NEC

DSX

ATC SIP Trunk Setup

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Issue 1.01

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Revision History		
Issue	Date	Revisions
1.00	4/11/11	• Initial release.
1.01	4/22/11	• Updated required software level, expanded RTP port forwarding range, and added System Administrator screen shots.

Contents

Tables

1 Overview

The DSX is compatible with ATC SIP Trunking. This setup guide summarizes the account information you will receive from ATC and provides step-by-step instructions on how to program that information into the DSX.

You can set up SIP trunks as standard loop start lines or DID lines. All the feature available with other types of loop start and DID lines are also available with ATC SIP trunks. For details on the features available with loop start and DID lines, refer to the on-line DSX Software Manual at: http://www.necdsx.com/docs/dita/dsx_v3_complete/index.html

2 ATC Setup

To set up your SIP Trunking account, contact ATC at http://www.americantelephonecompany.com. Once your account is set up they will provide you with the following service information:

Table 1: ATC Account Information

Option	Description
ATC Server Address	The ATC Server Address is the IP address to which the DSX sip lines will connect.
Fixed WAN IP Address	ATC SIP Trunking terminates to a fixed WAN IP address at your site. Normally, this is the WAN IP address of the router to which the DSX is connected.
DID(s)	These are the telephone numbers that users will dial to reach you over your ATC SIP trunks.

3 System Router Setup

3.1 NAT and SIP

In the router to which the DSX is connected, enable NAT and disable all special SIP management features (such as SIP ALG).

3.2 Port Forwarding

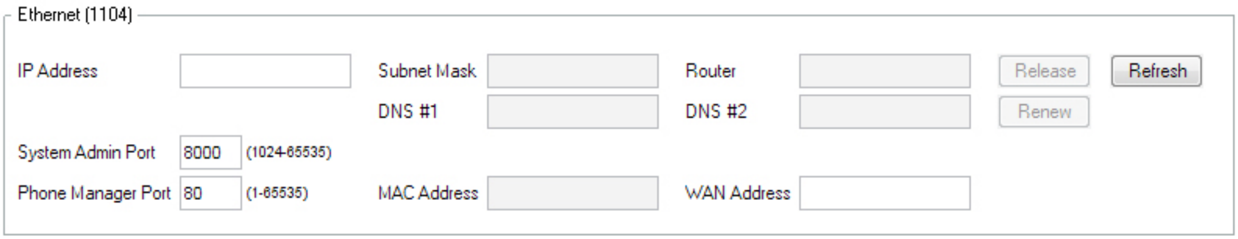
Forward UDP ports 5060 and 1024 through 1215 to the DSX system's IP address.

4 DSX Setup

4.1 Software Level

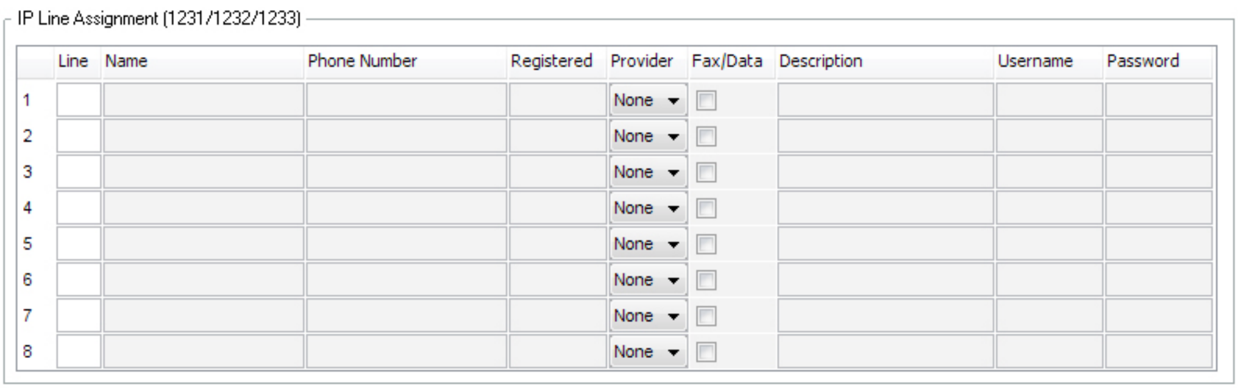
3.31.96 or higher.

4.2 DSX WAN IP Address



1104-09: WAN IP [SYSTEM: CONFIG: COMMUNICATION: ETHERNET: WAN ADDRESS]
Enter the WAN IP address of the router to which the DSX system is connected.

4.3 Assign SIP Lines



1231-01: IP Lines [SYSTEM: PORTS: IP LINES: IP LINE ASSIGNMENT]
The first DSX SIP line is the first line beyond the last assigned line. Each SIP line uses an IP resource (licensed VoIP port) in DSX. The maximum number of VoIP licenses is 8 in DSX-40 and 16 in DSX-80/160.

