APOGEE LABS

IOC504 TX & IOC504 RX
FIBER OPTIC MODULES

For transmission and reception of pulse or PCM data over fiber.

FEATURES

Pulse Mode

- 20 nano-second minimum pulse width
- 5Mhz Repetition Rate
- 265nano-second throughput Delay ±15ns
- Selectable input/output Data Polarity

PCM Mode (Low rate PCM)

- DC to 5Mbps data rate
- Selectable input/output data polarity

PCM Mode (High rate PCM)

- 1Mbps to 80Mbps data rate
- Selectable input/output data polarity

OVERVIEW

Used in the AL2073, AL2073S, or AL2873 Interfacer systems, the IOC504 modules are designed to transmit (IOC504 TX) or receive (IOC504 RX) TTL level pulses or TTL level PCM data signals across fiber-optic cables with minimum delay and minimum induced jitter. The transmitter module accepts a TTL level pulse or TTL level PCM data signal and converts it to an optical signal for transmission over single mode fiber optic cable. The packetized data is received by the receiver module, which converts the optical signal back to its original TTL level pulse or TTL level PCM data signal .

With three unique modes of operation, the modules cover a wide variety of data types and rates. Moreover, control of the modules in the application is easy. Integrated into the AL2873 chassis, user control is via a high contrast front panel LCD display or remotely via an Ethernet link using simple AS-CII commands. In the AL2073 and AL2073S chassis, control of the modules is accessed through a rotary switch.

SPECIFICATIONS

PULSE MODE

- Pulse width: 20ns minimum
- Pulse repetition rate: 5MHz maximum
- Input to output delay: 265ns +/- 15ns accuracy
- Output: 1300nm wavelength

LOW RATE PCM MODE

- Rate: DC to 5MHz NRZ codes(2.5MHz max for Bi-phase codes)
- Code independent
- Input to output delay: 265ns +/- 15ns accuracy
- Max data output jitter: <25ns for all rates
- Transition density: No restrictions

HIGH RATE PCM MODE

- Rate: 1 MHz to 80 MHz NRZ codes (40MHz max for Bi-Phase codes)
- Input to output delay: 35ns +/- 3ns accuracy
- Typical data output jitter: <1.5ns for all rates
- Transition density: Requires an average of 50% transition density

REMOTE CONTROL

- Via 10 BaseT Ethernet

ENVIRONMENTAL

- Operating temperature: 0° to 50° C
- Relative humidity: 15% to 95%; non-condensing
- Altitude: Sea level to 10,000 feet