

# Switch Integration Requirements

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## Overview

This chapter contains information that explains switch integration processes, terms, and requirements including:

- A brief explanation of the switch integration processes
- An explanation of the switches supported by the Intuity AUDIX <sup>™</sup> system
- Configuration descriptions that explain each of the components required to establish a link with the switch
- Configuration diagrams that show you the different hardware, physical connections, and cables used to connect the Intuity AUDIX system and the switch

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## Purpose

The information in this chapter will help you to understand the basic requirements of an Intuity AUDIX system switch integration *before* you attempt to administer the integration.

## **An Introduction to Switch Integration and DCIU**

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*Switch integration* refers to the sharing of information between a voice messaging system and a switch to provide a seamless interface to callers and subscribers. A fully integrated voice messaging system answers calls with information taken directly from the switch.

To create an integrated environment for the Intuity AUDIX system and an Avaya System 75, DEFINITY Communication System Generic 1 (G1), Generic 3i (G3i), Generic 3r (G3r), Generic 3s (G3s), or Generic 3vs (G3vs) switch, the system uses a Digital Communications Interface Unit (DCIU) link to the switch. The DCIU link transfers digital call information, such as called party and calling party information, to the Intuity AUDIX system. The system exchanges analog voice information with the switch through analog telephone lines. DCIU is also referred to as Switch Communication Interface (SCI) or the Processor Interface (PI).

DCIU acts as a processor with nine physical channels. One of the channels connects to the switch processor. The remaining eight channels can connect to external processors, such as an Intuity AUDIX system, an INTUITY AUDIX® system, another switch on a Distributed Communications System (DCS), or a Call Management System (CMS). Each of the DCIU physical links can have multiple logical channels, with a maximum of 64 channels. The 64 channels can be distributed to the external adjuncts using various methods. For example, if you have an Intuity AUDIX system and a DCS network, you could use 48 of the channels for the Intuity AUDIX system and 16 of the channels for the DCS network.

When integrated through a DCIU link, the Intuity AUDIX system sends message packets to the switch using the BX.25 protocol at 9.6 Kbps. The messages received by the DCIU from the Intuity AUDIX system can be routed to something else, such as the host switch, or they can be routed on another outgoing channel. This processing power allows a remote switch on a DCS, a host switch, and an Intuity AUDIX system to work together.

DCIU serves as a message router or a multiplexer, receiving information on one side and sending the information out to various places, because DCIU routes or *hops* messages from the Intuity AUDIX system to switch.

Unlike the other DEFINITY switches, the G3r switch does not have a processor interface. The G3r relies on a Packet Gateway, or *pgate*, to route information. Because of this, some of the configuration and administration on the G3r differs from the other DEFINITY G3, G1, and System 75 switches.

## DCIU Circuit Card and GPSC/AT/E

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For all DCIU switch integrations with an Intuity AUDIX system, a DCIU or a general-purpose synchronous controller AT-enhanced (GPSC/AT/E) card is required. The DCIU and GPSC circuit cards communicate with the switch through the DCIU link and transfer digital call information. For DCIU and GPSC card installation instructions, see the Intuity AUDIX installation manual.

## SN229 Circuits

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*Do not* connect Intuity AUDIX voice ports to SN229 circuits in DEFINITY switches. The SN229 circuits do not provide the positive disconnect that the Intuity AUDIX system uses for outcalling and AMIS Analog Networking.

Instead, connect to TN742 or SN228B circuits. If you are using SN228B circuits on the DEFINITY switch, use the following settings:

- Program the station as on-prem.
- Set the bcard to 600  $\Omega$  low gain. (The bcard ships from the factory with a setting of 600  $\Omega$  high gain. This setting is too high for use with Intuity AUDIX voice ports and often causes echo.)

## DCIU Switch Connections

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Use the information and diagrams in this section to understand the different configurations for connecting an Intuity AUDIX system with a System 75, DEFINITY G1, G3i, G3r, G3s, and G3vs. You can use the following methods to connect to the switch:

- Isolating Data Interface (IDI) connections
- Modular Processor Data Module (MPDM/7400D) connections

Read the configuration information to determine the best connection for your system.

### Connections through an IDI

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Use the IDI connection where there is little distance between the Intuity AUDIX system and the switch. [Figure 1-1](#) and [Figure 1-2](#) show the IDI connections to the switches that are covered by this book.

