



SLC[®] Series 5 Carrier System

MC97796A1() (RT) Bank Control Unit— 5SPQADZ (MC97796A1) 5SCBUN0 (MC97796A1B)

Features/Functions

- The bank control unit and alarm display unit together form the system bank controller
- Works with ADU to provide system options and system identification
- Has system program memory and EEPROM memory to store channel unit provisioning coefficients
- Controls drop and channel unit testing by the switch or PGTC
- Conducts internal performance monitoring and fault diagnosis
- System alarm LEDs
- Compatible with 5ESS[®], GTD-5, and DMS⁺-100 local digital switches for TR-303[†] service.

* DMS is a trademark of Northern Telecom, LTD.

† Bellcore Technical Reference GR-303-CORE Issue 1, September 1995, and all Revisions and Supplements, "Integrated Digital Loop Carrier System Generic Requirements, Objectives, and Interface," Bell Communications Research.

Description

This data sheet describes the MC97796A1() (RT) bank control unit (BCU) (COMCODE 107860751, MC97796A1; and 108288044, MC97796A1B) and is intended for the end-user of the unit.

The MC97796A1() RT bank control unit is used in the SLC Series 5 Carrier System Feature Package 303 (FP303) Release 3 remote terminal (RT). Firmware for the MC97796A1() BCU is specifically designed for applications where the RT connects directly to a TR-303 local digital switch (LDS), such as

the 5ESS[®] switch with an integrated digital carrier unit (IDCU). The MC97796A1() BCU extends the functionality of the MC97777A1 BCU to support connectivity to several local digital switches other than the 5ESS. For details, see Table 2, MC977796A1() BCU local digital switch compatibility and the 363-205-010, *SLC Series 5 Carrier System Application and Planning Guide*.

Together, the MC97796A1() BCU and the AUB27() alarm display unit (ADU) form the bank controller for the FP303 RT.

The BCU contains a microcomputer that is the bank controller. It also has system program memory, electrically erasable programmable read-only memory (EEPROM) for system configuration data and random access memory.

In FP303, the active and standby EOC and the time slot management channel (TMC) are sent in DS0 time slots 12 and 24 on both the A and C line interface unit (LIU) DS1 facilities. The EOC carries operations messages, including alarms, between the LDS and RT; the TMC carries call processing messages (such as time slot assignments) from the LDS to the RT. The EOC processor is on the BCU; however, the TRU extracts and inserts EOC messages into the bit stream for the BCU. The TMC processor is on the TRU.

The BCU controls the framing format. FP303 operates with the extended super frame/new data link (ESF/ndl) format with D4 sequential counting sequence.

This data sheet has been reissued to introduce the MC97796A1B BCU which supports the telemetry output feature of the AUB27() ADU. The MC97796A1B BCU supports telemetry output capability for major, minor, and power minor alarms, in place of miscellaneous alarm inputs, when the AUB27() ADU DL/NDL option switch is placed in the NDL position. When in the DL position, normal miscellaneous alarm transmission to the central office is provided via the TR303 embedded operations channel (EOC).

Figure 1 shows the faceplate diagram for the MC97796A1D RT bank control unit. Table 1 shows the MC97796A1() BCU common unit compatibility. Table 2 lists the compatibility of the MC97796A1() BCU with various local digital switches. Table 3 lists the environmental specifications. Table 4 lists the power drain requirements, and Table 5 lists the edge connections for the MC97796A1() BCU

Compatibility

The MC97796A1() RT bank control unit is compatible with a TR-303 local digital switch (LDS), such as the 5ESS switch with an integrated digital carrier unit (IDCU). In a Series 5 RT, the MC97796A1() RT BCU is compatible with the following common units:

Table 1. MC97796A1() BCU Common Unit Compatibility

MC97796A1() BCU Common Unit Compatibility					
ADU	TRU	TRU Faceplate Connector	LIU	LSU	CTU
AUB27	AUA112()	993A	AUA61, AUA62, AUA64; C-Series or later	AUA74	AUB22, AUB25

Table 2. MC97796A1() BCU Local Digital Switch Compatibility

MC97796A1() BCU Local Digital Switch Compatibility			
Manufacturer	Model	Generic/ Release	Applications
Lucent Technologies	5ESS	5E10	TR303
AGCS	GTD-5	SVR-1731*	TR303
Nortel	DMS-100	NA004	TR303

* See 363-205-010, *SLC Series 5 Carrier Application and Planning Guide*, for current feature restrictions.

Specifications

This unit is intended for use in *SLC Series 5 Carrier Systems* located in controlled environments that conform to the specifications of Telcordia Technologies GR-63^{*}. It may also be used in applicable Lucent Technologies cabinets designed for *SLC Series 5* and intended for applications in non-controlled (outside plant) environments that conform to Telcordia Technologies GR-487[†]. These cabinets, when properly equipped, are designed to maintain internal environmental conditions within appropriate operational limits for *SLC LineReach* equipment such that system performance meets TR-NWT-000057[‡].

The applicable outside plant environment criteria for cabinet enclosures (per GR-487) are summarized in Table 3 Environmental Specifications.