Example with DSX-40:

- The first SIP line in a DSX-40 without a COIU expansion card is line 5. Available SIP line numbers are 5-12.
- With the COIU expansion card installed, the first SIP line is line 9. Available SIP line numbers are 9-16.
- DSX-40 supports a maximum of 8 VoIP licenses. When the total number of licenses are in use, only Peer-to-Peer calls are available.

Example with DSX-80/160:

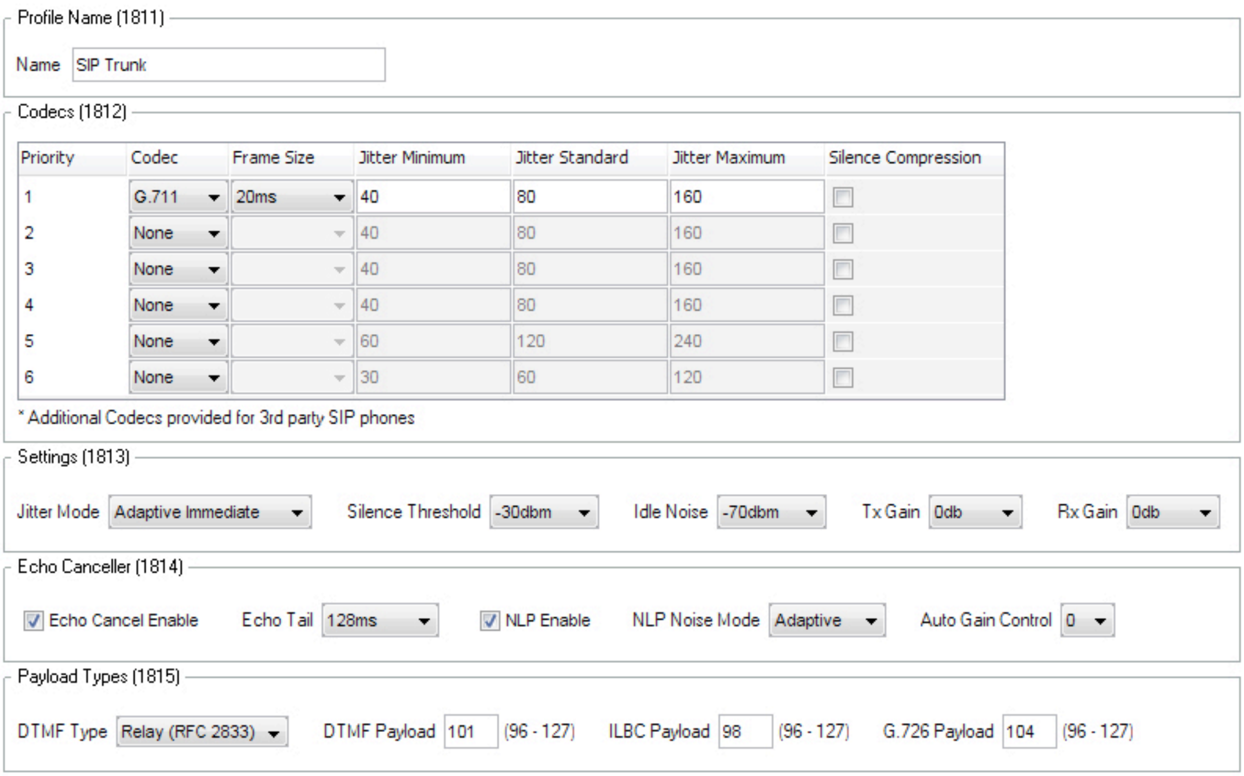
- The first SIP line in a DSX-80/160 with a single 8COIU card is line 9. Available SIP lines are 9-17.
- The last line number in DSX-80/160 is 64. In a system with an 8COIU and two T1/PRI cards, this will limit the available number of SIP lines.
- DSX-80/160 supports a maximum of 16 VoIP licenses. When the total number of licenses are in use, only Peer-to-Peer calls are available.

1232-01: IP Line Provider Number [SYSTEM: PORTS: IP LINES: IP LINE ASSIGNMENT]
Assign each SIP line in DSX to a provider number (1 or 2). DSX supports up to two providers simultaneously.

Example: If ATC is your only SIP trunk provider, assign all the SIP lines designated in 1231-01 to provider 1.

