

MODEL 2073 PRODUCT LINE

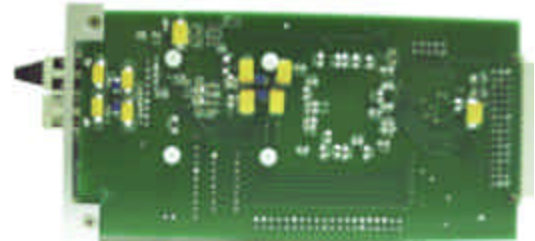
IOC556 TX
FIBER OPTIC / ECL
TRANSMIT MODULE

AND

IOC556 RX
FIBER OPTIC / ECL
RECEIVE MODULE



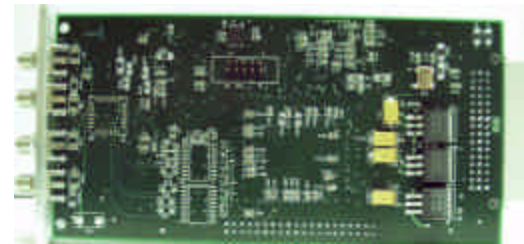
REAR VIEW



SIDE VIEW



REAR VIEW



SIDE VIEW

FEATURES

- Negative ECL Differential Data and Clock Input / Output (-0.8 Vdc – 1.8 Vdc)
- Single mode Fiber Optic Input / Output
- 1 Fiber to move both Data and Clock signals
- DC Isolated Link
- Inputs illuminate Front Panel LED's
- 5 Mbit to 320 Mbit Data Rate
- Test Modes

OVERVIEW

The IOC556 Pluggable Interface Modules (PIM) provide the ability to transfer electrical signals over optical cables. These modules are used to provide a DC isolated data link, provide a long length (up to 15 kilometers) data path and reduce radiated emissions. The IOC556 TX (transmitter) accepts a serial synchronous data stream (data and clock) and converts it to an optical signal for transmission over single mode fiber. The Packetized data is received by the IOC556 RX (receiver) module, which converts the optical signal back to its original ECL data and clock form. The IOC556 uses industry standard SMA and SC connectors, operates from 5 Mbits to 320 Mbits and requires three of the 14 available slots in the 2073 chassis.

Note: There are no user-configurable settings on this module.

