

Release Note
NEAX[®] 2000 IVS²
Business / CCIS

2100 Series Software Release

1. Overview

The introduction of the NEAX[®]2000 IVS² marked the beginning of a new era for the NEAX 2000 IVS family of products. It introduced a new generation platform that delivers increased processing power, expanded capacities, simplified software line-up and advanced capabilities using new technology. 2100 Series release goes beyond traditional PBX functionality as the transition to IP telephony becomes a reality. 2100 Series Software not only introduces IP Trunk, but also represents a major development step in the evolution by providing Back-Up CPU along with a large number of new features and enhancements.

2. New Business Features and Hardware

2.0 National ISDN-NI2 Name Display - When receiving an incoming call from an ISDN PRI span with NI-2 protocol, the display on the answering D^{term}[®] will show the Calling Party Name as well as the Calling Party Number sent from the ISDN provider. If Calling Party Name is not provided the system can search the name list in the MP (1000 slot Memory Block No. 3 of System Speed Dial) for a number match then display the number provided by the provider and name from the MP list on the D^{term} display.

2.0.1 Required Software & Hardware - New Systems: (150443) 48 Port System Software-2100 Series (FD) and (150134) 24PRTA-B are required to provide NI2 Name Display. *Existing Systems with SPN-24PRTA-A*: (150443) 48 Port System Software-2100 Series (FD), and (150514) 24PRTA (FD) are required to update the Flash Rom of (150121) 24PRTA-A cards to provide NI2 Name Display.

2.0.2 Typical Application – Applications requiring incoming ISDN PRI NI2 Name and Number to be displayed on the Dterm LCD. Also, NI2 or non-NI2 ISDN applications where only number is provided, name from the MP list can be provided to the Dterm display.

2.1 Remote Hold From SN716 Attendant Console (ATTCON)- This feature has been available for a D^{term} and now is available for an ATTCON. This feature gives an ATTCON the ability to transfer a terminating call to an extension; during ring back tone condition the ATTCON presses the Hold key and places the call on hold at the extension. The call can then be picked up from any station via Directed Call Pick-Up or by accessing the on hold line at the D^{term} by going off-hook and pressing the held line key.

2.1.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series (FD)

2.1.2 *Typical Application* – Attendant places call on hold at D^{term}, then pages. Paged party can then either return to office and press held line or use Directed Call Pick-Up to retrieve the call.

2.2 Back-Up CPU- Back-Up CPU is now available for the NEAX 2000 IVS². The table below outlines the major enhancements by comparing the CP20 with the CP02. With the CP20 the system is a true Active/Stand-By application. In the event of CPU failure the system will automatically switch to CPU 1 if CPU 0 fails or automatically switch to CPU 0 if CPU 1 fails. This is an improvement over the CP02 in that the CP02 would only automatically switch to CPU 1 if CPU 0 failed. The CP20 has all the features available with the CP14 including built-in SMDR/MCI/4RST/2DAT etc. *NOTE: In the event of CPU failure and the Active CPU switches to Standby CPU, all calls will be disconnected during this transition. This is Cold Standby not Hot Standby. This applies to both CP02 and CP20.*

NEAX 2000 IVS ² New CP20	NEAX 2000 IVS CP02
2 RS-232 Ports	2 RS-232 Ports
Built-In Registers (4 circuits)	No
Built-In SMDR	No
Built-In MCI	No
Built-In DAT (2 circuits)	No
Programmable Time of automatic Office Data Copy	Fixed at 2 AM every day
Manual Office Data copy on demand by Command	Manual data copy by switch settings only
Manual MP changeover by command	Must make busy Active CPU to switch over
Uses back plane to copy Office Data	Uses one of the two RS Ports to copy office data (front cable connects CP02's together)
Call processing is not interrupted when copying	System is down while manual copying data
Faster install time of standby CPU	Standby takes about 30 minutes to copy from Active after initial install
Utilizes PZ-M537 memory expansion	No
In case of CPU failure Active to Stand-by CPU automatic switching 0 to 1 and 1 to 0.	In case of CPU failure Active to Stand-by CPU automatic switching 0 to 1 only

2.2.1 Required Software & Hardware-
 (150076) BACK-UP CPU PACKAGE – 2

- ICS VS PIMMB (Qty 1)
- SPN-CP20 (CPU) (Qty 2)
- 48 Port System Software – 2100 Series (Qty 2)
- MATWorX Studio (Qty 1)

2.2.2 *Typical Application* – Mission Critical customers that require an advanced level of security.