Table 3. Environmental Specifications

<p>A. Temperature Range (Ambient)</p> <ol style="list-style-type: none"> 1. Operating, per TR-NWT-000057: in Lucent Technologies cabinet-mounted RT, outside ambient temperatures of -40° F (-40° C) with no solar load to +115° F (46° C) with maximum solar load and maximum power dissipation. Lucent Technologies cabinets are designed to ensure that the components within do not exceed their rated temperatures for the above conditions. 2. Storage, per TR-NWT-000057: ambient temperatures of -40° to 140° F (-40° to 60° C).
<p>B. Relative Humidity</p> <ol style="list-style-type: none"> 1. Operating, per TR-NWT-000057. For outside ambient temperature 84° F (29° C) or less, relative humidity of 5% to 95%. For ambient temperatures above 84° F (29° C), the relative humidity is limited to that corresponding to a specific humidity of 0.024 pound of water per pound of dry air. 2. Storage, per TR-NWT-000057: ambient temperatures 84° F (29° C) or less, 10% to 95%. For ambient temperatures above 84° F (29° C), the relative humidity is limited to that corresponding to a specific humidity of 0.024 pound of water per pound of dry air.

* Telcordia Technologies Generic Reference GR-63, Issue 1, October 1994, and all Revisions and Supplements, "Network Equipment-Building System Requirements: Physical Protection (a module of LSSGR, GR-64; TSGR, FR-440, and NEBS FR, FR-2063)," Telcordia Technologies, Inc.

† Telcordia Technologies General Requirements GR-487, Issue 1, June 1996, and all Revisions and Supplements. "General Requirements for Electronic Equipment Cabinets," Telcordia Technologies, Inc.

‡ Telcordia Technologies Technical Reference TR-NWT-000057, Issue 2, January 1993, and all Revisions and Supplements, "Functional Criteria For Digital Loop Carrier Systems," Telcordia Technologies, Inc.

Table 4. Power drain for MC97796A1() BCU

Supply	Maximum Value
+5 Volts DC	3 W

Faceplate Features

The MC97796A1() RT bank control unit faceplate is shown in Figure 1. The following LED indicators and pin jack are located on the faceplate:

FAIL (Red LED): When lit indicates that a failure has been sectionalized to the BCU. This LED will light momentarily during BCU installation or resets.

PMN (Red LED): When lit indicates that a failure in the AC power plant or the AC rectifier at the RT site.

MISC1 (Yellow LED): When lit indicates that RTMISC1 input closure at the RT has been activated.*

MISC2 (Yellow LED): When lit indicates that RTMISC2 input closure at the RT has been activated.*

A (Red LED): When lit indicates that an incoming failure has occurred on the A DS1 facility.

B (Red LED): When lit indicates that an incoming failure has occurred on the B DS1 facility.

C (Red LED): When lit indicates that an incoming failure has occurred on the C DS1 facility.

D (Red LED): When lit indicates that an incoming failure has occurred on the D DS1 facility.

⇒ NOTE:
If you lose communications completely, such as when both A and C data links fail, then all LED lights A, B, C, and D could be lit.

PROV TRANS (Pin Jack): When the pin is inserted into this jack, the BCU transfers provisioning coefficients from the ADU at the RT to the BCU without first comparing it to the checksum contained in the TRU. This feature is used when converting from earlier feature packages to FP303 Release 3 with the MC97796A1() BCU.

* For the MC97796A1B BCU; If the NDL Mode is selected on the AUB27() ADU the MISC1 and MISC2 inputs are converted to MJ, MN and PMN outputs and the MISC1 and MISC2 indicators are unused.

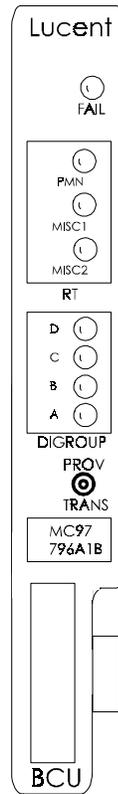


Figure 1. MC97796A1B Faceplate Diagram

Table 5. Edge Connections For MC97796A1() Bank Control Unit

Finger	Function
1	Frame Ground
18, 50, 60, 87	Circuit Ground
20	+ 5 Volts DC

References

The following documents provide additional information about the use of this BCU in the *SLC Series 5 Carrier System*:

363-099-105TD	<i>SLC Series 5 Carrier System Integrated Network Access - Remote Terminal</i>
363-205-010	<i>SLC Series 5 Carrier System Application and Planning Guide</i>
363-205-401	<i>SLC Series 5 Carrier System Remote Terminal - Acceptance and Turnup</i>
363-205-402	<i>SLC Series 5 Carrier System Channel Unit Installation and Testing</i>
363-205-500	<i>SLC Series 5 Carrier System Maintenance and Trouble Clearing</i>
915-710-115	<i>SLC Series 5 Carrier System Application Engineering</i>

Technical Assistance

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

Ordering Information

Additional copies of this document (363-005-257) are available from the Customer Information Center — call 1-888-582-3688.

Comments

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