Switched Digital Broadband Access System

AUA421 Channel and Drop Test Unit — 5SPQAC7

Features/Functions

- Located at SDBAS ONU or FiberReach NBS
- Enhanced inventory
- Supports channel and drop testing
- Faceplate FAIL and BUSY LEDs
- No option switches
- Compatible with TR-57 / TR-909 industry standards

Description

This data sheet describes the AUA421 channel and drop test unit (CDTU) (COMCODE 107500654) and is intended for the end-user of the unit. The AUA421 channel and drop test unit is used in a switched digital broadband access system (SDBAS) optical network unit (ONU) or DDM-2000 FiberReach Narrowband shelf (NBS) and provides support for end-to-end channel testing of 2-wire locally-switched services (POTS, SPOTS®, coin, and multiparty) and integrated services digital network (ISDN) circuits. The AUA421 CDTU also contains a drop test circuit to determine the condition of the metallic drop beyond the ONU to support loop testing.

When a channel test request is received from the host digital terminal (HDT), the backplane interface unit (BIU)* instructs the channel unit (CU) under test to operate its test relay. This provides full splitting metallic access with the CU side

* MXBIU for SDBAS, and DSXBIU for NBS

connected to the channel test bus and the drop side connected to the loop test bus. The BIU then informs the AUA421 CDTU to perform testing consisting of applying terminations to the channel side and performing measurements on the customer drop.

The AUA421 CDTU applies the channel test terminations in sequence based on results from the channel test detectors. The CO test equipment can then determine:

- HDT to ONU facility failures
- ONU equipment failures

The AUA421 CDTU performs tests to detect the following faults on the drop beyond the SDBAS ONU or FiberReach NBS:

- Hazardous voltage
- Foreign voltage (FEMF)
- Resistive fault
- Receiver off-hook (ROH)

If none of the above faults is found, the CDTU will report a test OK.

When the HDT signals that the test session is complete, the BIU instructs the CU to return to normal operation and the AUA421 CDTU to return to its idle state.

The AUA421 CDTU operates in the following access systems:

- SDBAS ONU.
- DDM-2000 FiberReach NBS hosted on a *SLC*-2000 HDT.

The inventory and alarm circuit contains factory-installed information specific to the AUA421 CDTU that can be remotely accessed using an operation interface processor. This circuit also gathers alarm information from the CDTU and makes it available upstream.

The AUA421 CDTU stores a plug-in inventory record in non-volatile memory which is available for reading by an inventory compatible RT / host digital terminal (e.g., *SLC*-2000 RT / HDT). The inventory record includes 10-character *COMMON LANGUAGE*[*] *CLEI*, COMCODE, ECI, Function, and ID codes.

Figure 1 shows the faceplate diagram for the AUA421 CDTU. Table 1 lists the environmental specifications and Table 2 lists the typical power drain for the AUA421 CDTU.

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* *COMMON LANGUAGE* is a registered trademark and *CLEI*, *CLLI*, *CLCI*, and *CLFI* are trademarks of Bell Communications Research, Inc.

Table 1. Environmental Specifications

A. Temperature Range (Ambient) 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 assure 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).
B. Relative Humidity 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 pounds 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 pounds of water per pound of dry air.

Table 2. Power drain for AUA421 CDTU

Supply	Typical Value
+ 5 Volts dc	850 mW
- 5 Volts dc	30 mW
- 48 Volts dc	1.32 W

Installation and Testing

There are no switches to set on this unit.

Faceplate Features and Options

The AUA421 CDTU faceplate is shown in Figure 1. The following LED indicators on the faceplate are as follows:

FAIL (Red LED): When lit, indicates an internal failure with the AUA421 CDTU.

BUSY (Green LED): When lit, indicates that a test session is active.

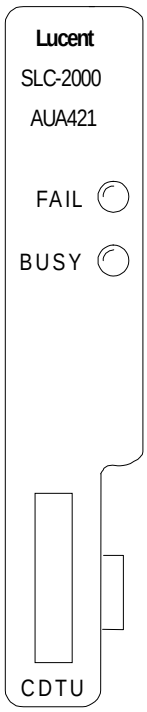

Figure 1. AUA421 Channel and Drop Test Unit Faceplate

References

The following documents provide additional information about the use of this channel and drop test unit in the *Switched Digital Broadband* Access System:

363-206-300	DDM-2000 *FiberReach Multiplexer — Applications, Planning, and Ordering Guide*
363-206-301	DDM-2000 *FiberReach User/Service Manual*
363-208-000	*SLC-2000 Access System Application, Planning, and Ordering Guide*
363-208-200	*Switched Digital Broadband Access System Applications, Planning, and Ordering Guide*
363-208-201	*Switched Digital Broadband Access System Release 1.01 Host Digital Terminal User/Service Manual*
363-208-202	*Switched Digital Broadband Access System Release 1.01 Optical Network Unit User/Service Manual*
363-208-203	*Switched Digital Broadband Access System Release 1.01 and Release 1.1 Commands and Messages Manual*

Technical Assistance

Follow local procedures for obtaining technical assistance. Lucent Technologies also provides in-hours or emergency out-of-hours help for the *SLC*-2000 SDBAS. Call the Lucent Technologies Regional Technical Assistance Center at 1-800-225-RTAC.

Ordering Information

Additional copies of this document (363-005-407) are available from the Customer Information Center — call 1-888-584-6366.

Comments

Comments about this document can be directed to:

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