



SLC[®] Series 5 Carrier System

AUA161 DS1 Line Interface Unit — 5SLI100

This data sheet describes the AUA161 DS1 line interface unit (LIU) (COMCODE 106434608) and is intended for the end-user of the unit. The AUA161 LIU is used in the remote terminal (RT) to provide the interface between the SLC[®] Series 5 Carrier System Feature Package I (FPI) and the DSX-1 cross-connect panel. The AUA161 LIU is used in slot A. The AUA161 LIU contains random access memory which must be loaded from the AUB101 flash memory unit (FMU) to be operational.

Figure 1 is a functional block diagram of the AUA161 LIU, and Figure 2 shows the components and faceplate.

In the transmit direction, this LIU converts the internal 4.096 Mb/s pulse code modulation (PCM) format to 1.544 Mb/s DS1 rate. The ABCD signaling bits and derived data link (DDL) are extracted for message-format transmission to the *GTD-5** EAX through the remote data link control (RDLC) link that resides on the first DS0 of the A digroup. It also inserts the Fs framing sequence and the signaling bits on the DS1 facility. The LIU pre-equalizes its output so that the signal meets the cross-connect compatibility specification at the connecting DSX-1.

In the receive direction, this LIU converts the incoming DS1 signal to the internal 4.096 Mb/s format. The RDLC link is extracted and the ABCD signaling bits and DDL are inserted. The LIU monitors the received signal for bipolar violations (Fs), loss of frame, and loss of signal. Failures are reported to the bank

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controller (BC). Failures also cause the E-bit to be set (this freezes the signaling state in the channel unit) and, after 2.5 seconds, cause the G-bit to be set (this initiates trunk processing).

A DS1 interface relay resides on the LIU to connect the LIU to the DS1 facility. When the relay is energized, the LIU is connected to the DS1 line.

In Mode 4 operation, the PCM for the C & D digroups is inserted and separated in this LIU.

If the local 4-MHz or NSYNC signal fails, the LIU will switch to backup 4-MHz and NSYNC signals from the transmit/receive unit (TRU) C/D using the LIU/EMU slot C in FPI.

EQUALIZATION Option — These three switches (TRANS- 0, 1, 2) select the amount of pre-equalization based on the distance between the bank and the DSX-1 cross-connect panel (see Table 1).

Table 1. Equalization Option Settings

<u>TRANS- 0</u>	<u>1</u>	<u>2</u>	<u>Distance to DSX-1 (Feet) (Note)</u>
ON	OFF	OFF	0 to 132
OFF	ON	OFF	133 to 265
ON	ON	OFF	266 to 398
OFF	OFF	ON	399 to 532
ON	OFF	ON	533 to 655

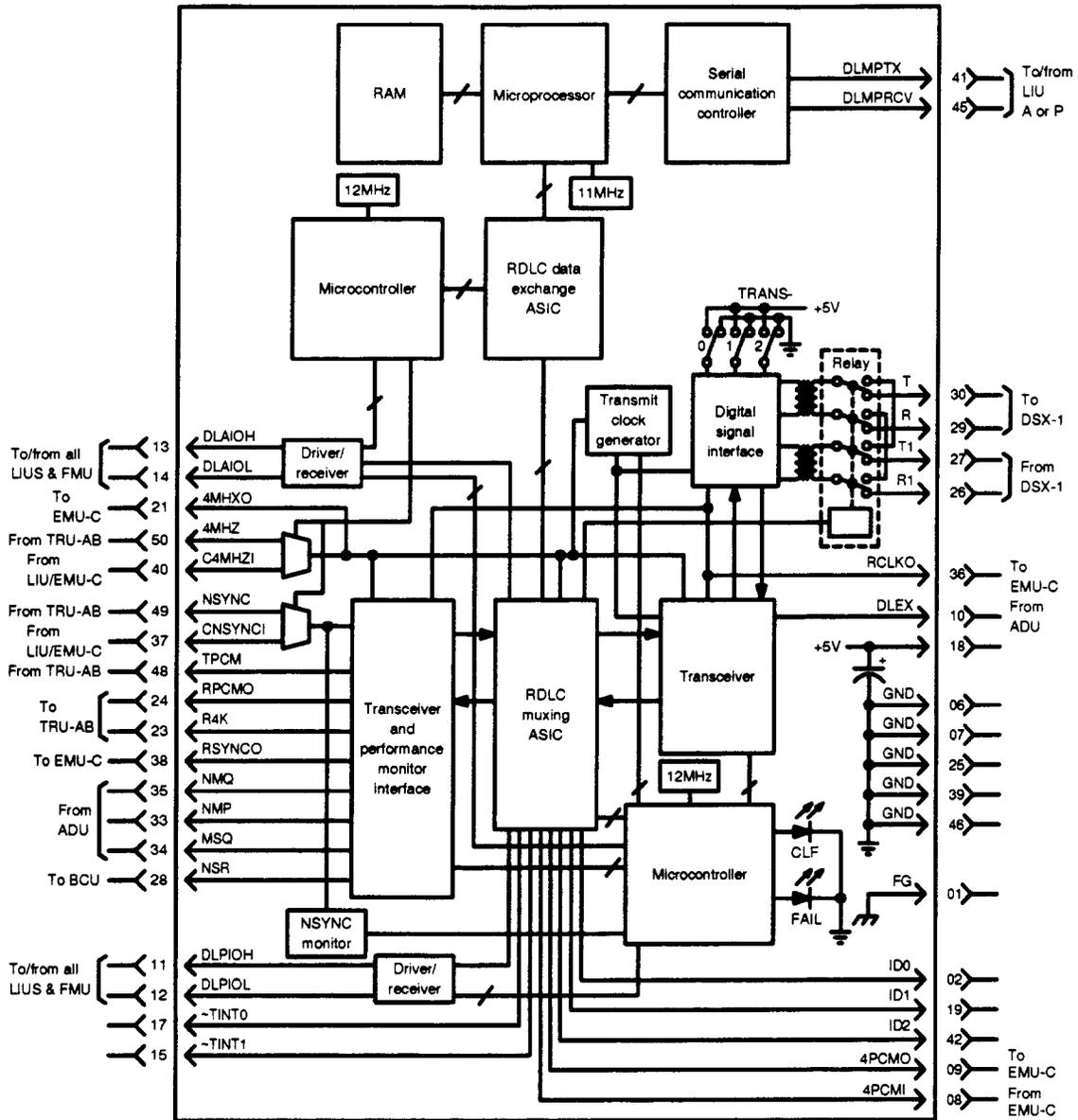
Note: These distances are for ABAM cable used in the central office. Refer to AT&T 915-710-115G for calculations for other types of cable used for collocated RT and T1 extension applications.