2.3 32 Party Conference - This feature provides 32-party conferencing with Group Calling/Meet Me, a new SPN-CFTC card is required for the feature. The SPN-CFTC is an AP card but is treated as an analog trunk and is included in the max of 256 analog trunk assignments per system. The quantity of 32-party conference cards that can be mounted is dependant on available AP time slots and available trunk assignments. Each 32-party conference card can be partitioned in to four 8-party, two 8-party/one 16-party, two 16-party or one 32 party group. **Group Calling** provides three distinct operations; **Group Call Automatic**, which allows a group of telephones to be rung simultaneously, and all conference together as they go off-hook. **Group Call Broadcast** allows a group of telephones to ring simultaneously and be in receive-only state (no transmit) when they go off-hook. The originator can then make a broadcast announcement to the group. **Group Call Two Way Calling** allows a group of telephones to ring simultaneously and the first telephone that goes off hook is in conference with the originator. All other telephones will stop ringing when the first telephone goes off-hook. All three Group Calling applications are available for D^{term} Terminals, Analog Telephones and Wireless PS's. **Meet Me** Conference operation does not require a conference leader like the 6/10 Party Conference; instead it is accessed independently by dialing a trunk access code. Meet Me conference is available to be accessed from any station, attendant, auto attendant or trunk (DID, DIT, Tie) to the Meet Me conference trunk. Both Group Call and Meet Me can be supported on a single partitioned card. (Note: This is not an amplified conference bridge)

2.3.1 *Required Software & Hardware*- (150443) 48 Port System Software-2100 Series (FD) and (150125) SPN-CFTC.

2.3.2 *Typical Application* – Applications requiring a station user to ring a group of stations simultaneously. Applications requiring Meet Me conference users to dial directly into the conference bridge without a conference leader.

2.4 E911 Notification Key SN716 Attendant Console - This feature provides the ATTCON the ability to be notified when a station dials 911. Notification is provided on a special key assigned to the ATTCON. The ATTCON display will show the originating station number and destination trunk number. The attendant can press the special key and conference into the 911 call.

2.4.1 *Required Software & Hardware*- (150443) 48 Port System Software-2100 Series (FD)

2.4.2 *Typical Application* – Hotel/Motel or business applications that require notification when a guest or employee dials 911.

2.5 Day/Night Mode Change by System Clock – This feature allows the system clock to change Day/Night Mode for each tenant automatically without having to manually put the system into day/night mode. Example; week days from 12:00 am to 8:00 am system is in night mode, 8:00 am to 8:00 pm system is in day mode, 8:00 pm to 12:00 midnight system is in night mode, week ends system is in night mode. Exception schedule allows for Holidays and non-business days.

2.5.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series (FD)

2.5.2 Typical Application – Applications where automatic day/night mode change is preferred over manual day/night mode change.

2.6 Message Center Interface RS Port on MP – This feature provides the interface between the CP14, CP16 and CP20 MP and the VMS via an RS port on the MP. This feature is now available without using the AP00B.

2.6.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series (FD) and CP14, CP16 or CP20.

2.6.1 Typical Application – Small Office installation where price is a consideration and MCI connection to VM is required.

2.7 Voicemail Soft-Key Integration – This feature allows the NEAXMail AD-8 & AD-40 to send commands to change the contents of the LCD on a D^{term}. The LCD of a D^{term} will automatically update when communicating to the NEAXMail AD-8 & AD-40. A cable between the Voice Mail and the CPU is required. Soft-key functions such as new messages / old messages / create message / pause / next / back / archive / delete / reply / redirect provide a convenient method of operation while in the voice mailbox.

2.7.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series, (151113) NEAXMail AD-8 with revision Q414f software and (151026) AP VM-0.7 CA-A. For AD-40 the (151026) MAT CA-T is required.

2.7.2 Typical Application – Provides a simplified method for a user to retrieve and interact with the Voice Mail System (VMS).

2.8 Call Forwarding Set by DISA – This feature allows a caller via DISA to set and cancel Call Forward All Call settings for individual stations.

2.8.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series (FD)

2.8.2 Typical Application – Applications where a user needs to call in via DISA and set, cancel or change the Call Forward All destination of their telephone.

3. Enhanced Business Features

3.1 D^{term} Volume Level Control – This feature allows the user to set the volume level and retain this volume level on the D^{term} for all new calls. This feature is applicable to both D^{term} and SN716 DeskCON. Functions for both handset and speaker phone.

