Dterm IP INASET incorporates a large-size LCD, with Web access and phone book features built-in. It essentially supports all of the functions of traditional Dterm Series terminals (home, browser and directory applications).

Intelligent Dterm Soft Phone (Dterm SP30)

The Dterm SP30 uses a Windows-based Graphical User Interface (GUI), enabling you to enjoy multi-functional digital telephone operation via your own personal computer. Simply connecting a USB handset/headset to your PC leads to enhanced communications efficiency and increased productivity.

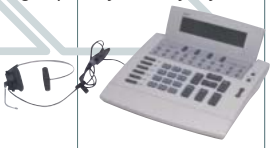
Attendant Consoles

Dterm Series i Attendant Terminal (White/Black)

The flexible Attendant Terminal makes use of the DSS/BLF (Direct Station Selection/Busy Lamp Field) Console, and offers important functions such as a 60-key pad, extension status indicator lamp and one-touch calling.

Desk Console

With a design that, while compact, is rich in functionality, the Desk Console is a strong response to a growing need for parallel processing capability in everyday business.



PC-based Operator Console

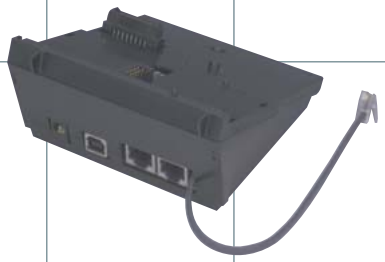
The Integrated Attendant Console (IAC), designed for compatibility with the NEAX PABX family, is a WindowsNT-based operator console that provides the capability to operate as an Attendant Console and a Directory System.

Dterm Series i terminals bring the powerful features of the NEAX2400 IPX right to your computer

Dterm Series i multi-function/multi-line digital terminals are ergonomically designed, featuring larger keypad buttons for dialing convenience, an expanded three-line x 24-character LCD display, tiltable legs with non-skid feet, and a highly visible call/message indicator lamp. Hands-free capability is standard with all models. Dterm Series i terminals are easily connected to the NEAX2400 IPX by a single cable. These advantages make Dterm Series i terminals the right choice to meet your business communication requirements.

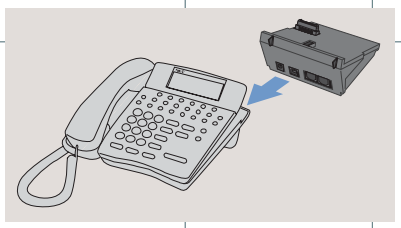
IP Adapter (IPW)

This new IP adapter for peer-to-peer connectivity supports VLAN Tagging and can be connected to PCs in a cascade configuration without adversely affecting tone quality.



There are four models available:

- Dterm 4D (Black): 4-button terminal with LCD display
- Dterm 8 (White/Black): 8-button terminal
- Dterm 8D (White/Black): 8-button terminal with LCD display
- Dterm 16D (White/Black): 16-button terminal with LCD display
- Dterm 16LD (White/Black): 16-button terminal with display, Desi-less type
- Dterm 32D (White/Black): 32-button terminal with LCD display



Media Converter (2-port Analog MC)

The Media Converter provides a path for migration of analog telephone and G3 FAX services to IP. It is equipped with an RJ-45 jack for connection to a LAN, and performs a protocol conversion between the analog line and IP.

MG-PRI

Media Gateway (MG) is the VoIP gateway between IP network and a digital interface network (ISDN network). MG can be used for ISDN interface of a Branch Office.

PoE L2 Switch (BF210)

The BF210/24 offers efficient Layer 2 LAN switching for 24 ports (max.), which auto-negotiate among multiple transmission modes. Power over Ethernet (PoE) with UPS function is incorporated for NEC IP terminals. Two highspeed Gigabit Ethernet ports available with optional module.

MC & MG with PFT

MC & MG with PFT has two functions, Media Converter (MC:4LC) and Media Gateway (MG:2COT). MC and MG usually work independently. In case of a failure of MC & MG with PFT, Power Failure Transfer (PFT) connects C.O. lines (2 Lines) and Analog terminal directly.

UNIVERGE™ is NEC's IP architecture for unifying multimedia networks while enabling robust business solutions. UNIVERGE is an open and standards-based IP architecture, ensuring interoperability with other broadband media, IT equipment and business applications. It also enables seamless and mobile communication in a multi-network environment.

Founded in 1899, NEC Corporation is one of the world's leading providers of Internet, broadband network and enterprise business solutions dedicated to meeting the specialized needs of its diverse base of customers. Ranked as one of the world's top patent-producing companies, NEC has been a global innovator in the design, manufacture, service and installation of communications networks ranging from just a few stations to several thousand.

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* Models may vary for each country. Please refer to your local NEC representatives for further details.

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