

INTUITY AUDIX LX

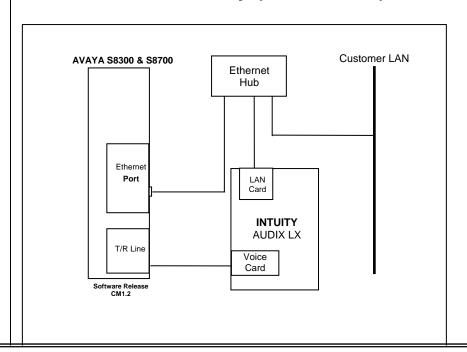
Message

Server

Configuration Note 9513 – RIP 02/10

AVAYA S87x0, S8x00

w/ C-LAN Connectivity (Release 1.0)



IMPORTANT:

This CN is for Support ONLY of Existing Integrations as originally installed. No NEW Sales or Conversions to different Integrations are supported.

LANLink allows the AVAYA S8300/8700 and the INTUITY AUDIX LX ™ system to communicate over a private, dedicated LAN or a customer's LAN.

Avaya LANLink requirements

1.0 METHOD OF INTEGRATION

Connectivity to the INTUITY AUDIX LX $^{\text{TM}}$ through LANLink Software allows a telephone caller to integrate with a Host computer for information. LAN connectivity provides the ability to transfer messages through a local area network. The INTUITY AUDIX LX acts as the client computer and the S8300 as the server, and the TCP session will be initiated by the INTUITY AUDIX LX. There are two connectivity methods supported. Connecting can be achieved through a Hub or Router connection, or through the customer's LAN.

2.0 AVAYA OVERLAN ORDERING INFORMATION

- LANSet SWIN package to replace the existing X.25 DCIU for INTUITY AUDIX LX to Avaya \$8300 connectivity.
- INTUITY AUDIX LX Software Release 1.0-17.5.
- C-LAN Linux LANset Package.

Disclaimer: Configuration Notes are designed to be a general guide that reflects AVAYA Inc.'s experience configuring its systems. These notes cannot anticipate every configuration possibility given the inherent variations in all hardware and software products. Please understand that you could experience a problem not detailed in a Configuration Note. If so, please notify the TAC/TSO at (408) 922-1822, and if appropriate, we will include the problem in our next revision. AVAYA Inc. accepts no responsibility for errors or omissions contained herein.

PBX hardware requirements

3.0 PBX HARDWARE REQUIREMENTS

- MM711 Analog voice port cards, 8 ports per card
- Ethernet port on internal board

3.1 PBX SOFTWARE REQUIREMENTS

• Minimum Software on the S8300/87x0/8510:

R011x.02.0.110.4; CM1.2

Host switch must have Avaya Communication Manager 1.2 or higher

Remote switches can be DCS or DCS+ to older switches, allowed with TCP/IP to Release 7.1.

<u>Note</u>: For S83xx systems that <u>do not</u> have a CLAN card, administer the processor channel interface link as **p** to use the Processor Ethernet interface for adjunct connectivity. Without a CLAN card there is no need to administer Ethernet data mode.

3.2 LAN CONNECTIVITY

- Ethernet LAN connectivity TCP/IP
- Two Methods Supported:
 - Direct through a dedicated 10baseT hub
 - Through a router on a customer LAN

3.3 CUSTOMER-PROVIDED EQUIPMENT

- Wiring necessary to support the physical LAN (CAT 3 minimum)
- Ethernet Hub (location of 10baseT optional)

3.4 DOCUMENTATION NEEDED

See the INTUITY AUDIX LX documentation CD-ROM:

- Getting Started
- Switch Integration Planning
- Administration for switch to INTUITY AUDIX LX
- Installation for Avaya G700 Media Gateway controlled by an S8300 or S8700 (PN 555-234-100)

4.0 SUPPORTED FEATURES

- Calling Party ID
- Called Party ID
- Internal vs. External

- Direct vs. Redirected Call
- Busy/Ring-no-answer
- Message Waiting

5.0 OVERLAN QUALIFICATION

See the INTUITY AUDIX LX documentation CD-ROM for Switch integration requirements and LAN integration.