3.1.1 Previously - The volume level was reset back to default for each new call.

3.1.2 Typical Application – Applications such as high noise areas where the handset volume needs to be retained at its highest volume setting.

3.2 Multi Language Display – Adds Global Spanish and Portuguese displays on the Dterm LCD and SN716 DeskCON LCD.

3.2.1 Previously - English, Global French and Japanese were supported.

3.2.2 Typical Application – Applications requiring multi-lingual LCD display on D^{term} and Attendant Console.

3.3 Name Display for T1 ANI - This feature allows the MP to assign names to incoming calls from T1-ANI (Automatic Number Identification). When the system receives an incoming call from T1 ANI, it searches the programmable name list in the MP by the calling party number. This result is the incoming assigned name and number is displayed on the D^{term} LCD. (1000 slot Memory Block No. 3 of System Speed Dial is used for this feature. This Memory Block is shared for T1-ANI & ISDN PRI).

3.3.1 Previously – Only incoming number could be displayed for T1 ANI applications.

3.3.2 Typical Application - Answering Service that uses T1-ANI trunks and requires company name and number to be displayed.

3.4 Queue Limit for TAS – This feature allows a limit to be applied for incoming TAS calls, when this limit is reached additional calls can be redirected to a station, attendant console or voice announcement trunk.

3.4.1 Previously – No queue limit could be set for TAS.

3.4.2 Typical Application – 24-hour customer service department with minimal staff after normal business hours. During heavy incoming call periods queue limit can be set, any additional calls can be redirected to voice announcement trunk or voice mail.

3.5 Overflow for TAS Queue – This feature allows Call Forwarding No-Answer to take place for incoming TAS calls. When an incoming call terminates via TAS the Answer Key Flashes and Rings on selected D^{term} Terminals. If the TAS call is not answered during programmed period of time, the call can be forwarded from the TAS Key to another station, attendant console or voice announcement trunk.

3.5.1 Previously – When an incoming call terminated via TAS to the Answer Key it continued to ring on the Key until it was physically answered or the caller hung up.

3.5.2 Typical Application – After hour applications where person-answering TAS calls is not always near a D^{term}.

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

3.6.1 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.

3.6.2 Typical Application – All MCI applications.

3.7 Routing for Call Forwarding Outside - This enhancement allows the system to select the outgoing trunk route belonging to the tenant of the station user when the station user sets Call Forwarding-Outside.

3.7.1 Previously – Calls to a station set for Call Forwarding-Outside would always follow the tenant for the outgoing trunk.

3.7.2 Typical Application – Shared Tenant application where it is necessary to keep certain stations and trunks in the same tenant.

4. New CCIS Features

4.1 IP Trunk - Communications cost can be reduced by utilizing IP Trunks in the system, to convert voice signals into IP packets and transmit them over the data network. All CCIS centralized and transparent features can be used connecting up to 255 NEAX 2000 IVS² systems in a network for a total of 130,560 station ports.

Each IP trunk board supports up to 16 IP channels and has an on-board CCH, the SC00-CCH card is not required when doing IP CCIS. The 4VCT is a voice channel translator card. One card is required for every 4 IP channels, up to 4 cards are used with one 16-channel IP Trunk card to provide 16 channels of IP.

For example if you require eight IP channels, you would need one IP Trunk card and two 4VCT cards. A maximum of eight IP Trunk cards and a quantity of thirty two 4VCT cards can be mounted per system (128 IP channels).

4.1.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series (FD), (150132) SPN-IPTB-A (AP), (150133) SPN-4VCTI-A w/CA. Also, required are Software-Keys for IP Trunk and CCIS.

4.1.2 Typical Application - With the introduction of IP Trunk networking CCIS can be accomplished using any wide area transport, from traditional Tie lines, ISDN, T1, ATM, Frame Relay and IP.

4.2 Event Based CCIS - This feature was supported in the NEAX 2000 IVS; it has been operationally enhanced and is now available on the NEAX 2000 IVS². Provides CCIS networking features using ISDN PRI or BRI Trunks between switches. The ISDN lines can also be used for local and long distance calling providing an extra cost savings.

4.2.1 Required Software & Hardware- (150443) 48 Port System Software-2100 Series (FD), (150624) ECCIS software-key, (150134) SPN-24PRTA-B or (150112) SPN-2BRTC (AP).

