SLC®-2000 ACCESS SYSTEM

SPQ®494 Quad Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) Channel Unit—5SC2120

Features/Functions

- Four channels of ANSI* standard U-DSL ISDN basic rate interface
- Faceplate test access to tip and ring pairs
- FAIL LED on faceplate
- No option switches
- UL** Recognized
- Enhanced inventory readout
- Conforms to appropriate industry standards

* Registered trademark of American National Standards Institute, inc.

** Registered trademark of Underwriters Laboratories Inc.

Description

This data sheet describes the *SPQ*®494 quad integrated services digital network (ISDN) basic rate interface (BRI) channel unit (Comcode 107354458) which is intended for use in the *SLC*®–2000 remote terminal (RT) when integrated with a local digital switch (LDS) and operating with the TR-303 interface. The channel unit is also intended to operate in the optical network unit (ONU), and network interface units (NIUs), when these units home on a *SLC*-2000 host digital terminal, which in turn operates with the TR-303 interface to a local dgital switch (LDS). The channel unit functions are controlled by the TR-303 embedded operations channel (EOC), which is a message channel operating between the host LDS and the *SLC*-2000 Access System.

Functions

The *SPQ*494 CU provides four channels of service, in line terminating (LT) mode, to the network termination type 1 (NT1). Up to four customers are served.

The *SPQ*494 must be used in loops that meet carrier serving area (CSA) design rules. The U-interface 2B1Q signal provides a 4-level line code at a data rate of 160 kb/s (80k baud), comprising two B channels and one D channel, plus overhead. The D channel is used for signaling and low-speed packet data. The unit complies with the ANSI* standard for a U-interface digital subscriber line (U-DSL).

A microcontroller performs on-board processing and contains the remote inventory data for use by the Central Office. Channel Unit timing is derived from the system clock.

Transmission Treatment

The channel unit provides 4 ANSI* standard digital subscriber lines over metallic facilities.

The channel unit functions are controlled by the TR-303 embedded operations channel (EOC), which is a message channel operating between the host local digital switch and the *SLC*-2000 Access System.

* Registered trademark of American National Standards Institute, Inc.

Compatibility

The *SPQ*494 CU operates only in systems which are operating with a TR303 interface with ISDN. The CU is compatible with the following equipment:

- *SLC*-2000 remote terminal (RT)
- Optical network unit (ONU)
- Network interface units (NIUs) for switched digital video (SDV) and hybrid fiber-coax systems
- Other host switches which support TR303 with ISDN

NOTE:
The channel unit does not operate in universal digital loop carrier systems.

Specifications

The *SPQ*494 CU conforms to the appropriate criteria of ANSI*, Bellcore, FCC, GTE and UL** standards.

This channel unit can only be used on loops that follow Carrier Serving Area (CSA) design guidelines. Further specification information, consult AT&T 363-208-000, *SLC*-2000 Access System, Applications, Planning, and Ordering Guide.

Faceplate Features

The *SPQ*494 channel unit faceplate is shown in Figure 1. The SPQ494 CU has one faceplate 8-pin jack and one RED LED indicator to indicate channel unit failure.

The FAIL LED lights when the following condition(s) exist:

- RESET: If the CU is in a reset state and cannot exit, the FAIL LED remains on.
- POWER-UP: The FAIL LED comes on during power-up, the system requests the CU self test to be run, and the system shuts off the LED if the tests conclude properly. The LED remains on if there are errors detected during the self-test.
- SELF TEST: If the CU self test fails, the LED remains on

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- LED TEST: The LED is turned on by the system during the LED test

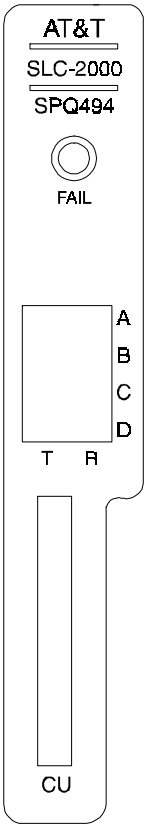

Figure 1. *SPQ*494 Faceplate Diagram

ISDN Test Access

The 392A BA/RJ Adapter (COMCODE 107514457) connects the standard ITT Cannon RTG Channel Unit faceplate Test Cord (ITT part number 121071-0037) to an ISDN test set.

The 392A Adapter is a small circuit board with two banana jacks on one end and an RJ45 jack at the other end. This adapter is available through AT&T. The ITT Cannon Channel Unit Faceplate Test Cord is sold by ITT Cannon.

References

The following documents provide additional information about the *SLC* Series 5 Carrier System and *SLC*-2000 Access Systems:

AT&T 363-205-010	*SLC* Series 5 Carrier System Application and Planning Guide
AT&T 363-205-110	*SLC* Series 5 - Cable Measurement Method for Determining Provisioning Setting for Special Services Channel Units
AT&T 363-208-000	*SLC*-2000 Access System Application, Planning and Ordering Guide
AT&T 363-208-001	*SLC*-2000 Access System User/Service Manual
AT&T 915-710-115	*SLC* Series 5 Carrier System Application Engineering
AT&T 915-710-116	*SLC* Series 5 Carrier System Channel Unit Application and Prescription Setting

Technical Assistance

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergence out-of-hours help for the *SLC* Series 5 Carrier System and the *SLC*-2000 Access System. Call the AT&T Regional Technical Assistance Center at 1-800-225-RTAC.

Ordering Information

Additional copies of this document (AT&T 363-005-388) are available from the Customer Information Center— call 1-800-432-6600.

Comments

Comments about this document can be directed to:

AT&T Network Systems Customer Education and Training
Documentation Services
2400 Reynolda Road
Winston Salem, NC 27106-4606

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