Planning Steps Before Installation

☐ Complete the planning worksheets in the LAN/Switch Integration Planning before the installation. Completing the Planning worksheets ensures that the installer has all the needed information.

These worksheets include:

- Voice ports stations on Host switch
- Voice port extensions, equipment location and names
- LAN Data for switch link to INTUITY AUDIX LX system
- Names and IP addresses for INTUITY
- Hunt groups for Host switch
- Call coverage path
- LAN Data for INTUITY AUDIX LX
- ☐ Determine how the connection being made from the Avaya INTUITY AUDIX LX system to the DEFINITY switch. Choose from the following:

Option 1: Private LAN, no connectivity to customer LAN (uses private LAN addresses)

- Preferred option, most robust and reliable, no dependency on customer's network.
- Crossover Cable is used for ease of connections.
- Hub can be used instead of crossover cable extended distances. Up to four cables can be used.

Option 2: Customer LAN

- Preferred option when using Avaya Message Manager or AUDIX Digital Networking.
- Uses switch or router to provide a private collision domain.

- Minimal dependency on customer's network.
- Customer must provide equipment and administer network for private segment.
- Customer's LAN administer must be present during setup.
- ☐ If Option 2 is chosen, the following information is needed from the customer.
- a) Gather customer network physical connectivity information:
 - 1. Location of 10BaseT network access point (hub, switch or router)
 - 2. Distance between C-LAN and network access point (328 ft. or 100 m maximum)
 - 3. Wiring access point, existing or new, Category 5 minimum required
- a) Customer network administration information:
 - 1. IP address of C-LANs, adjuncts, and gateways
 - 2. Node names of C-LAN adjuncts and gateways
 - 3. Subnet masks for all LAN segments containing C-LANs or adjuncts
 - 4. Gateway IP address for all LAN segments that contain C-LANs, adjuncts, or routers
 - 5. Will all endpoints (C-LANs and adjuncts) be on the same local LAN segment.
- c) Network administration information needs to be mapped into specific administration fields.
- ☐ Sanity check of information obtained and verified by the customer:
 - If C-LAN and adjuncts are on the same LAN segment:
 - Gateway IP address and subnet mask information is valid.
 - All IP addresses contain the same subnet address.
 - If C-LAN and adjuncts are on a different LAN segments, gateway IP addresses are different.

Without the above information, the Avaya technician will be unable to complete the installation. Installations that require the technicians to return because information was not available incur additional charges.

☐ Determine the location of the 10baseT network access point.

□ Determine the distance between the C-LAN and the network access point.
 □ Determine if the customer will need LAN connectivity and support.
 NOTE: The LAN cable, the connector at the end of the cable for connection to the Avaya INTUITY AUDIX LX system, and LAN administration not performed on the Avaya INTUITY AUDIX LX system are the responsibility of the customer, unless specified by contract.
 □ Working with the customer, determine the following:

- The number of ports, drives, and mailboxes required for the INTUITY AUDIX LX. Obtain IP address of C-LANs, adjuncts, and gateways.
- The node names
- Are all endpoints on the same local LAN

6.0 SWITCH CONFIGURATION FOR LAN INTEGRATION

For more information, click Help on the appropriate page or see the INTUITY AUDIX LX CD ROM for detailed information.

