NEC

Release Notes

UNIVERGE NEAX *2000 IPS*
Family of Products

Business / CCIS / IP / ISDN

3700 Series Software R12.2 Release

1. Overview

The NEAX 2000 IPS continues to provide new and enhanced features with the release of 3700 series R12.2 software. 3700 series R12.2 software is being released with the new features Delayed Hotline and Station Service Status Display. In addition, there are enhancements on Automatic Login to Home Station Number, Remote PIM over IP, Mobility Access, Call Forwarding, Dial-by-Name, Flexible Ringing Assignment by Day/Night Mode, etc. New boards are also introduced for RoHS compliance.

2. New Business Features

2.1 Delayed Hotline

When a station user goes off-hook and waits for a preprogrammed time without dialing, the station user is automatically routed to a predetermined station or an operator (Desk Console). If the station user dials a number before the preprogrammed time, the station user can make a call as usual. Max. 100 stations can be assigned for the delayed hotline stations (including normal hotline stations). An analog single line telephone, Dterm, Dterm IP can be the delayed hotline station.

• Knows station number, dials the number

• Does not know station number, wait for preprogrammed time period, and then automatically routed to a predetermined station or operator.
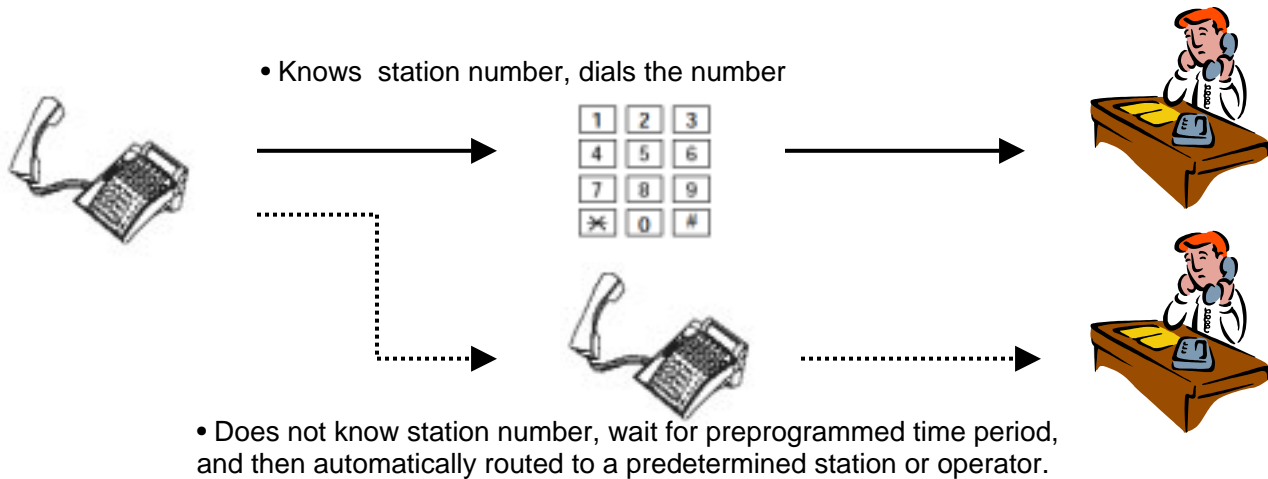
Figure 1 Delayed Hotline

2.1.1 Typical Applications

Lobby telephones in hotels or hospitals can be a typical application of the delayed hotline feature. If visitors know station numbers, they can make a call by dialing that station number. If the visitors do not know the station number, they wait for a short time period, and then automatically routed to an operator or reception.

2.1.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)

2.2 Station Service Status Display

This feature is designed for maintenance purpose. By entering single command (CME4, YY=00, 01), a maintenance person can see a list of service features/station status regarding to a specific station. Below information can be displayed with MATWorX or Dterm CAT.

CME4, YY=00
- Connection status (Connected or not)   * Dterm or Dterm IP station only
- Make busy status (Make Busy or not)
- Line status (Idle or busy)
- Service feature activation status
  - Call Forwarding-All Calls
  - Call Forwarding-Busy Line
  - Call Forwarding-No Answer
  - Call Forwarding-Logout (Dterm IP)
  - Do Not Disturb

CME4, YY=01
- Service feature activation status
  - Mobility Access (MA)
  - Day/Night Mode
  - Split Call Forwarding-All Calls
  - Split Call Forwarding-Busy Line/No Answer
  - Busy-In/Busy-Out (UCD: Uniform Call Distribution)
  - Call Restriction

2.2.1 Benefits

Feature provides a maintenance person the ability to see the service feature setting status for a specific station at a glance.