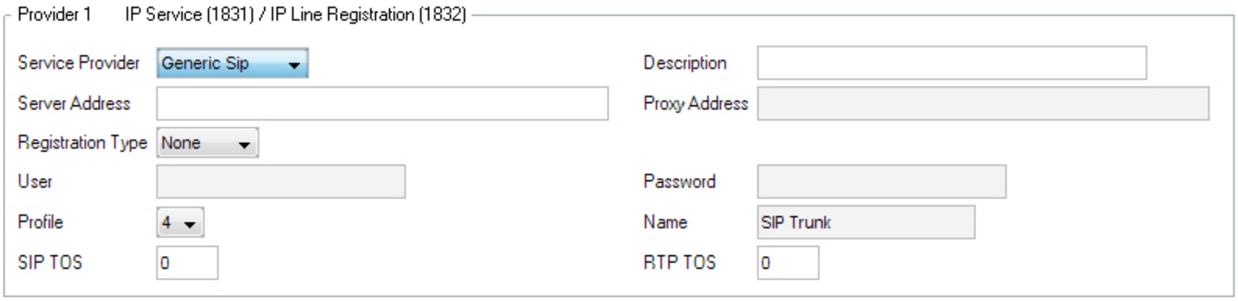
1232-02: IP Line Username [SYSTEM: PORTS: IP LINES: IP LINE ASSIGNMENT]
1232-03: IP Line Password [SYSTEM: PORTS: IP LINES: IP LINE ASSIGNMENT]
These options are not used with ATC SIP trunks.

4.4 Codec Setup



1812: Codecs [SYSTEM: VOIP: PROFILE X: CODECS]
1815: DTMF [SYSTEM: VOIP: PROFILE X: PAYLOAD TYPES]
For the Profile you are using for ATC SIP trunks (normally 3 or 4), set Priority 1 for *G.711*, *20mS* Frame Size, with DTMF set to *Relay (RFC 2833).* Set Priority 2-6 to *None.*

4.5 Select the SIP Trunk Provider Type



1831-01: Provider Number [System: VoIP: Providers: Provider (1 or 2)]
Select the provider number you want to set up. This selection corresponds to the provider number you assigned to the SIP lines in *1232-0*1.

Example: If ATC is your only SIP trunk provider, and you have chosen provider 1 in *1232-01*, select provider 1 for this option also.

1831-02: Provider Type [System: VoIP: Providers: Provider (1 or 2): Service Provider]
Dial 12 to choose *ATC* as the type for the provider selected in 1831-01.

1831-03: Provider Name [System: VoIP: Providers: Provider (1 or 2): Description]
The provider name is an optional 18-character entry that describes the provider. Enter any name you like – the entry does not affect provider setup or registration.

1831-04: Profile [System: VoIP: Providers: Provider (1 or 2): Profile]
Select the VoIP profile that the system will use when connecting to the SIP trunk provider. The entry you make here corresponds to the profiles set up in programs 1811-1815. Choose a profile that corresponds to the entries you made in *4.4 Codec Setup* above.

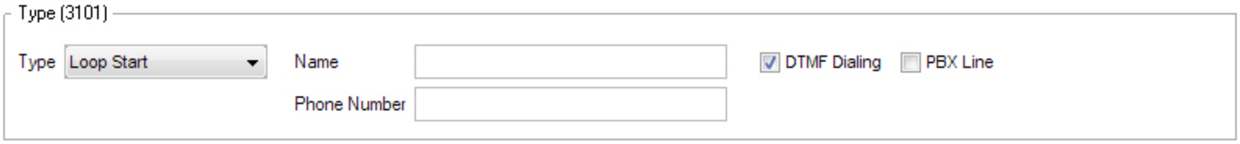
4.6 Set Up the SIP Trunk Registration

1832-01: Provider IP Registration [System: VoIP: Providers: Provider (1 or 2): Server Address]
Select the provider number you want to set up (see 1831-01) and enter the Table 1 *ATC Server Address* entry as it was provided to you by ATC. This option uses the text entry method.

1832-02: Registration Type [System: VoIP: Providers: Provider (1 or 2): Registration Type]
Choose the IP line registration type. DSX IP lines can share the same registration (*01: Common*), have a unique registration for each line (*02: Per Line*), or require no SIP registration (*00: None*) . For ATC, choose *00: None*.

1832-03: Account Username [System: VoIP: Providers: Provider (1 or 2): User]
1832-04: Account Password [System: VoIP: Providers: Provider (1 or 2): Password]
1832-05: Proxy [System: VoIP: Providers: Provider (1 or 2): Proxy Address]
1832-06: SIP Type or Service (ToS) [System: VoIP: Providers: Provider (1 or 2): SIP TOS]
1832-07: RTP Type of Service (ToS) [System: VoIP: Providers: Provider (1 or 2): RTP TOS]
These options are not used with ATC SIP trunks.

4.7 Assign DID Numbers to your SIP Lines



3101-07: Telephone Number [Lines: Config: Setup: Type: Phone Number]
For each of your SIP lines, enter a telephone number that corresponds to one of the *DID* numbers in Table 1. Each line must have a unique entry. This entry is required for both Loop Start and DID lines.

4.8 Fax Setup

1812: Codecs [System: VoIP: Profile x: Codecs]
1815: DTMF [System: VoIP: Profile x: Payload Types]
SIP trunks to be used for fax must be set for *G.711*, *20mS* Frame Size, with *Inband* DTMF. The fax is transmitted in-band DTMF only.