The following steps are required on the AVAYA S8300 Switch to prepare for the C-LAN Integration. This is done on the "Host" switch:

- Change dial-plan parameters, enter a number between 1-99 in the local node number.
- Assign the DIAL PLAN TABLE as required:
- DIAL PLAN PARAMETERS
- Local Node Number: X (1-99)
- ETA Node Number:
- ETA Routing Pattern:
- UDP Extension Search Order: local-extensions-first
- 6-Digit Extension Display Format: xx.xx.xx
- 7-Digit Extension Display Format: xxx-xxxx
- Define the Avaya INTUITY AUDIX LX system voice ports as unique stations. Define the following:

STATION

Extension: XXX or XXXX (Enter the 3 or 4 digit extension number)

Type: 2500 (Designate the ports as 2500)

Configure the Link that will connect to the INTUITY AUDIX LX™ system

Name: Audix 1

COS: X (Enter the COS defined for this group of ports)

FEATURE OPTIONS:

LWC Reception: audix

LWC Activation? n

Data Restriction? y

Switchhook Flash? y

Adjunct Supervision? Y

Multimedia Mode: basic

AUDIX Name: Intuity

Define the analog voice port stations on the Host switch using the "add station voice port extension", use "duplicate station <Ext> for the remaining

voice ports.

Define a unique Class of Restriction (COR), and Class of Service (COS), per customer policy.

FRL: x

CLASS OF RESTRICTION

COR Number: xx

COR Description: Audix Ports

APLT? y

Can Be Service Observed? n Calling Party Restriction: none

Can Be A Service Observer? n Called Party Restriction: none

Time of Day Chart: 1 Forced Entry of Account Codes? n

Restriction Override: all Facility Access Trunk Test? n

Restricted Call List? n Can Change Coverage? n

Access to MCT? y Fully Restricted Service? n

Group II Category For MFC: X

Send ANI for MFE? n

MF ANI Prefix: Automatic Charge Display? n

Hear System Music on Hold? y PASTE (Display PBX Data on Phone)? n

Can Be Picked Up By Directed Call Pickup? n

Can Use Directed Call Pickup? n

Group Controlled Restriction: inactive

MF Incoming Call Trace? n

Brazil Collect Call Blocking? n

Block Transfer Display? n

Block Enhanced Conference/Transfer Displays? y

Remote Logout of Agent? n

Station Lock COR: 11

CALLING PERMISSION (Enter "y" to grant permission to call specified COR)

Assign the CLASS OF SERVICE for the voice ports.

Auto Callback: n

Call Fwd-All Calls y

Data Privacy n

Priority Calling n

Console Permissions n

Off-hook Alert n

Client Room n

Restrict Call Fwd-Off Net y

Call Forwarding Busy/DA n

Personal Station Access (PSA) n

Extended Forwarding All n

Extended Forwarding B/DA n

Trk-to-Trk Transfer Override n

QSIG Call Offer Originations n

- Define voice port extensions, equipment location and names
- Define a hunt group and add the Avaya INTUITY AUDIX LX system voice ports to that hunt group (configure local and remote hunt groups as required). Define the local hunt group as 'ucd-mia', and define the message center as 'AUDIX'. Define the remote hunt group as 'ucd' or 'ucd-mia' and define the message center as 'rem-AUDIX'.

The following example defines group 99, and 299 as the pilot number and ext 391, 392, 393 and 394 as the extensions in the hunt group.

HUNT GROUP

Group Number: 99 ACD? n

Group Name: Audix Queue? n

Group Extension: xxx Vector? n

Group Type: ucd-mia Coverage Path:

TN: 1 Night Service Destination:

COR: 1 MM Early Answer? n

Message Center: audix

Message Center AUDIX Name: Intuity

Primary? n

Calling Party Number to INTUITY AUDIX? y

LWC Reception: audix

AUDIX Name: Intuity

Messaging Server Name:

Group Number: 99 Group Extension: xxx Group Type: ucd-mia

Member Range Allowed: 1 - 1500 Administered Members (min/max): 1/4

Total Administered Members: 4

GROUP MEMBER ASSIGNMENTS

Ext Name (24 characters)

1: xxx Audix 1

2: xxx Audix 2

3: xxx Audix 3

4: xxx Audix 4

• On the System-Parameters Maintenance screen, page 2, change system parameters maintenance and set Packet Intf2 to 'Y' to activate the Packet-Interface 2. Note that "01A07" is used as an example only. This example shows the bottom of the screen only, do not change any other existing entries on this page.