2.2.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)

3. Enhanced Features

3.1 Automatic Login to Home Station Number

Prior to R12.1, an IP terminal with MAC Address Authentication Mode can be temporarily used as a terminal with Password Authentication Mode (Login/Logout Mode). In this case, once the IP terminal with MAC Authentication Mode is logged out, a new user has to manually login. In R12.2 software, new operation mode is added: Fixed Connection Mode. In this mode, an IP terminal works as follows.

- An IP terminal is normally used like MAC Authentication Mode (no need to login / logout operation).
- If necessary, the terminal can be temporarily logged out and can be used as someone's own terminal by login with new user station number & password. After the new user logs out the terminal, the terminal is automatically logged in to the home station number (e.g. conference room telephone).

Maximum 256 IP terminals can be assigned for the Fixed Connection Mode telephone.

3.1.1 Typical Applications

Case-1: A Meeting room telephone is assigned as Fixed Connection Mode. Someone wants to use the meeting room telephone temporarily as their own telephone. They can login with their station number. After logout, the meeting room telephone can be automatically logged in to its home station number.
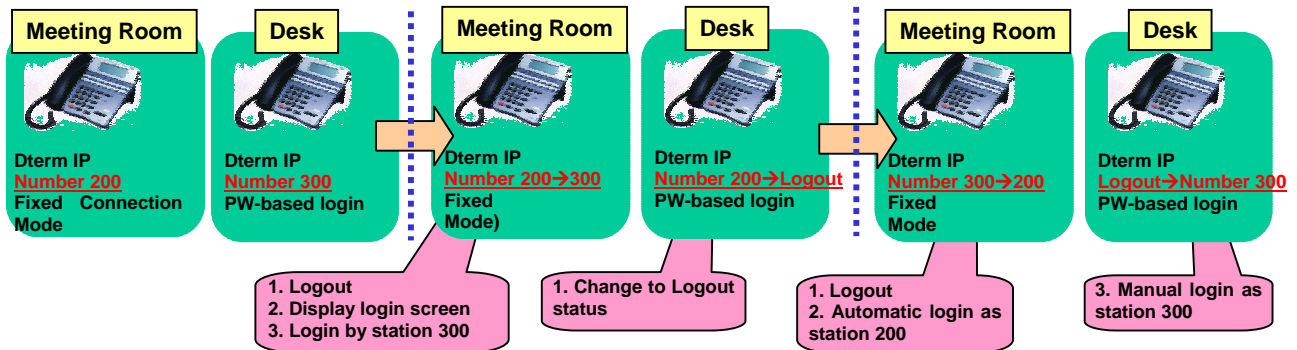
Figure 2 Automatic Login to Home Station Number (Case-1)

Case-2: User A desk phone (station 200) is in Fixed Connection Mode. User A visits another office and logs-in with User A station number (200) from a soft phone. At this time, User A desk phone becomes log-out status. After User A logs-out the soft phone, User A desk phone is automatically logged in to station number (200).

Figure 3 Automatic Login to Home Station Number (Case-2)

3.1.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)
- Dterm IP or Dterm SP30 Soft Phone