4.2.2 Typical Application – Cost effective applications for bw network traffic Branch Offices.

5. Enhanced CCIS Features

5.1 Centralized E911 CCIS – This feature provides an extension in a remote site the ability to pass its own station number when 911 is dialed over CCIS and out the E911 trunk route.

5.1.1 Previously – Only one unique number could be sent from the remote site over CCIS and out to the PSAT.

5.1.2 Typical Application - All network applications.

5.2 Outgoing ISDN CPN over CCIS – This feature provides an extension giving an outgoing call in a remote site the ability to pass its own CPN over CCIS and out the ISDN trunk route.

5.2.1 Previously – No number could be sent from the remote site over CCIS and out the ISDN trunk route.

5.2.2 Typical Application - T1 and IP network applications that have a main site with ISDN trunks and remote sites using the ISDN trunks to make outgoing calls.

5.3 Incoming ISDN CPN for Transferred Call over CCIS - This enhancement allows an ISDN call to be transferred over CCIS and provide the Calling Party Number to the D^{term} display in the remote site.

5.3.1 Previously – Only DID calls over CCIS provided the Calling Party Number to the D^{term} display in the remote site.

5.3.2 Typical Application - T1 and IP network applications that have a main site equipped with ISDN trunks that are answered by an Attendant Console or Automated Attendant and then transferred over CCIS to a station at a remote site.

5.4 Split Call Forwarding CCIS – This enhancement provides Split Call Forwarding for calls received over CCIS to be forwarded by call type (tie, internal or CO).

5.4.1 Previously - Calls over CCIS would follow internal Split Call Forwarding destination.

5.4.2 Typical Application – School District in a CCIS network where classrooms want incoming station calls over CCIS to ring the classroom and incoming trunk calls over CCIS to go to Voice Mail.

5.5 Call Forwarding over CCIS - This enhancement improves the number of times a call can be call forwarded over CCIS network (up to 7 hops). This resolves the limitation of an incoming CO call to switch B that goes across CCIS to VM/Auto Attendant in switch A. Switch A Auto Attendant sends call back over CCIS to station in switch B. Station in switch B is set Call Forward All to VM in switch A, call will now forward back to VM in switch A.

5.5.1 Previously - Call would not forward back to VM in switch A, but continue to ring on switch B station.

5.5.2 Typical Application – CCIS network where incoming CO Trunks and Automated Attendant/Voice Mail are in different nodes.

5.6 Built-in SMDR for Tandem Connection - In 2100 Series we have added the ability for remote sites in a CCIS network to report tandem connections to the centralized SMDR in the main system with out the need for the AP00 package to be mounted in the remote site. Tandem connection refers to local trunks provided in the remote system.

5.6.1 Previously - The AP00 card was required to be mounted in the remote site.

5.6.2 Typical Application – Remote sites in a CCIS network that require reporting on local trunk activity back to the Centralized SMDR.

5.7 Voicemail AA Info Enhance - Allows a digital Voice Mail (AD-8 & AD-40) to be used as centralized VM in a CCIS network without the use of MCI. The AA info enhancement allows for the lighting of Message Waiting lamps in remote nodes from a centralized digital VM. This saves the cost of having to purchase the AP00 for Centralized VM.

5.7.1 Previously – An AP00 was required for MCI when a digital VM was used for Centralized Voice Mail.

5.7.2 Typical Application – All CCIS network applications.

6. New Software

6.1 (150443) 48 Port Sys Software-2100 Series (FD): Required for new system sales and to upgrade existing systems to 2100 Series Software.

6.2 (150624) ECCIS: Software-key activates Event Based CCIS.

6.3 (150618) IPT x 1 Card: Software-key activates quantity one of SPN-IPTB (AP) allowing up to 16 IP channels in the system.

6.4 (150620) IPT x 4 Cards: Software-key activates up to quantity four SPN-IPTB (AP) allowing up to 64 IP channels in the system.

6.5 (150628) IPT x 8 Cards: Software-key activates up to quantity eight SPN-IPTB (AP) allowing up to 128 IP channels in the system.

6.6 (150622) IPT 1 to 4 Cards: Software-key for systems with one SPN-IPTB (AP) card and need to add up to four additional SPN-IPTB (AP) cards.

6.7 (150625) IPT 1 to 8 Cards: Software-key for systems with one SPN-IPTB (AP) card and need to add up to eight additional SPN-IPTB (AP) cards.