The following LED indicators are located on the faceplate of the LIU.

CLF (Yellow LED) — When lighted, this faceplate-mounted LED indicates that a carrier line failure has been located on the digital facility connecting the facility to the RT. When flashing, this LED indicates that the unit has internally started itself but has not been initialized by the *GTD-5* EAX.

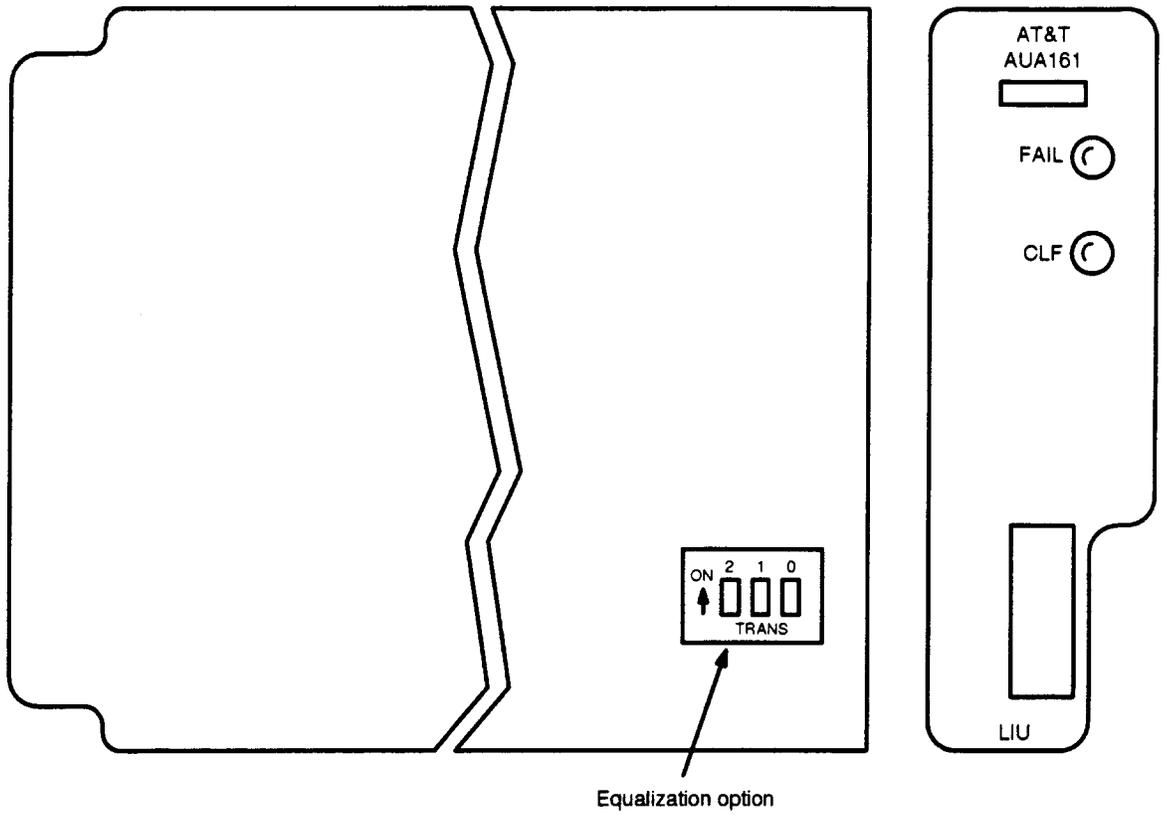
FAIL (Red LED) — When lighted, this faceplate-mounted LED indicates one of the following conditions.

- The LIU needs to be loaded by the AUB101 flash memory unit (FMU) on initialization.
- If the LED indicator remains lighted after 2 minutes, a hardware failure has been located on this LIU.



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Figure 1. AUA161 LIU Block Diagram



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Figure 2. AUA161 LIU Components and Faceplate

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the *SLC* Series 5 Carrier System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

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