3.2   Remote PIM over IP Enhancement

3.2.1   Backup Call Routing to ISDN in Remote PIM Survival Mode

Calls within a Remote PIM over IP network are made by dialing a station number. If IP network fails, the Remote Site system works as a survival mode. In this case, prior to R12.2, the station user had to dial an outside telephone number associated with the called station number to call to the station in the Remote PIM network. In R12.2 software, if IP network fails, calls to Main/Remote Sites can be automatically routed via ISDN network. When the calling station dials the called station number, the system translates that number to the outside telephone number and makes the outgoing call via ISDN.
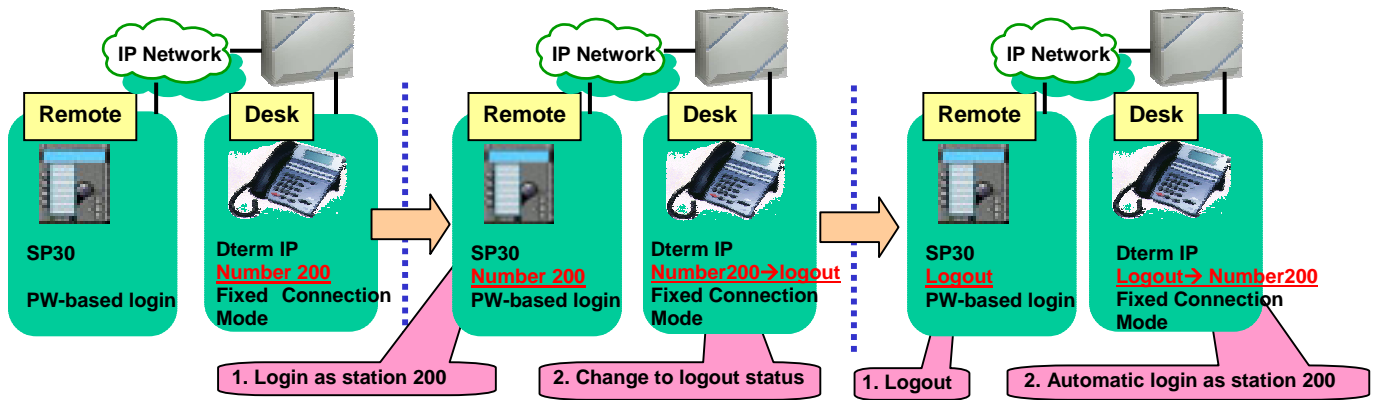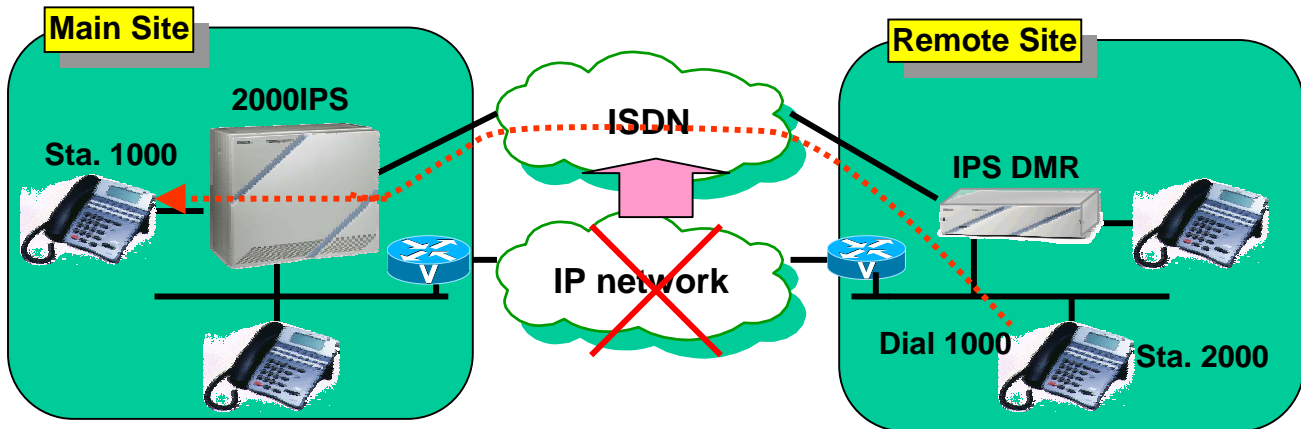

Figure 4 Backup Call Routing to ISDN in Remote PIM Survival Mode

3.2.2   Benefits

Regardless of the Remote PIM status (survival mode or not), a station user can make a call to Main Site/Remote Sites by dialing the station number in the Remote PIM network (no need to dial outside telephone number).

3.2.3   Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)
- ISDN PRI or BRI Trunk Card at Main and Remote

3.3 Mobility Access (MA) Enhancements

In R12.2 software, below enhancements can be provided for the Mobility Access (MA) feature.

- **Call Forwarding – All Calls (CF-All) set/cancel from a remote MA user**
  A remote MA user can Set/Cancel CF-All feature for their MA station. All calls toward the MA user station are forwarded to another destination, instead of going to the remote MA user.

- **Call Forwarding – Busy (CF-B) when a remote MA user is busy**
  A remote MA user can Set/Cancel CF-B feature for their MA station. When a remote MA user is busy, calls toward the MA user station can be forwarded to another destination.