6.8 (150627) IPT 4 to 8 Cards: Software-key for systems with four SPN-IPTB (AP) cards and need to add up to eight additional SPN-IPTB (AP) cards.

6.9 (150514) 24PRTA (FD): Flash ROM upgrade for (150121) SPN-24PRTA-A to provide ISDN NI-2 Name Display.

6.10 (150516) 8CSH (FD): Flash ROM upgrade for (151281) SPN-SC03A-8CSH-JA (AP) to provide short text message on wireless PSII (mid December 2000).

6.11 (150308) AP01 Chip Kit: EPROM upgrade for (151261) SPN-AP00 IP-B (AP) to provide short text message on wireless PSII (mid December 2000).

7. New Hardware

- 7.1 (150076) Back-Up CPU Package – 2:** For Dual CPU applications, package includes one PIMMB, one MATWorX Studio, two SPN-CP20 (CPU) and two copies of 48 Port Sys Software-2100 Series (FD).
- 7.2 (150125) SPN-CFTC (AP):** 32 Party Group Call/Meet Me conference card.
- 7.3 (150122) SPN-24CCTA-A (AP):** T1 and Common Channel Handler (CCH) combined on one card. For T1 CCIS applications.
- 7.4 (150134) SPN-24PRTA-B (AP):** T1 and D Channel Handler (DCH) combined on one card. This card provides ISDN NI-2 Name Display and replaces (150121) SPN-24PRTA-A.
- 7.5 (151288) SPN-AP01 IP-D (AP):** This card provides short text message on wireless PSII (mid December 2000) and replaces (151261) SPN-AP00 IP-B (AP).
- 7.6 (151287) SPN-SC03A 8CSH-B (AP):** Wireless ZT handler provides short text message on wireless PSII (mid December 2000) and replaces (151281) SPN-SC03A 8CSH-JA (AP).
- 7.7 (150229) SPN-SC03A 8ICH (AP):** D Channel Handler for ISDN BRI station. This card is equipped with Flash ROM to allow simplified future updates. This card replaces (150217) SPN-SC03 8ICH (AP).
- 7.8 (150132) SPN-IPTB-A (AP):** IP Trunk Card provides up to 16 IP Channels, maximum eight cards per system used with (150133) SPN-4VCTI-A w/CA.
- 7.9 (150133) SPN-4VCTI-A w/CA:** 4 Circuit Voice Channel Translator Card provides up to 4 IP Channels, used with (150132) SPN-IPTB-A (AP). Maximum four cards used with each IPTB, maximum thirty-two 4VCT cards per system.

8. New Revision Hardware

- 8.1 (151113) NEAXMail AD-8 (4-Port):** Internal Voice Mail card has new software (Q414f), which provides Voice Mail Soft-keys. (151026) AP VM-0.7 CA-A is required to connect between the AD-8 card and CP14, CP16 or CP20 for Voice Mail Soft-keys.

9. New Documentation

9.1 (152018) NEAX 2000 IVS² IP System Manual: Issue 1

9.2 (152019) NEAX 2000 IVS² SMDR/MCI/PMS Interface Specifications: Issue 1

10. New Issue Documentation

10.1 (151969) NEAX 2000 IVS² Command/Maintenance Manual: Issue 2

10.2 (151971) NEAX 2000 IVS² Feature Programming Manual: Issue 2

10.3 (151998) NEAX 2000 IVS² Installation Procedure Manual: Issue 2

10.4 (151989) NEAX 2000 IVS² WCS System Manual (PCS): Issue 2

10.5 (152010) NEAX 2000 IVS² WCS Features & Specifications / PSII: Issue 2

10.6 (152007) NEAX 2000 IVS² Business/Hotel/Data Features & Spec: Issue 2

10.7 (151987) NEAX 2000 IVS² CCIS System Manual: Issue 2

10.8 (152008) NEAX 2000 IVS² CCIS Features & Specifications Manual: Issue 2

10.9 (151988) NEAX 2000 IVS² ISDN System Manual: Issue 2

10.10 (152009) NEAX 2000 IVS² ISDN Features & Specifications Manual: Issue 2

10.11 (151992) NEAX 2000 IVS² Q-SIG System Manual: Issue 2

10.12 (151993) NEAX 2000 IVS² Data Interface System Manual: Issue 2

10.13 (152001) NEAX 2000 IVS² Office Data Programming Manual: Issue 2