The maximum length between an Intuity AUDIX system GP-Sync or DCIU card and an IDI is 15 meters (50 feet). This limitation applies only to the distance between the GP-Sync or DCIU card and the IDI and does not affect or include the distance between the IDI and the switch. (This distance is separately covered in the switch documents). If the Intuity AUDIX MAP and the switch must be more

than 15 meters (50 feet) apart, use an MPDM/7400D to facilitate the connection. See [“Connections through an MPDM/7400D”](#) below for information on MPDM/7400D connectivity.

Hardware Required for the Connection

- One IDI
- One ED-1E43411-Group 175 cable
- One H600-210 cable, Group 1 through 7. The group depends on cable length.
- One gender-changer for the DCIU circuit card (comcode 406783613; shipped with the circuit card)
- *For a DEFINITY G3r or R5/6r only*, one H600-347, Group 1 cable (male 50-pin Amphenol to four RS-232C male connectors)

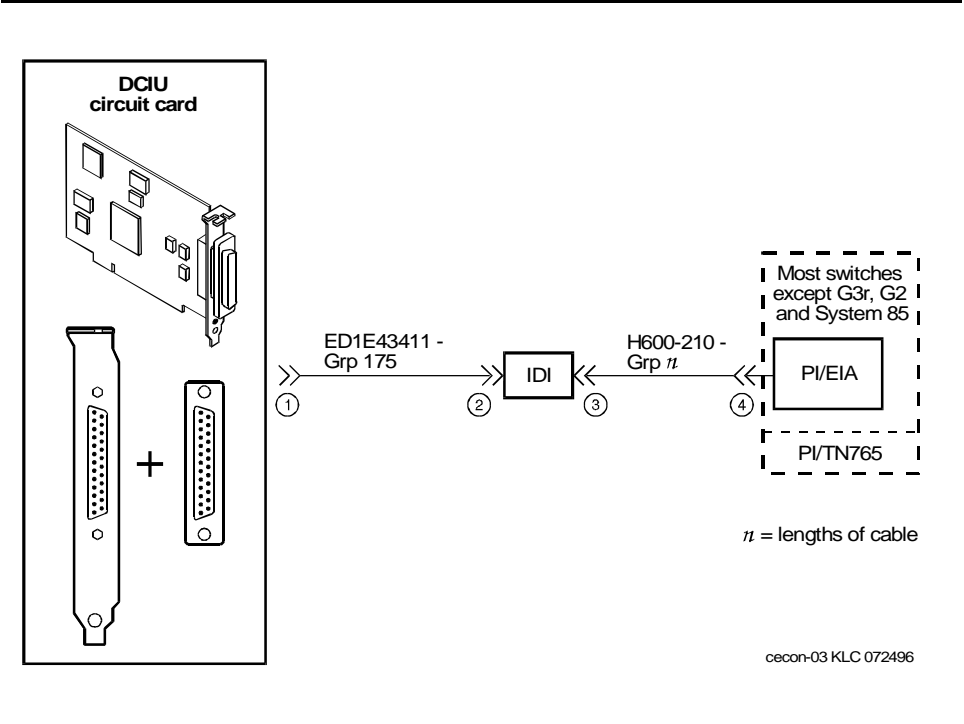


Figure 1-1. System 75, G1, G3i, G3s, and G3vs IDI Connection to the Switch

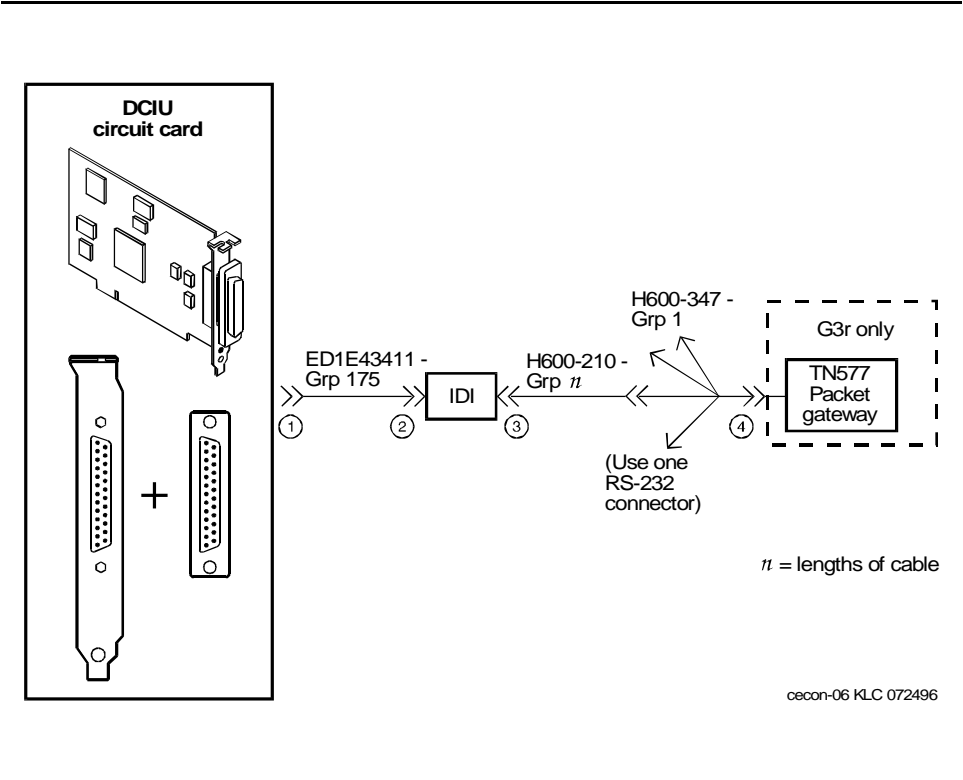


Figure 1-2. DEFINITY G3r IDI Connection to the Switch