- **Mobility Access Transfer enhancement**
  With a trunk call in progress the remote MA user can transfer (three way calling) the call. The trunk is placed on consultation hold against the office MA station; the trunk hears office Music on Hold. The remote MA user can then transfer the call to another station in the office by dialing MA DID receiving dial tone and dialing the destination station number.

3.3.1 Benefits

CF-All: When the MA user will be unavailable to take calls remotely the user can set CF-All and have the calls answered by office Voice Mail. When the MA user becomes available CF-All can be canceled. **CF-B:** if the MA user is working from home they can set CF-B and have the calls answered by office Voice Mail when they are in conversation on the home phone.

3.3.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)

3.4 Call Forwarding Enhancements

- When an incoming trunk call is forwarded by Call Forwarding-Outside, Caller ID of the forwarding station can be presented to ISDN by system data programming.

- When an incoming trunk call is forwarded by Call Forwarding-No Answer over CCIS and the call forwarding destination is busy, that call can be returned to the forwarding station by system data programming.

- When an incoming trunk call is forwarded by Call Forwarding-No Answer over CCIS to an operator in the distant office, that call will appear on the NANS key of the Desk Console.

3.4.1 Benefits

The enhancements provide more flexibility for Call forwarding functions.

3.4.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)

3.5 Dial by Name Enhancements

1) **Erase Directory Entry**
Prior to R12.2, a Dterm user can add and modify their directory data from the telephone set. In R12.2 software, the Dterm user can erase the directory data from the telephone set. This is effective for station-based directory data only (system-based directory data cannot be added, modified and erased from the telephone set).

2) **Character Deletion**
Prior to R12.2, when a Dterm user enters an incorrect character or number during directory search or directory data entry, the user cannot modify the input characters or numbers (need back from the start). In R12.2 software, the Dterm user can delete the incorrect characters or numbers from the last input and re-enter the correct characters or numbers.

3.5.1 Benefits

These enhancements provide more flexibility for the Dial by Name feature.

3.5.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)

3.6 Flexible Ringing Assignment by Day/Night Mode

Prior to R12.2, a ringing-on/off can be assigned per Dterm line/trunk key. In R12.2 software, in addition to this, the ringing-on/off per Dterm line/trunk key can be assigned by Day/Night mode status. This enhancement is applicable for Dterm, Dterm IP and Soft phone SP30.

Example: When a Dterm station 2000 has station 2001, 2002 and 2003 as sub-line, below ringing-on/off pattern can be configured.

Flexible Ringing Assignment (Example)

Line Key	Station Number	Day Mode	Night Mode
1	2000 (My Line)	Ringing-on	Ringing-on
2	2001	Ringing-on	Ringing-off
3	2002	Ringing-off	Ringing-on
4	2003	Ringing-off	Ringing-off

3.6.1 Benefits

More flexible ringing-on/off patterns can be provided to the customers.

3.6.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)

3.7 Hotel/Motel Printer Enhancements (PMS-IP)

Prior to R12.2, an improvement in the hotel functions using PMS via IP was to allow the print out of an execution history. Maid/Room Status results were added with R12.2 software.

- Automatic Waku-Up Set/Cancel
- Automatic Wake-Up Result
- Do Not Disturb Set/Cancel
- Message Waiting Set/Cancel
- Room Cut-Off Set/Cancel
- Check-In/Check-Out Set/Cancel
- PMS Interface Established/Failed
- Maid/Room Status change results

Also with R12.2, additional information can be output to the Hotel/Motel Printer.
- Immediate Printout Call Detailed Records

3.7.1 Benefits

This printout information can be used as an evidence of Hotel/Motel service set/cancel activities. It is also useful for troubleshooting regarding the PMS interface.

3.7.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)
- SPN-AP00B MRC-G (AP) (SC-3561 IPS MRCA PROG-C1)
- RS PRT-15S CA-A

3.8 External Paging with Meet-Me over Tie Line

Prior to R12.2, the External Paging with Meet-Me feature is available in a standalone configuration. Now, in R12.2 software, this feature is also available over tie line network. A station or an operator can dial-access to voice paging equipment located in another PBX connected via tie line trunk and connects both parties automatically after the page party has answered the page by dialing an access code.

Available tie line trunk type is 4ODT (2-wire/4-wire E&M trunk), T1 trunk and CCIS trunk (These trunks must support release signal sending).

Available paging trunk (external voice paging equipment interface) type is 4ODT and 8COT.

