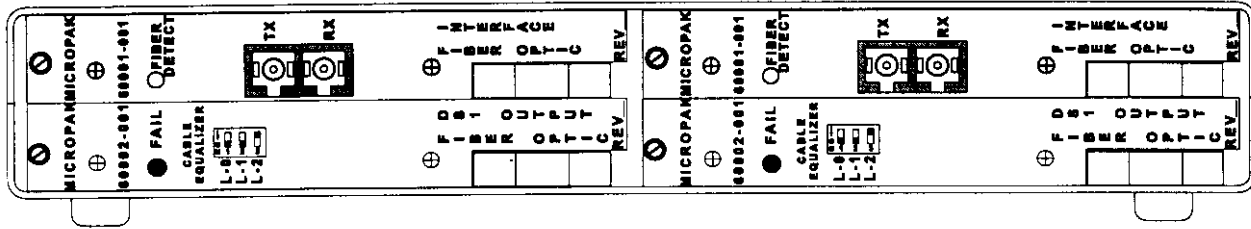


**Technical and Installation Practice
DigiTie Fiber Optic Multiplexor
60000-001**



CONTENTS

1. GENERAL 1
 2. TECHNICAL DESCRIPTION 1
 3. INSTALLATION TBD
 4. APPLICATIONS TBD
 5. SPECIFICATIONS
 6. Appendix A

FEATURES

- LOW COST INTER- OR INTRA-BUILDING MULTIPLEXOR
- DS1 OUTPUT EQUALIZATION TO 655 FEET
- WALL MOUNT, DESK TOP OR RACK MOUNT HOUSING
- RS-232 ALARM AND DIAGNOSTIC PORT
- REMOTE TROUBLESHOOTING TO UNIT LEVEL
- -48 V OPERATION OR AC POWER

GENERAL:

The DigiTie 6000 Fiber Optic Multiplexor is self contained unit which multiplexes and demultiplexes four synchronous or asynchronous DS1 signals at 1.544 MHz to a DS2 transmit/receive fiber pair.

The DS1 signals terminate on a 50 pair Amphenol or Amp Champ connector which is part of the backplane.

The mounting houses two complete system and may be used in a CPE environment in a wall mount installation or as a desk top device or on a rack mount equipment bay.

External Diagnostics and control are available through RS-232 interface.

TECHNICAL DESCRIPTION:

The block diagram illustrates the system partition between the DS1 Interface board and the Fiber Optic interface unit.

Each DS1 is terminated with a transformer and line interface IC. The receive signal has a DSX-1 high level to a low level of 655 feet of cable loss.

Each DS1 may be remotely looped back at the line interface for test purposes.

The output of the line interface IC's drive a M12 multiplexor which adds and deletes stuff bits to synchronize each of the DS1 inputs.

The 6.312 Mbit output drives a Manchester coder/decoder on the Fiber Interface which creates the drive signal for the output LED and recovers clock and reconstructs the data from the optical receiver.

INSTALLATION:

TBD

APPLICATIONS:

TBD

5.0 SPECIFICATIONS:**System**

Power	-48 VDC +/- 8 VDC
Connector	Screw Terminal
Frame Ground	Screw terminal, 18 GA
AC	External 50 Watt converter
Mounting	MPN 60000-001 Wall Mount Desk Top Rack Mount
Management	RS-232 per System
Connector	DB-9, DTE, Female

Environmental

Temperature	0 to 50 °C
Storage	-40 to +70 °C
Humidity	95% non-condensing
Altitude	-200 to 18,000 ' rel. to sea level

DS-1 Input

Impedance	110 Ohms, twisted pair
Level	DSX-1 - 650 ft ABAM attenuation
Frequency	1.544 MHz +/- 32 ppm

DS-1 Output

Impedance	110 Ohms, twisted pair
Level	DSX-1, Equalized for: 0' to 133', 133' to 266', 266' to 399', 399' to 533', 533' to 655'
Frequency	Equal to the input

Connector	4 DS1 circuits per 25 Amphenol or AMP Champ connector
-----------	---

Optical

Driver	1300 nm LED
Output Power	-18 dBm
Rx Sensitivity	-30 dBm
Max. Cable Loss	12 dB
Connector	Duplex SC

APPENDIX A**PROTECTING CIRCUIT BOARDS FROM
ELECTROSTATIC DISCHARGE****Shipping, Storage and Unpacking:**

Circuit boards are packed and shipped in antistatic packing material to protect against ESD during normal shipping and storage. Boards should be kept in the factory packing material until the time of installation. Once plugged into the appropriate equipment shelf, they are protected against ESD by the normal equipment grounding. If a board is removed from the shelf for any reason, it should be replaced immediately in the original packing material and kept there until reinstalled in the equipment shelf.

Handling:

All likely sources of static potential should be grounded to the same potential. Ungrounded personnel should not handle or touch the equipment.

STATIC CAUTION

Many circuit boards include semiconductor devices which can be damaged by static electricity. Since large electrostatic voltages (as high as 15,000 volts) can be generated by personnel performing ordinary installation and maintenance, sensitive equipment must be protected from electrostatic discharge (ESD).