SPE OPTIONAL BOARDS

Packet Intf1? <u>n</u> Packet Intf2? <u>y</u>

Bus Bridge: 01A07

- If the S8300 or INTUITY AUDIX LX is connected to a customer LAN/WAN the customer must supply the IP addresses and subnet mask to be used. In addition, they must also supply the IP addresses for remote locations.
- Configure Node Names AUDIX MSA (change node-names audix-msa) Define the AUDIX node name and IP address as appropriate. The following is an example of the IP addresses defined when listing node names.

NODE NAMES

<u>Type</u>	Name	<u>IP Address</u>		
AUDIX	Intuity	xxx.xxx.xx		
IP	cdr	xxx.xxx.xxx		
IP	cms	xxx.xxx.xxx		
IP	default	0. 0. 0. 0		
IP	gateway	xx.xxx.xx		
IP	procr	xxx.xxx.x.xxx		

• Configure the IP Interface screen (change ip-interfaces).

Inter-region IP connectivity allowed to: N

Enabled: Y

Network Region: 1

Type: c-lan		
Slot: (Enter the equipment location)		
Code/Sfx:		
Node Name:		
Subnet Mask: Default entry as 255.255.255.0		
Gateway Address:		

- The Ethernet data module does not apply to the S8300.
- Administer a processor channel for the link from the switch to the Avaya INTUITY AUDIX LX AUDIX LX system.

From the Processor Channel Screen (Use the *change communication-interface processor-channels command to access this.*)

PROCESSOR CHANNEL ASSIGNMENT Proc Gtwy Interface Destination Session Mach Chan Enable Appl. To Mode Link / Chan Node Port Local / Remote ID 1: _y _audix ___ s _ P _5002 intuity 0 1 1 1 1

- Use any Processor Channel. Processor channel "1" is preferred. Processor Channel "59", or any other channel may be used to match previous version of a ECS installation.
- Enable: Always set to "y", this channel will not go active until the link is enabled on the Ethernet Data Module.
- Appl: Set to "audix" for INTUITY AUDIX LX.
- Mode: Always set to "s" for INTUITY AUDIX LX application.

- Interface Link must be set to "P" (primary) for an S8300. For S8700 set it to "1" (or the appropriate link; Note: range is 1 to 33).
- Channel: Set to "5002" for INTUITY AUDIX LX. If this is the only switch connected to the INTUITY AUDIX LX, if this is a shared INTUITY AUDIX LX contact ATAC or NIC support. Multiple nodes will not be supported without a design. You must contact the Network Implementation Center.?? Took out sentence that says submit E-1154 to the SDSC.??
- Destination Node: This name must match the name assigned to INTUITY AUDIX LX on the Node-Name screen.
- Destination Port: always "0" for direct connect INTUITY AUDIX LX.
- •Session-Local: This field must match the Node Number assigned on the Dial Plan Screen for INTUITY AUDIX LX and CMS, the session local is always "1".
- Session-Remote: This field must match the AUDIX Number assigned in the INTUITY AUDIX LX and the Mach ID field on this Processor Channel screen. For INTUITY AUDIX LX this field is always "1".
- Mach ID: This field must match the AUDIX Number assigned in the INTUITY AUDIX LX and the Session-Remote field on this Processor Channel screen.
- If this customer is using Router's then you must configure the IP router table. From the IP Routing Screen (add ip-route xxx), this step only applies when bypassing the switch's default IP gateway. It is rare for this type of configuration.

You must define the following:

- Route Number:
- Destination Node:
- Gateway:
- C-LAN Board
- Metric:

IP ROUTE 1

Page 1 of 1

IP ROUTING

II NOOTIIN

Route Number: 1

Destination Node: gateway

Gateway: ethernet C-LAN Board: XXXXX

Metric: XXXXX

IP ROUTE 2

Page 1 of 1

IP ROUTING

Route Number: $\frac{2}{\text{cms}}$

Gateway: gateway

C-LAN Board: XXXXX

Metric: 0

• Set up a coverage path for access to the voice port hunt group for message retrieval.

