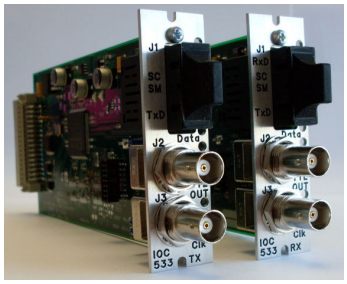
APOGEE LABS

IOC533
FIBEROPTIC / TTL
TRANSMIT / RECEIVE MODULE



IOC533 TX/RX

FEATURES

- Serial TTL data and clock input / output
- 100 bps to 40 Mbps data rate
- Single fiber optic input / output
- Single mode fiber SC connector
- Single fiber moves both data and clock signals
- DC isolated link
- Inputs illuminate front panel indicators
- Ethernet remote control and status (AL2873 chassis)
- Input code - NRZ-L
- Output code selectable - RNRZ; NRZ-L, M, S; BiØ-L, M, S
- Optical repeater function (IOC533RX module)
- Low latency

FUNCTIONAL OVERVIEW

The IOC533 Pluggable Interface Module (PIM) provides the ability to transfer electrical signals over optical cables. These modules are used to provide a DC isolated data link, provide a medium length (up to a few miles) data path, and reduce radiated emissions. The transmitter accepts a TTL serial synchronous data stream (data and clock) 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 data and clock form. The IOC533 uses industry standard BNC and SC connectors, operates from 100 bps to 40 Mbps, and requires one of the 14 available slots in the AL2073 or AL2873 chassis. Also support by the single-slot AL2073-S "brick" chassis.

SPECIFICATIONS

GENERAL

- BNC connectors
- SC fiber connectors
- Single slot (3" x 6" x 0.9")
- Singlemode
- Model AL2073 pluggable interface module (PIM)

ELECTRICAL SIGNAL INPUT

- TTL
- 50Ω, 75Ω, 10KΩ jumper selectable termination
- Single slot (3" x 6" x 0.9")
- Singlemode
- Model AL2073 pluggable interface module (PIM)

LINK LATENCY

The following represent the latency from input of the IOC533TX to the output of the IOC533RX.

54 mS at 10 Kbps
5.4 mS at 100 Kbps
540 uS at 1 Mbps
100 uS at 5 Mbps
57 uS at 10 Mbps
39 uS at 15 Mbps
30 uS at 20 Mbps

ELECTRICAL SIGNAL OUTPUT

- TTL
- High current

OPTICAL SIGNAL I/O

- SC type connectors
- Singlemode
- 1300 nm wavelength

APPLICATION INFORMATION

The IOC533 is used to distribute data across long lengths (15km) of fiber cable. It utilizes industry standards for both the electrical and optical signal interfaces. The units are self adjusting to any data rate within its specified range requiring no operator setup. The IOC533RX functions as an optical repeater when its SC optical TX port is used to drive another IOC533RX. The TTL outputs are not disturbed when functioning as an optical repeater.

The AL2073 Chassis Front Panel LEDs which correspond to a specific IOC533 module offers a quick look status of the module's operation. When installed in the AL2873 chassis, TTL data/clock and Fiber status will be available on the front panel and via the Ethernet control port.

This module can also be plugged into Apogee Models:

AL2873

AL2073

AL2073-S