UDS-139

LIFB01

Unit Data Sheet

PART NUMBER/ MNEMONIC	NAME	STATUS
3AL 00452 AA/ LIFB01	Single DS3 ATM Input/Output Low Speed Interface Plug-in Unit	Active

FEATURES AND APPLICATION NOTES

- Requires 1603 SM ATM12 system software R08.00 and later.
- Provides ATM cell processing including address translation, policing, and Operations and Maintenance (OAM) functions.
- Provides the ability to extract ATM cells from ATM-mapped DS3 (Physical Layer Convergence Protocol [PLCP] or direct mapping).
- Provides the ability to terminate an ATM-mapped STS1 on the network side and an ATM-mapped DS3 on the facility side.
- Performs DS3-ATM and STS-ATM mapping/de-mapping.
- Provides one DS3 low speed interface between cross-connect (VSCC) plug-in unit and the Line Driver/Receiver (LDR) plug-in units.
- The LIFB01 provides enhanced DS3 performance monitoring capabilities.
- Front panel mounted Light Emitting Diodes (LEDs) indicate plug-in unit status (fail or active).
- Can work in conjunction with any of the VT/STS cross-connect plug-in units (VSCC101, VSCC20x, VSCC30x, or VSCC501) and any of the following LDRs: LDR101 or LDR301.

NOTE: *LIFB01 requires VSCC501 cross-connect for the ATM routing function.*

DESCRIPTION

The LIFB01 provides one DS3 low speed interface between the VSCC plug-in unit and the Line Driver/Receiver (LDR) plug-in unit. The input/output circuit on the LIFB01 is a DS3.
The LIFB01 plugs into the same shelf location that the DMI plug-in unit uses. The LIFB01 can be used with either OC3, OC12, OC48 line group configurations. Depending on the provisioning, the LIFB01 can be used with an LDR301 unit or an LDR101 unit.
The LDR units connect the LIFB01 circuits to the CIOP101 panel that provides the external facility connections. The CIOP101 mounts on the rear of the shelf assembly. Figure 1 shows the traffic path from the high speed (HIF) interface through the VSCC cross-connect unit and the LIFB01 unit to the LDR unit, which is connected to the shelf's CIOP101 panel.
NOTE: *External connections to the CIOP101 should be made using 728A, 734A, or 735A coaxial cable. The length of the cable should be per the distances in Table A.*

Figure 1. Traffic Flow to/from LIFB01

Table A. CIOP External Connections

CABLE TYPE	CROSS-CONNECT POINT	LINE BUILDOUT (LBO) SETTINGS
728A or equivalent	450 feet	0-225 feet (IN) 226-450 feet (OUT)
734A or equivalent	400 feet	0-200 feet (IN) 201-400 feet (OUT)
735A or equivalent	220 feet	0-110 feet (IN) 11-220 feet (OUT)

Figure 2 is a face view and side view of the LIFB01 unit. Figure 3 is the block diagram of the LIFB01.

Figure 2. LIFB01 Plug-in Unit

Figure 3. LIFB01 Block Diagram

SPECIFICATIONS

Table B lists the LIFB01 performance specifications.

Table B. DS3 Mode for LIFB0x

PARAMETER	CHARACTERISTIC
Line Rate	44.736 Mb/s
Frequency Tolerance	±20.0 ppm
Line Code	Bipolar with 3 Zero Substitution (B3ZS)
Jitter Tolerance	Reference to Category I equipment in GR-499-CORE
Signal-to-Noise Ratio	>25 dB, at LDR101 input
Return Loss	>20 dB, at LDR101 input (with redundant LDR configuration)
Output Power Level	Defined at the cross-connect point per GR-499-CORE
Pulse Specifications	
Protection	1 + 1 (Equipment Nested Switched)
Switching Time	50 ms after detection of fault
Reframe Time	250 µs maximum
Equipment Loopback	Yes (requires 75-ohm termination on external cable)
Facility Loopback	Yes
Impedance	75
Physical Interface	BNC connectors (on CIOP101)
Maximum Distance to Cross-connect	450 ft with AT&T 728A or equivalent* 400 ft with AT &T 734A or equivalent 220 ft with AT&T 735A or equivalent
** Either the LDR101 or LDR301 may be used. The LDR101 can have a minor pulse shape variation when operating in the -40°C to 0°C range using AT&T 728A type cable lengths outside of 25 to 225 feet without any operational impact.*	

Table C lists the LIFB01 operational specifications.

Table C. LIFB01 Operational Specifications

PARAMETER	CHARACTERISTIC	SPECIFICATION
SONET Payload	SONET Payload Size With SONET Path Termination	STS1 (Uses any SONET Cross-connect)
	SONET Payload Size With ATM Stream	STS1 (Requires VSCC501 ATM Cross-connect)
VP Values	Number of VPs	511 NNI or 255 UNI
	VP Address Range on Ring	1-511 NNI or 1-255 UNI
	VP Address Range on ATM DS3	0-4095 NNI or 0-255 UNI
DS3 ATM Formats		DS3 Direct Mapping or DS3 PLCP
Traffic Policing	Traffic Descriptors	32 User Provisionable Traffic Descriptors
	Provisionable Policing Parameters	Peak Cell Rate 0 0-353,207 Cells/Second
		Peak Cell Rate 0 + 1 0-353,207 Cells/Second
		Sustained Cell Rate 0 0-353,207 Cells/Second
		Sustained Cell Rate 0 + 1 0-353,207 Cells/Second
		Maximum Burst Size 0 32, 50, 100, 150, or 210 Cells
		Maximum Burst Size 0 + 1 32, 50, 100, 150, or 210 Cells
		Cell Delay Variation Tolerance 100, 150, 200, 250, 350, 500, 700, 1000, 1400, 2000 microseconds
Traffic Types	ATM Forum Traffic Management 4.0	CBR.1 rt VBR.1 nrt VBR.1 rt VBR.2 nrt VBR.2 rt VBR.3 nrtVBR.3*
	ATM Forum UNI 3.1	CBR.A CBR.B nrt VBR.A nrt VBR.B nrt VBR.C nrt VBR.2 nrt VBR.3*
Performance	Bandwidth	104,268 Cells/Second DS3 Direct Mapping or 96,000 Cells/Second DS3PLCP
	Latency	TBD
** CBR = Constant Bit Rate, VBR = Variable Bit Rate, rt = realtime, nrt = non-realtime*		