Release Note

NEAX®2000 IVS²

BUSINESS / CCIS / ISDN

SERIES 2000 R1.5 SOFTWARE

1.0   OVERVIEW

Series 2000 R1.5 Software maintains all of the features and flexibility of Series 2000 R 1.0 Software while delivering two major capabilities that will significantly impact the small business telecommunication market; **Expanded Digital Trunks** and the **Retrofit CPU**.

NEC is also releasing a new multi-language capability for the NEAXMail AD-8 integrated voicemail system. Languages are assigned on a per port basis. This feature will enables you to use this voicemail product to leverage the **NEAX**®**2000 IVS** family of products into a new market space.

2.0   EXPANDED DIGITAL TRUNK CAPABILITY

The **Expanded Digital Trunks** provide the **NEAX**®**2000 IVS** family with up to eight CCIS links from a single system. It also improves the capability for a stand-alone system by increasing the number of ISDN PRI spans. The expansion provides for a new maximum of ten T-1 interface cards and also allows a new maximum of eight ISDN PRI interface cards. The combined total of digital trunks (T-1, ISDN PRI and CCIS trunks) has been expanded from 120 to a maximum of 240.

- 240 Digital Trunks (combined total of T-1, ISDN PRI and CCIS trunks)
    - 10 T-1 Interface Cards (Sys. Max.)
    - 8 PRI Interface Cards (Sys. Max.)

2.1   Expanded Application Processor (AP) Bus
The expansion of the digital trunks is made possible, in part, due to the new generation Main Processors (CP-14, and CP-16). The new Main Processor (MP) boards allow access to a second Application Processor Bus (AP Bus). The new MP boards allow access to the original Lower AP Bus (128 AP TS) and the previously unavailable Upper AP Bus (128 AP TS). The original CP00 and CP03 boards provide access to only 128 AP timeslots, the Lower AP Bus.

2.2   Port Interface Module (PIM) Compatibility
The **NEAX**®**2000 IVS**² PIM-F units allow access to both the Lower AP Bus and the Upper AP Bus in PIMs 0 through 7.

The **NEAX**®**1000 IVS** and **NEAX**®**2000 IVS** units, PIM-ABA, PIM-UA, PIM-UB and PIM-Q can access the Lower AP Bus in PIMs 0 through 7.
The **NEAX**®**1000 IVS** and **NEAX**®**2000 IVS** units, PIM-ABA, PIM-UA, PIM-UB and PIM-Q can access both the Lower and Upper AP Buses **ONLY** as PIM 0.

2.3   Application Processor Interface Cards

The introduction of new interface cards is necessary to provide access to the Upper AP Bus via the PIM backplane. The new T-1 card, SPN-24DTAC-A, and the new ISDN PRI card, SPN-24PRTA-A, can access both the Lower AP Bus and the Upper AP Bus. These new cards can be mixed with the previously existing AP cards, however there are specific requirements for installation.

***** *PLEASE NOTE* *****

*When the **NEAX**® **1000 IVS** or the **NEAX**® **2000 IVS** is to be configured as a multiple PIM Retrofit system, there are specific installation requirements for the AP interface cards. For configuration and installation requirements please refer to the **NEAX**® **2000 IVS Retrofit System Guide (P.N. 152015).***

3.0 RETROFIT MIGRATION

Series 2000 R1.5 software provides our customers the ability to migrate their **NEAX**® **1000 IVS** or **NEAX**® **2000 IVS** to the new software platform released with the **NEAX**® **2000 IVS^2**. The new Retrofit platform will provide the path for our customer to take advantage of future software enhancements. Future upgrades, for a previously Retrofitted system, will be performed by simply installing a new **48 Port System Software (FD).**

The migration to the Series 2000 platform is made possible by replacement of the **Main Processor** (MP) and **Firmware Processor** (FP) cards in the **NEAX**® **1000 IVS** or **NEAX**® **2000 IVS** system. The **SPN CP-16 (MP)** and the **SPN CP-17 (FP)** are the hardware components that facilitate the migration to the Series 2000 software platform.

3.1 SPN CP-16 (Retrofit MP)

The SPN CP-16 has many built-in features. Some are new features and some are enhancements to existing MP card (CP00 and CP03) features. The SPN CP-16 is shipped as part of a kit that includes the software and documentation necessary for installation. The built-in features designed to make better use of the backplane real estate, by reducing the number of additional interface cards required, are listed below.

