

**SLC<sup>®</sup> Series 5  
ISDN Auxiliary Unit  
Model NUL193  
™  
(CLEI Code: 5SC3BB01AA)**

**1. GENERAL DESCRIPTION**

Engenuity's Model NUL193 Auxiliary Unit (Figure 1) provides support of ISDN services in AT&T SLC-5 systems without upgrades to common equipment. The unit allows Engenuity's ISDN Basic Rate channel units, Models AUA193xx and AUA293xx, to operate with embedded feature packages in Remote Terminal (RT) and Central Office Terminal (COT) assemblies.

**1.1 Reissue**

This version of the technical practice contains revisions to Table 1 and updated references to ISDN channel units.

**2. APPLICATIONS**

The NUL193 mounts in a slot to the immediate right of Engenuity's AUA193xx or AUA293xx ISDN Channel Unit in a SLC-5 terminal, and allows assignment of the 3 DS0 time slots required for 2B+D service. This configuration expands the number of SLC-5 feature packages that can be used to support ISDN and provides an economical alternative to upgrading common equipment. Each NUL193 supports one or two ISDN channel units.

The specific SLC-5 Bank Control Unit (BCU) installed determines if a NUL193 is needed (see Table 1). The NUL193 is not required for ISDN services that require only 2 DS0 channels (e.g., 2B or 1B+D).

**3. INSTALLATION & MAINTENANCE**

Installation consists of inspecting the unit and installing it into a channel unit position in the shelf.

**3.1 Inspection**

Upon receipt of the equipment, visually inspect it for signs of damage. If the equipment has been damaged in transit, immediately report the extent of the damage to the transportation company and to Engenuity Communications.



**Figure 1 Model NUL193**

Feature Pkg	Terminal Type	BCU Model	Use NUL193?
B	RT	MC97724A1/B	NO
		MC97771A1	YES
		MC97776A1	YES
		MC97776A1B	NO
C	RT	MC97726A1	YES
		MC97756A1	YES
		MC97776A1B	NO
C	COT	MC97725A1	YES
		MC97755A1	YES
		MC97755A1B	NO
C2	RT	MC97756A1	YES
C2	COT	MC97755A1	YES
		MC97755A1B	NO
C/AC	RT	MC97771A1	YES
		MC97776A1	YES
		MC97776A1B	NO
INA	RT	MC97769A1	NO

**Table 1 SLC-5 ISDN System Configurations**

SLC is a registered trademark of AT&T.

CLEI is a trademark of Bell Communications Research Inc.

### 3.2 Installer Connections

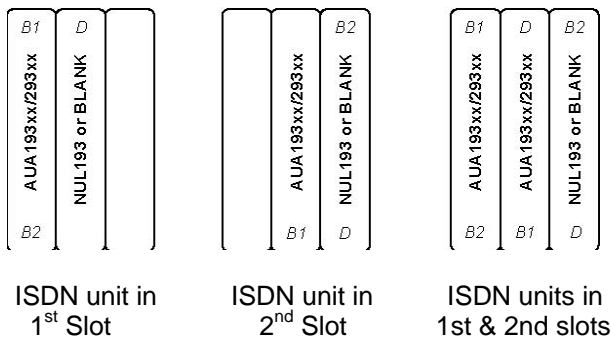
All connections required by Engenuity's NUL193, including power, are integral to the SLC-5 terminal assembly.

### 3.3 Unit Installation

**CAUTION**

This product incorporates static sensitive components. Proper electrostatic discharge procedures must be followed.

The NUL193 mounts in a single channel unit position of a SLC-5 RT or COT assembly, to the immediate right of Engenuity's AUA193xx or AUA293xx ISDN Channel Unit, as shown in Figure 2. Physical slot placement rules for the channel units can be found in their associated technical practices. When not using a NUL193, a blank card should be installed in the additional slot required for 2B+D service



**Figure 2 Card Placement in SLC-5 Tri-Group**

### 3.4 Options

The NUL 193 itself contains no options for the user to set. All provisioning is performed via the AUA193xx or AUA293xx channel unit.

### 4. FUNCTIONAL OPERATION

The NUL193 communicates with the common equipment for time slot assignment but does not access the DS0 channel directly. All transmission functions are performed by the AUA193xx or AUA293xx channel unit.

### 5. TECHNICAL ASSISTANCE

If technical assistance is required, contact your company's technical service center or call Engenuity's Customer Service department:

800-980-3266 or,  
(630) 587-1455

### 6. RETURN MATERIAL AUTHORIZATION

If a unit needs repair, call the Engenuity Communications Service Center for a Return Material Authorization (RMA) number and return the defective unit and the RMA number, freight prepaid, along with a brief description of the problem to:

Engenuity Communications Inc.  
3820 Ohio Ave., Suite 12  
St. Charles, IL 60174  
ATTN: Repair & Return Dept.

As specified in our warranty, Engenuity Communications will repair and return the unit at no charge to the customer provided the warranty of the unit has not expired. If an out-of-service situation exists, a replacement unit can be obtained; however, a purchase order number will be required to ensure return of the replacement unit.

### 7. SPECIFICATIONS

- Power:** +5Vdc
- Power Consumption:** 150 mW, nominal
- Environment:** -40 to +65° C  
0 to 95% humidity  
(no condensation)
- Dimensions:** Height, 3.5 in.  
Width, 0.64 in.  
Depth, 9.8 in.
- Weight:** Approx. 6 oz.
- Mounting:** Mounts in one position of a SLC-5 terminal assembly
- Warranty:** 7 years

### 8. ORDERING INFORMATION

NUL193 SLC-5 Auxiliary Unit  
(CLEI: 5SC3BB01AA)