## **Connections through an MPDM/7400D**

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Use an MPDM/7400D to connect an Intuity AUDIX platform to a switch that is located more than 15 meters (50 feet) away. [Figure 1-3](#) and [Figure 1-4](#) show the connections for the System 75, DEFINITY G1, G3 and R5/6 switch.

### **Hardware Required for the Connection**

- One MPDM/7400D with an RS-232C interface card
- One ED-1E434-1I Group 110 cable (comcode 524124658)
- One 25-pair cable (connects the TN754 to the cross-connect field)
- One D8W-87 4-pair module cord
- One 103A adapter with 3-pair cord
- Gender-changer for the DCIU circuit card (comcode 406783613; shipped with the circuit card)
- *For a DEFINITY G3r only:*
  - A second 25-pair cable (connects the second TN754 to the cross-connect field)
  - A second D8W-87 4-pair modular cord
  - A second 103A adapter with a 3-pair cord
  - A second MPDM/7400D with an RS-232C interface card
  - One M25A 50-foot RS-232C male-to-female cable
  - One H600-347 Group 1 cable (male 50-pin Amphenol to four RS-232C male connectors)



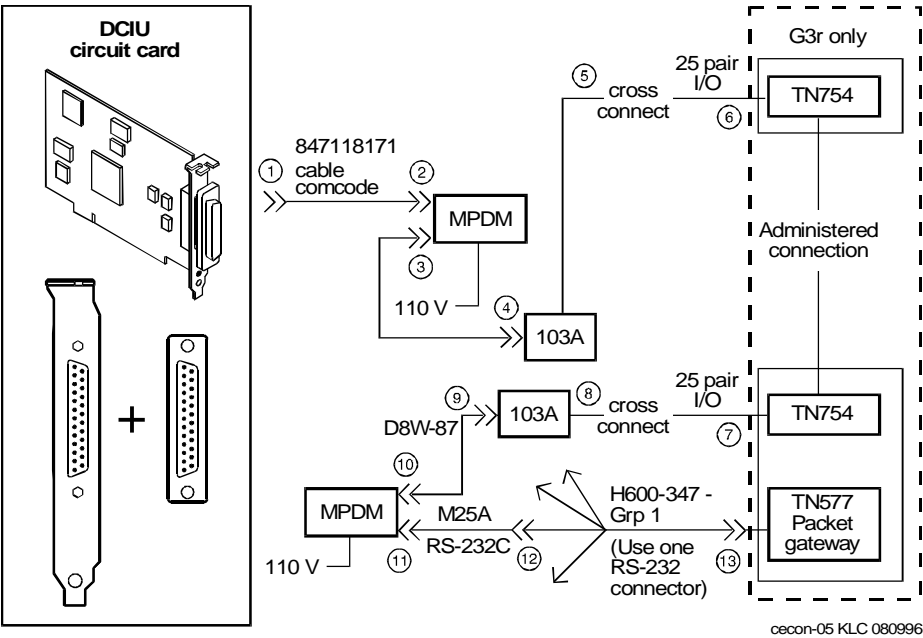


Figure 1-4. DEFINITY G3r MPDM/7400D Connection to the Switch