- 16 3-Party Conference Trunks
- Dial Tone Generator
- 32 Push Button Senders
- Four Push Button Receivers (Do NOT use FP Time Slots)
- 33.6Kbps Internal Modem
- Two RS232C Ports for SMDR/MAT at 19.2 Kbps
- MAT directly connected can upload/upgrade CPU at 56 Kbps
- Hold Tone Selectable – Internal Melody or External Source (1 Jack/input)
- Two "Phase Lock Oscillators" for Source Clock or Receiver Clock (the SPN-CK00 NOT Required)
- Two Digital Announcement Trunks (Do NOT use FP Time Slots)

3.1.1 CP16 Retro CPU Kit
- SPN CP16
  - 24 LT ports plus one T-1 (All current Basic Business/H/M features)
- MATWorX™Studio – NEAX®2000 IVS Suite
- **NEAX®2000 IVS** Retrofit System Guide
  (Includes **NEAX®1000 IVS)**

Note: No software license agreement required

3.2   SPN CP17 (Retrofit FP)

The PN-CP17 is unlike the PN-CP15 because it **DOES NOT** have the BUS interface function built into it. Therefore, the Retrofit system will require Bus cards. The system maximum requirement for CP17 cards is four. The CP17 is required under the following conditions:

- More than two PIMs.
- When Remote PIMs are connected even in a one or two PIM system.
- When Traffic requirements warrant (see below table).

Traffic Capacity Table

System Configuration	BHCA with Firmware Processor (FP) (PN-CP17)				BHCA without FP(No CP17)
	1 FP	2 FP	3 FP	4 FP	1 or 2 PIM
Business or Hotel/Motel without ACD/OAI	2500	5000	7000	8000	2000
Business or Hotel/Motel + ACD/OAI	2000	4000	5000	5500	1000

4.0   A SCALABLE SOLUTION

When your configuration requires more LT (Line/Trunk) ports or advanced features, you must add some combination of the optional **Software Keys.** The **Software Keys** will be delivered via the **Key Keeper** disk (150441). The contents of the **Key Keeper** disk will vary based on the **Software Keys** that have been loaded on it. When an order is placed for additional features **(Software Keys)** the **Key Keeper** disk must be ordered as well. The SPN CP-14 and SPN CP-16 will both support the **Software Keys** currently available as well as two newly released **Software Keys**.

- **Current Series 2000 R 1.0 Software Keys** (optional)
  - 128 LT ports
  - 256 LT ports
  - 512 LT ports
  - LT Ports (48 to 128)
  - 1 CCIS Link
  - 4 CCIS Links
  - 8 CCH Links
  - Wireless Demo
  - Wireless system

- **New Software Keys Series 2000 R1.5** (optional)
  - T-1/E-1 6 to 10 cards
  - ISDN DCH 5 to 8

5.0 Automated Software Registration and Activation

Series 2000 R1.5 software has the ability to be easily registered and activated using the same process as the Series 2000 R1.0 system software. MATWorX™ Studio – NEAX 2000 IVS Suite is the tool that is used to register the Series 2000 R1.5 and activate the software in the PBX. MATWorX™ Studio – NEAX 2000 IVS Suite replaces MATWorX 32 Suite as the MAT program for the **NEAX** ® **2000 IVS** family of products.

6.0 NEW HARDWARE

6.1 CP16 Retro CPU Kit - See details in above section 3.1**.**

6.2 SPN CP17 (Retrofit FP) - See details in above section 3.2.

6.3 SPN-24PRTA-A – This is a 24 Channel PRI Trunk/DCH combined interface card. This card requires Series 2000 R1.5 software. It can be used for both the Lower and the Upper AP bus locations. There is a system maximum of 8 ISDN PRI spans.

6.4 SPN-24DTAC-A – This is a 24 channel Digital trunk interface card for expansion to 240 digital trunks. It can be used with the both Lower and the Upper AP bus locations. It can be combined with all existing T-1 cards. There is a system maximum of 10 T-1 cards.

6.5 PN-8DLCL - This is an eight port interface card to support Epro, Elite, D^{term} Series III, D^{term} Series E and the SN716 Descon.

6.6 CFTB – This is an enhanced 6/10 party conference card. The audio characteristics are designed to provide minimal lose, when a conference call is in process. The performance of this card is reliant upon the quality of audio signal presented by the serving Central Office.

6.7 PN-M10 – This card is an Optical Fiber modem interface card. It supports Single Mode optical fiber using an SC connector. It provides point to point on-campus connection for T-1, CCIS and Remote PIM.

6.8 Multi Language NEAXMail AD-8 – There are new offerings of the NEAXMail AD-8 integrated voice processing system. The new choices allow a selection of two to five languages. Available languages are:

- US English
- Global Spanish
- Argentinean Spanish
- Global French
- Portuguese

7.0 Spare Retrofit CPU Option!

The delivery method for Series 2000 R1.5 software will allow you to maintain a spare Retrofit CPU, for use in an emergency situation. You will be able to load your Customers system software on a spare CPU to return them to service. You will then contact the NEC America. Inc. National Technical Assistance Center on the next regular business day to process the registration of the software and return the defective Retrofit CPU for repair.

8.0 Enhanced Business feature

8.1 Camp-on Recall – MCI
This feature will provide MCI packet information for an unanswered recalling camped-on call that was transferred by a Voicemail/Auto-Attendant System to a station.

8.1.1 Previously – The camped-on caller would recall to the Voicemail/Auto-Attendant System and hear the "generic" greeting, due to the absence of the MCI packet information.

8.1.2 Enhancement – The camped-on caller will recall to the Voicemail/Auto-Attendant System and hear the personalized greeting, due to the sending of the MCI packet information.