Voice Paging Equipment

Tie line (ODT/E1/CCIS)

Paging Trunk
(COT/ODT)

1) Dial tie line access code
2) Dial external paging feature access code
3) Dial desired party number

4) Dial Meet-Me access code
   (Paging answer access code)
5) Paged party is immediately
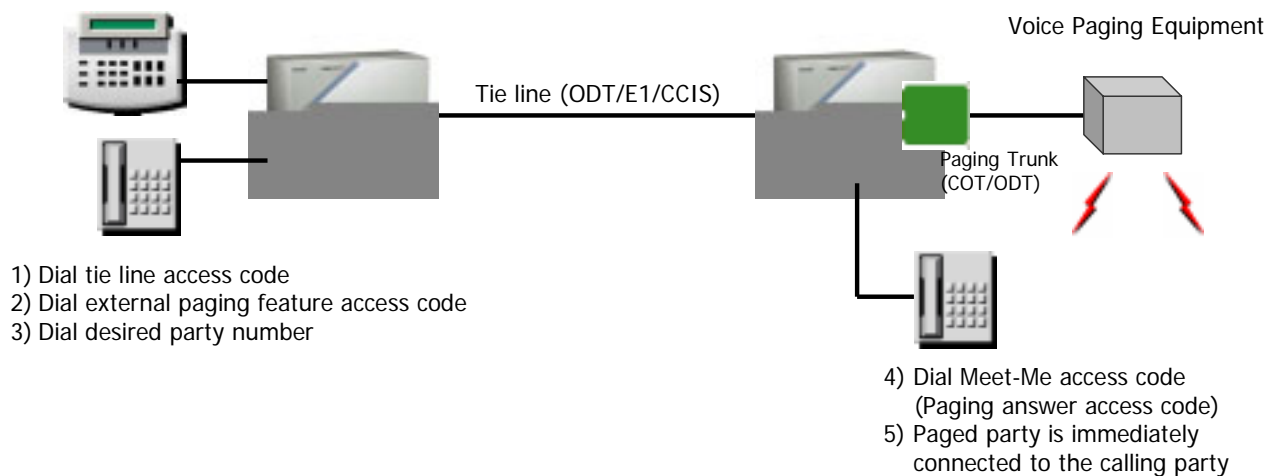   connected to the calling party

Figure 5 External Paging with Meet-Me over Tie Line

3.8.1 Benefits

The External Paging with Meet-Me feature is available over tie line network.

3.8.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)
- Tie line trunk: 4ODT, T1 trunk or CCIS
- Paging trunk: 8COT with DK00, or 4ODT

3.9 On-line MP-FP Command Output via RS-232C

This is a maintenance feature.   Prior to R12.2, MP-FP traces can be retrieved during off-line mode.   In R12.2, the MP-FP traces can be retrieved during on-line mode (SENCE switch=4), by entering commands (CMF6, Y=2).   The traces data can be retrieved by MATWorX or can be output via RS-232C (Modem built into MP).

- Up to 3 FP/APs can be specified for output.
   (CMF6, Y=2, 1st data=20, 21 and 22)
- Up to 3 commands can be specified for output.
   (CMF6, Y=2, 1sr data=10, 11 and 12)
- Byte location and it's value can be specified for output.
   (CMF6, Y=2, 1st data=30, 31 and 32)
- Line status of specific station and trunk can be output.
   (CMF6, Y=2, 1st=40)
- Trace data can be stored in MP (max. 64 Kbytes).
   Note: The stored data is erased when system initial is executed.
- Trace data output can be stopped by pressing the ESC key on the MATWorX.
- Conditions for trace data output <u>via RS-232C port</u>
  - Traffic condition: Up to 2500BHC (transmission speed is 9600bps)
                              Up to 5000BHC (transmission speed is 19200bps)
  - When 16sec has passed after the RS-232C cable is unplugged, the trace data output will automatically stooped.   In this case, the trace data in the buffer memory are remained.
- Conditions for trace data output <u>via built-in modem</u>
  - Traffic condition: Up to 2000BHC
  - When modem line is disconnected, the trace data output will stopped immediately.   In this case, the trace data stored in the buffer memory is deleted.
  - The built-in modem is automatically disconnected when there is no communication during 10 minutes.

3.9.1 Benefits

This enhancement increases problem solving efficiency.