COVERAGE PATH

Coverage Path Number: X

Hunt after Coverage? n

Next Path Number: Linkage

COVERAGE CRITERIA

Station/Group Status Inside Call Outside Call

Active? n n

Busy? y y

Don't Answer?		У	y	Number of Rings: 3
All?	n	n		
DND/SAC/Goto Cover?		у	y	

COVERAGE POINTS

Terminate to Coverage Pts. with Bridged Appearances? N

Point1: h99 Rng: Point2: Point3:
Point4: Point5: Point6:

• Apply the coverage path to stations, and if the switch is an r model, specify the node name of the Avaya INTUITY AUDIX LX system for each station that has a voice mailbox on the Avaya INTUITY AUDIX LX system.

The first step in administering the INTUITY AUDIX LX system for C-LAN integration is to place the INTUITY AUDIX LX onto the customers LAN.

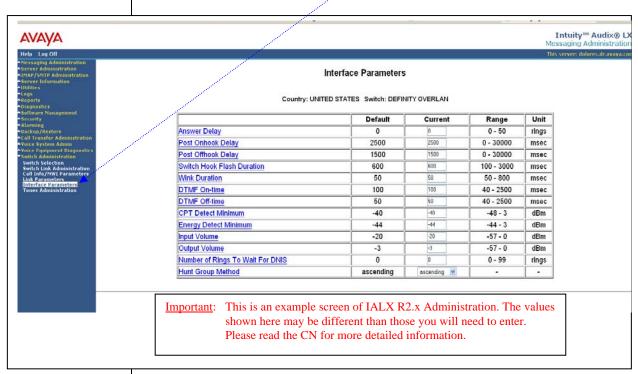
- continued on next page -

6.1 INTUITY CONFIGURATION FOR LAN INTEGRATION

For more information on configuring the INTUITY AUDIX LX TM, click **Help** on the appropriate page, or refer to the INTUITY AUDIX LX TM CD ROM and refer to the Switch Integration chapters for detailed information.

□ The following are the steps required for an INTUITY AUDIX LX ^{TM.} R2.x. INTUITY AUDIX LX 2.x uses a simpler GUI as shown in our example screen below. All you need do is open the category you will administer (shown in yellow text next to the small white triangles in the left column). You can expand these by click on the white triangle to left of it. Once this is done the category will expand providing choices below it. In our example we have opened Switch Administration. The triangle points down to indicate it is open.

Here we selected Interface Parameters. This is noted by the white rectangle around the text Interface Parameters in blue.



HINT: When changes to the Switch Interface Administration are completed, the voice system must then be stopped and started.

- Start at the Administration main menu
- Select Basic System Administration.
- Select Switch Selection.

Once a selection is made the appropriate screen will open allowing you to enter the parameters as noted in the CN.

NOTE: The Definity OVERLAN software may have to be loaded from the software CD that came with the Intuity LX.

- Under **Switch Administration**:
 - Click on Switch Selection
 - Select UNITED STATES DEFINITY OVERLAN
 - Click Save

NOTE: You must stop and start the voice system to make these changes active.

- Under Voice System Admin administer the following as required
 - Click on Assign Chans to Groups
 - If you are setting up different channels to different groups, complete these fields as follows:
 - O Channels: *Enter a number or range* (for example, **0,1,2** or **0 1 2** or **2-4** or **all**).
 - O Groups: *Enter a number or range* (for example, **0,1,2** or **0 1 2** or **2-4** or **all**).
 - Click Save
 - Click Assign PBX Ext/Chans
 - o Starting PBX Extension: *Enter a phone number* (**the pilot number**) for the first channel (up to 7 digits).
 - o Starting Channel Number: Enter a number (start at channel 0).
 - o Ending Channel Number: Enter the last channel number.

IMPORTANT: If numbers are not sequential then you have to do this for each extension and channel.

