SLC®-2000 MSDT

MC97789A1 Backplane Interface Unit — 5SCT420

This data sheet describes the MC97789A1 backplane interface unit (BIU) (COMCODE 106383540) and is intended for the end-user of the unit. The MC97789A1 BIU provides the interface between the *SLC*®-2000 Multi-Services Distant Terminal (MSDT) and the Fiber in the Loop (FITL) remote terminal (RT) channel unit (CU). The MC97789A1 BIU performs the equivalent functions of the *SLC* Series 5 line interface unit (LIU), transmit/receive unit (TRU), bank control unit (BCU), and alarm display unit (ADU) for the six CUs and common units located at the MSDT. This version of the BIU is intended to be used in rural applications of the MSDT, where added digital loss in the talk path would be undesirable.

Figure 1 is a functional block diagram of the unit, and Figure 2 shows the faceplate.

In the transmit direction, the MC97789A1 BIU communicates with the six MSDT CUs, using the 128 kb/s bank control link, and multiplexes the pulse code modulation (PCM) format signals from the CU slots into one 4.096 Mb/s data stream. The BIU monitors CU parity on a DS0 basis and initiates per-channel trunk processing for any CU generating bad parity. The BIU inserts the extended super frame (ESF) framing pattern, the signaling bits, and the 4 kb/s data link. The 4.096 Mb/s signal is then converted to the 1.544 Mb/s DS1 bit stream rate, scrambled, and sent to the BYB1B optical unit (OU).

In the receive direction, the MC97789A1 BIU converts the incoming 1.544 Mb/s DS1 signal to the internal 4.096 Mb/s PCM format and extracts the 4 kb/s data link. A yellow alarm indication is reported to the RT whenever an error condition occurs on the incoming DS1 signal. The BIU will also initiate per-channel trunk processing when there is a loss of DS1 signal, detection of a yellow alarm, or when instructed by the far end. No loss is applied to the 4.096 Mb/s PCM signal and the signal is then routed to the MSDT CUs.

The MC97789A1 BIU communicates with the six MSDT CUs and the AUA411 channel and drop test unit (CDTU) using the 128 kb/s bank control link. It also reads alarm and inventory information from the MSDT common units using a serial interface.

Unit Indicators

FAIL (Red LED): When lighted, indicates that a failure has been sectionalized to the MC97789A1 BIU.

NE (Yellow LED): When lighted, indicates a near-end MSDT activity.

CLF (Yellow LED): When lighted, indicates that a carrier line failure has been detected on the link connecting the MSDT and RT.

FE (Yellow LED): When lighted, indicates a far-end activity.

CONFIG (Yellow LED): When lighted, indicates a problem with an MSDT CU and/or RT configuration.

SLOTS AVAILABLE (Seven segment LED display): Indicates the number of CU slots that can provide service (1 — 6) at the MSDT.

Unit Options

LED TEST (Pushbutton): When pressed, this switch activates all of the MSDT indicators under its control for approximately 2 seconds.

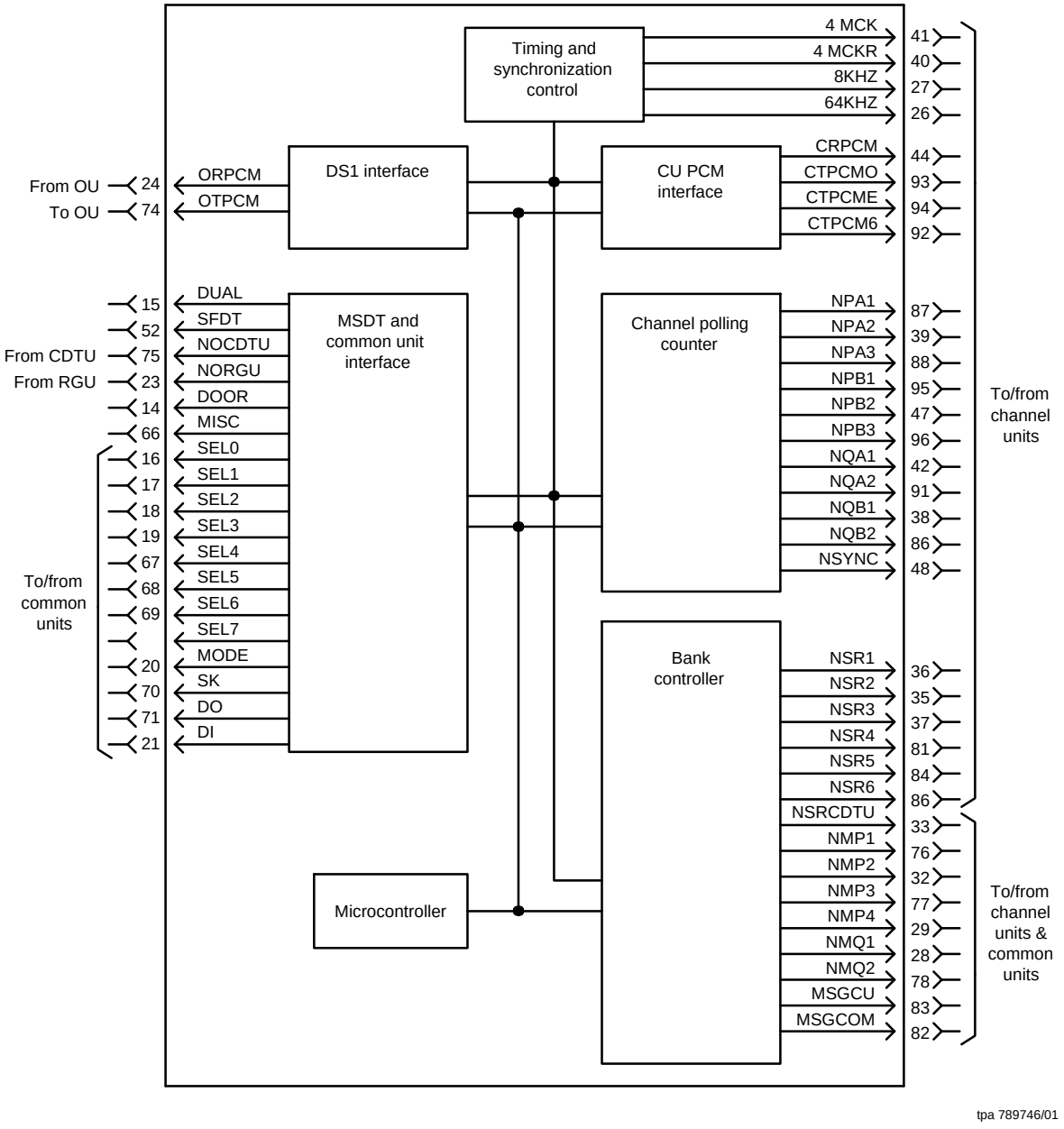

Figure 1. MC97789A1 BIU Block Diagram

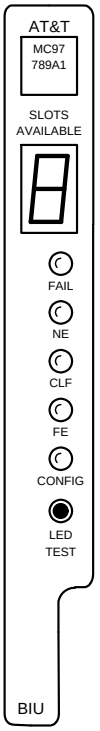

Figure 2. MC97789A1 BIU Faceplate

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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