3.9.2 Required Software and Hardware

- 64 PORT SYS SOFTWARE - 3700 SERIES R12.2 (FD)
- MATWorX IPS Ver.12 or later version

3.10 MATWorX Enhancements

Below is a list of MATWorX Add-Ins, which is enhanced to support the R12.2 related features.

- Service Restriction Add-in
- Station Assignment Add-in
- Station Data Copy / Move / Swap Add-in
- Digit Conversion Add-in
- Numbering Plan Add-in
- Traffic Measurement Add-in
- Office Data Save / Load / Verify Add-in
- Trunk Route Add-in
- Setting System Accommodation Data Add-in
- MOC Mode Add-in

3.10.1 Benefits

This enhancement provides a GUI-based data programming for R12.2 related features.

3.10.2 Required Software and Hardware

- MATWorX IPS Ver.12 or later version

4. Software and Hardware

Part Number	Description	Comments
New Software		
153333	**64 PORT SYS SOFTWARE 3700 SERIES R12.2 (FD)**	**3700 R12.2 Series Software**
New Hardware		
153137	**SPN-CP24D MP**	**Main Processor for IPS** • **Same functionality as SPN-CP24C MP, except** - **Number of music source(8)** [Note1] • **R11 or ealier software cannot be used with this CPU.** • **RoHS-compliant** **Replaces SPN-CP24C MP**
151423	**SPN-CP27B MP**	**Main Processor for IPS Backup MP system** • **Same functionality as SPN-CP27A MP, except** - **Number of music source(8)** [Note1] • **R11 or ealier software cannot be used with this CPU.** • **RoHS-compliant** **Replaces SPN-CP27A MP**
153426	**SPN-CP31D MP**	**Main Processor for IPS DML/DMR** • **Same functionality as SPN-CP31C MP, except** - **Number of music source(8)** [Note1] • **R11 or ealier software cannot be used with this CPU.** • **RoHS-compliant** **Replaces SPN-CP31C MP**

153256	**SPN-DTA(PRT)-A(AP)**	**PN-DTA (SC-3592 IPS PRTDA PROG-A1)**
		• **SPN-DTA(PRT)-A(AP) card used for:**
		  - **ISDN Primary Rate Interface (23B+D)**
		  - **T1 Trunk Card**
		• **RoHS-compliant**
		Replaces SPN-24PRTA-D (AP)

153122	**SPN-DTA(CCT)-A(AP)**	**PN-DTA (SC-3629 IPS CCTDA PROG-A1)** • **SPN-DTA(CCT)-A(AP) card used for:** - **Digital CCIS Trunk Interface** • **RoHS-compliant** **Replaces SPN-24CCTA-A (AP)**

Part Number	Description	Comments
153255	SPN-DTA(QSIG)-A(AP)	PN-DTA (SC-3630 IPS PRTDB PROG-A1) • **SPN-DTA(QSIG)-A(AP) card used as:** – **Q-SIG Interface** • **RoHS-compliant** **Replaces SPN-24PRTA QSIG (AP)**
153125	SPN-CFTC-A(AP)	**32-Party Conference Trunk card** • **Provides Group call, Meet-Me Conference and Station/Attendant Controled Conference** • **Some operation differences between SPN-CFTC-A (AP) and PN-CFTB. See Note 2** • **RoHS-compliant** **Replaces SPN-CFTC(AP) and PN-CFTB**

153486	SPN-AP00B MRC-G(AP)	PN-AP00-B (SC-3561 IPS MRCA PROG-C1)
		• **In R12.2, additional information can be output to the Hotel/Motel Printer.**
		   – **Maid Status change results**
		   – **Immediate printout for call detailed records**
		• **RoHS-compliant**
		Replaces SPN-AP00B MRC-F (AP)

153335	AP00B MRC-G (FD)	**For updating the following cards to SC-3561 IPS MRCA PROG-C1.** **SPN-AP00B MRC-C / MRC-E / MRC-F (AP)**

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NOTE 1

- Due to RoHS compliance reason, a melody IC for Music-on-Hold on MP board is changed to a new one.
- Due to musical copyright reason, some music contents have to be removed from the melody IC
- Below table shows the comparison of the music contents between current and new MP board