- Click Save
- Click Assign Services/Chans
 - o Channel: Enter the channel number and/or a range of numbers.
 - Service: (You have the option to select *DNIS_SVC, AUDIX, Chan Tran, chandip, or init_xfer). Choose *DNIS_SVC.
- Click Save
- **Display Number Services** (Numbers you assign to each installed service)
- Click Save
- Under **Call Transfer Administration**. Customers have the option to select numbers to be allowed or denied when they are performing transfers. You can add, delete and display numbers here. Restrictions (denied numbers) can also be administered if any are to be used.
 - If you click on Allowed Number Display, you will see the following for a four-digit dial plan:

From To 9999

Under Switch Administration

- Click Switch Link Administration

- o Switch Link Type: **LAN** (grayed out, cannot be altered)
- o Extension Length : \mathbf{X} (X = number of digits in extension)
- o Host Switch Number: 1
- o Audix Number: 1
- o Country: **United States** (grayed out, cannot be altered)
- o Switch: **Definity Overlan** (grayed out, cannot be altered)
- o Switch Number: 1
- o IP Address/Host Name: xxx.xxx.xxx
- o TCP/IP Port: 5002

NOTE: 5002 is the TCP port for the INTUITY AUDIX LX System used on a DEFINITY. 5002 must always be assigned to the host switch.

- Click Save
- Under Server Administration
- Click TCP/IP Network Configuration
- Administer the following:
 - o Host Name: **AUDIX** (This is the message server name)
 - o Default Gateway Address: See Note below
 - o Primary Name + Domain: Audix.Avaya.com
 - o IP Address: xx.xx.xx (Intuity Audix IP address)
 - o Subnet Mask: 255.255.255.0
 - Aliases: (enter the alias of the interface you are configuring such as Corporate LAN, Private LAN, etc.)
 - o Network Media Type: **auto detect** (default)
 - Enable DNS: **No** (Enter **Yes** only if the customer is using a name server.)
 - O Domain Name: (Name used as default domain for machines)
 - o Name Server: **xxx.xxx.xxx** (IP addresses of the DNS servers)
 - O Search Order: (Specifies the domains that are to be searched when the fully qualified name is not provided for a machine on the customer network)
- Click Save

NOTE: Do not define a default gateway until the physical connection is made.

For remote switches that are not on the IP Network, the host switch provides translation and forwarding facilities on a separate TCP port. This port number and host switch IP address or host name is specified along with the remote switch number.

☐ See the CD-ROM for further details on testing the installation

-----STOPPED HERE

To view the status of the Link:

- Under **Diagnostics**
- Select Link Diagnostics
- Click on *Check Link*
- Switch Number of the Link: 1 (or whichever link # you want to check)
- Click on Check Switch
- You should see "The Switch Link is already UP" at the top of the screen directly under "Link Diagnostics."

To verify packet information is being passed from the Server you can check the link using a ping test in the INTUITY AUDIX LX.

- Under **Diagnostics**
- Select Ping Another Server
- IP Address/Host Name: xxx.xxx.xxx (enter Server IP Address)
- Click Ping Test
- The Packet Statistics will be displayed

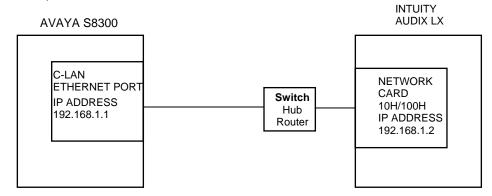
NOTE: If you encounter problems while performing these tasks, review the "switch log" before escalating problems to your Technical Support Center.

At this point all the required programming is complete. Please stop and restart the INTUITY AUDIX LX.