	Existing MP	**New MP**
	PN-CP24-C PN-CP27-A PN-CP31-C	PN-CP24-D PN-CP27-B PN-CP31-D
1	Menuet [default setting]	Menuet [default setting]
2	Nocturne	Nocturne
3	For Elise	For Elise
4	The Maiden's Prayer	The Maiden's Prayer
5	When the saints go marching in	When the saints go marching in
6	Amaryllis	Amaryllis
7	Spring (from Four Seasons)	Spring (from Four Seasons)
8	Ich bin ein Musikante	Ich bin ein Musikante
9	If you love me	Not Available
10	Let it be	Not Available
11	It's a small world	Not Available

NOTE 2

- Due to a RoHS compliance reason, PN-CFTB and PN-CFTC is consolidated to PN-CFTC-A.
- Below table shows a feature comparison between PN-CFTB vs. PN-CFTC-A

Feature Capacity

	CFTB	**CFTC**
Card type	• LT card	• AP card
Number of conference parties	• 6 parties (1 card) • 10 parties (2 cards)	• 32 parties
Number of ports per card	• 8 LT ports (1 card) • 16 LT ports (2 cards)	• 32 AP ports
Number of cards per system	• 4 cards	• 8 cards (max.256 ports)
Number of conference group per system	• 6-party x 4 • 10-party x 2 • 6-party x 2 + 10-party x 1	• 8-party x 4 • 16-party x 2 • 16-party x 1 + 8-party x 2 • 32-party x 1

Feature Comparison

	CFTB	CFTC
Station Controlled Conference	X	X (Note)
Attendant Controlled Conference	X	X (Note)
Meet-Me Conference	---	X
Group Calling – Automatic Conference	X	X
Group Calling – Broadcasting	---	X

Note: Operating procedure is a little bit different between CFTB and CFTC-A (see next section).

Operating Procedure Comparison
- **Station/Attendant Controlled Conference**

CFTB	CFTC
1. The conference leader goes off hook, or ATT presses a LOOP key. **2. Dial the access code A for CFTB and receive special dial tone.** 3. Dial the number of the 1st party to be added to the conference. 4. Press the Transfer key or SHF after the party answers and then dial the access code B to add them into the conference. **5. Sequentially call all desired parties and connect them to CFTB by dialing the access code B.**	1. The conference leader goes off hook, or ATT presses a LOOP key. 2. Dial the number of the 1st party to be added to the conference. 3. Press the Transfer key or SHF after the party answers and then dial the access code for CFTC. **4. The conference leader goes on hook, or ATT presses a RELEASE key. The 1st party is connected to the conference.** **5. Repeat procedure 1. to 4. above for all desired parties and connect them to CFTC.**

- **Station Controlled Conference (Dterm line key conference)**

CFTB	CFTC
The 6/10 party conference key and 5 or 9 line keys for participants must be assigned to Dterm of the conference leader. 1. Press the line key. 2. Dial the number of the 1st party to be added to the conference. 3. After the party answers, press the Hold key. 4. Sequentially call all desired parties using other line keys, and placing each on hold after the party answers. **5. After holding the last party, press the Conference feature key. The last party is connected to CFTB.** **6. Sequentially press the holding line keys to connect the participants to CFTB.**	Line keys for the same number as participants must be assigned to Dterm of the conference leader. 2. Press the line key. 3. Dial the number of the 1st party to be added to the conference. 4. After the party answers, press the Hold key. 5. Sequentially call all desired parties using other line keys, and placing each on hold after the party answers. **6. After holding the last party, repeat below procedure to connect the participants to CFTC:** **a) Press the holding line key** **b) SHF** **c) Dial access code for CFTC** **d) Go on hook to connect the participant to CFTC.**

5. Technical Documentation

Description	Revision
NEAX 2000 IPS System Manual	3.0
NEAX 2000 IPS Installation Manual	3.0
NEAX 2000 IPS Command Manual	3.0
NEAX 2000 IPS ISDN System Manual	3.0
NEAX 2000 IPS Q-SIG System Manual (PRT)	3.0
NEAX 2000 IPS CCIS System Manual	3.0
NEAX 2000 IPS Office Data Programming Manual	3.0
NEAX 2000 IPS Maintenance Manual	3.0
NEAX 2000 IPS OAI System Manual	3.0
NEAX IPS DM Hardware Installation Guide	3.0
NEAX 2000 IPS Feature Programming Manual	3.0
NEAX 2000 IPS Business/Hotel Features & Specifications	9.0
NEAX 2000 IPS CCIS Features & Specifications	9.0
NEAX 2000 IPS ISDN-QSIG Features & Specifications	9.0
NEAX 2000 IPS SMDR/MCI/PMS Specifications	3.0