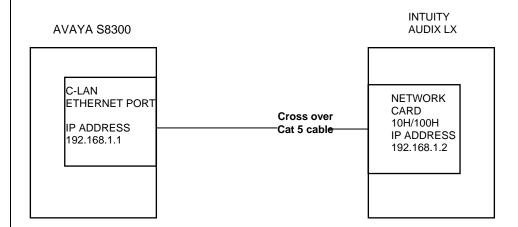
- continued on next page –

6.2 CONNECTIVITY FOR C-LAN CONNECTION

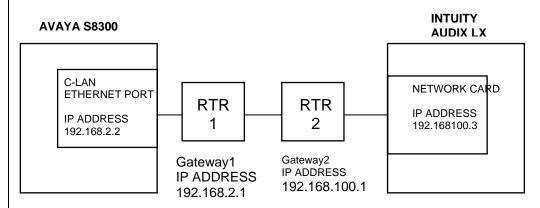
Option 1: Ethernet connection from the S8300 and the INTUITY AUDIX LX system to the customers network equipment (switch, hub, router)



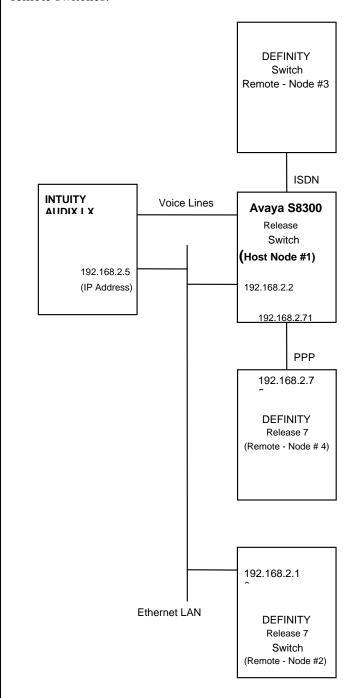
Option 2: Cross over cable from the S8300 switch directly into the INTUITY AUDIX LX system.



CONNECTIVITY WITH ROUTERS



The following illustration shows a typical configuration of a connection to remote switches.



Installing the voice lines

7.0 INSTALLING THE VOICE LINES

- Each voice card supports four analog (Tip/Ring) connections. The
 voice path between the MM711 analog card and the INTUITY
 AUDIX LX TM requires one pair in each RJ11 connection of the
 voice card.
- To ensure that the ports are physically connected correctly, ask the switch administrator to place calls to each individual INTUITY AUDIX LX TM voice channel, one at a time. Use the Voice Channel Monitor under System Configuration from the Main Menu to monitor that the correct channel is dialed from the switch. Cards are assigned bottom to top and ports are assigned right to left.

8.0 CONSIDERATIONS

- **8.1** C-LAN will not support synchronous PPP and asynchronous PPP. 10baseT Half-Duplex will be supported.
- **8.2 DCS is Avaya's networking package.** In a DCS environment, subscribers on the remote nodes might not have the same integration feature functionality as those on the hub node.
- 8.3 AUDIX Networking is supported through modems.
- 8.4 Digital Networking is supported.
- **8.5** A patch is required with Multi Vantage software 1.2. This patch allows callers who dial invalid numbers to be returned to the main menu and given the option to dial another number. Without this patch the system will drop callers who dial invalid numbers.

Important notes

Revision	Issue Date	Reason for Change
Version A	12/02	Initial release
Version B	01/04	Page 10 states interface link on processor Channel Assignment Screen must be set to "P" for Primary. This is only true when integrating an IALX with a S8300. For an S8700 the link should be set to "1" (Choices can be 1-33).
Version C	07/14/05	Updated CN with new Avaya PBX naming conventions
Version D	12/03/07	Added Note in section 3.1 regarding implementing this on system without CLAN card and only PROCR
Version E	3/3/08	Removed consideration regarding Analog station and MWI support. Make changes to accommodate new administration screens in Section 6.0 for IALX 2.0
RIP	02/23/10	Made CN RIP

©2010 AVAYA Inc. All rights reserved. All trademarks identified by the ®, SM and TM are registered trademarks, servicemarks or trademarks respectively. All other trademarks are properties of their respective owners. The above information is based on knowledge available at the time of publication and is subject to change without notice. Printed in U.S.A.

AVAYA Inc.

1033 Murphy Blvd., Milpitas, CA 95035 (408) 577-7000

http://www.avaya.com