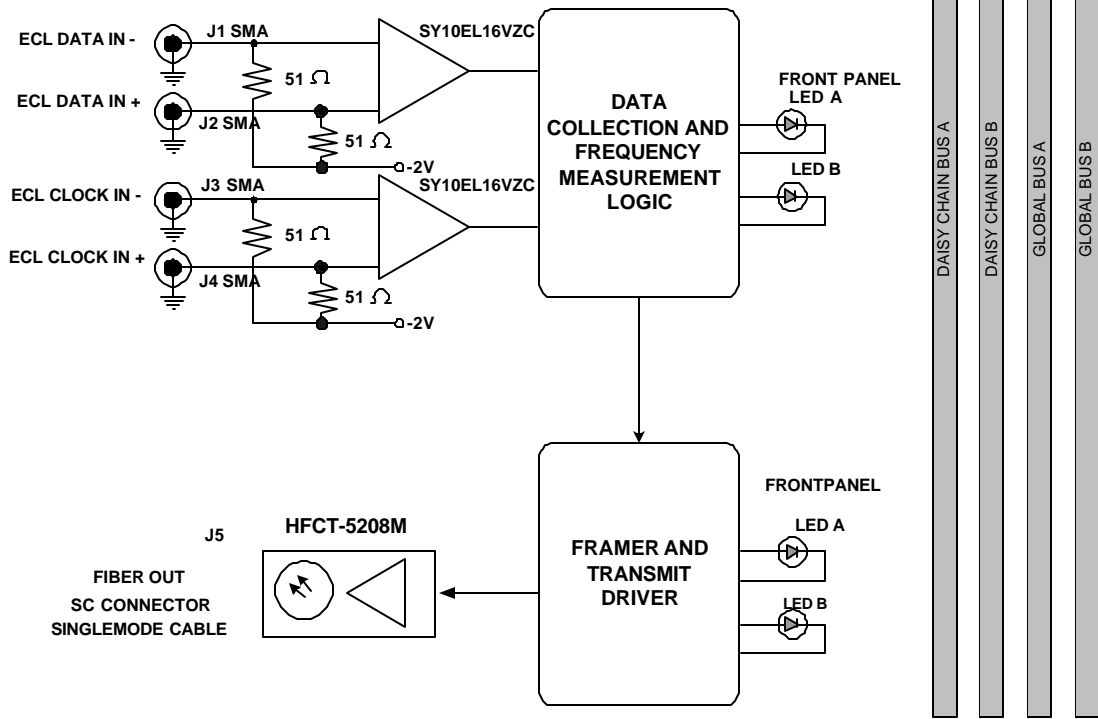


Figure 1: Model IOC556 TX Block Diagram

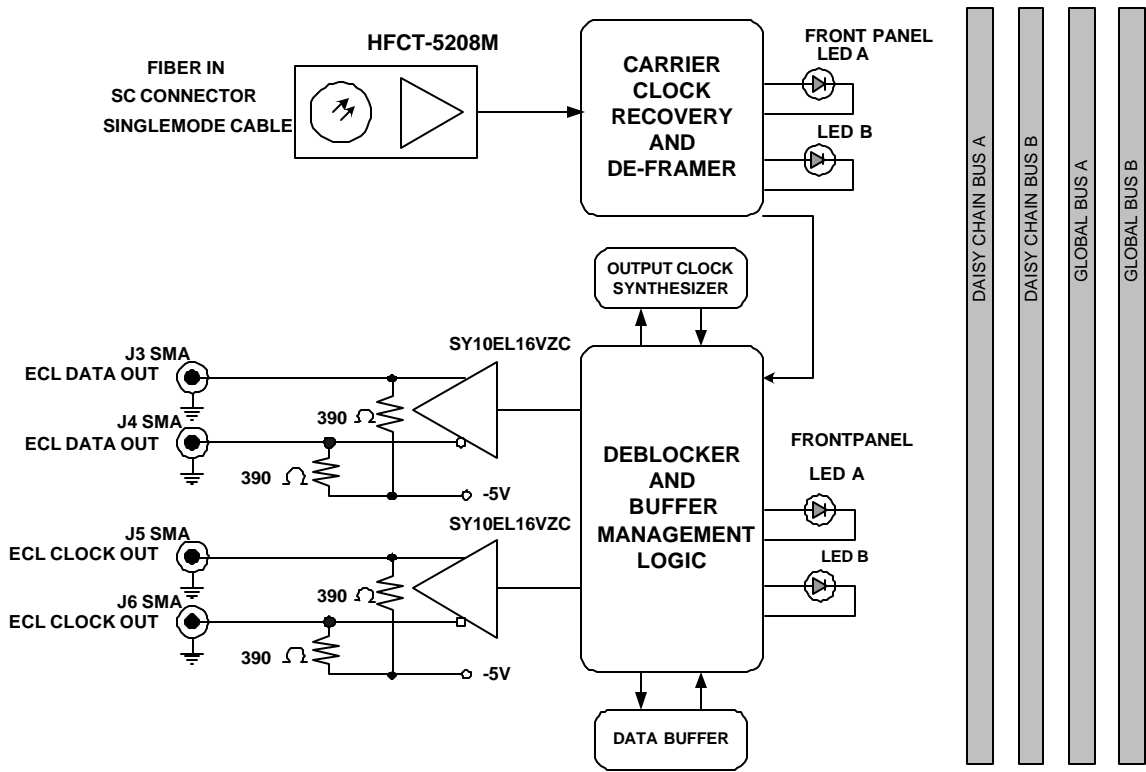


Figure 2 – Model IOC556 RX Block Diagram

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SPECIFICATIONS

GENERAL

3 Slot Module (3" x 6" x 1.8")
 SMA ECL Connectors
 SC Fiber Connectors
 Single Mode Fiber

ELECTRICAL SIGNAL INPUT

NECL
 50 Ohm Termination to -2V
 5 Mbit to 320 Mbit

ELECTRICAL SIGNAL OUTPUT

NECL
 High Current
 5 Mbit to 20 Mbit

OPTICAL SIGNAL I/O

SC TYPE Connectors
 Single Mode
 1300 nm Wave Length
 622.08 Mbit (OC-12)
 Unconditionally Eye-safe Laser IEC825 / CDRH
 Class I Compliant

APPLICATION INFORMATION

The IOC556 is used to distribute data across long lengths (15 kilometers) 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.

This module also can be plugged into Apogee models:

- 2097 and 2098: Data Acquisition Mux/Demux
- 6801: 5 Channel BERT Operation
- 6804: Multi Channel Clock Recovery

LED FUNCTION

(During Normal Operation)

	IOC556 TX Data & Clock Input	IOC556 RX Optical Output
LED A	Data Active	Power ON
LED B	Clock Active	Active Optical Output
	IOC556 TX Data & Clock Output	IOC556 RX Optical Input
LED A	Received Data OK (CRC Check)	Input Data OK
LED B	ECL Output Active	Optical Link OK

TEST MODES

Test modes are built into the IOC556 TX module which provide end-to-end testing of the modules. Tests are selected using the rotary switch on the front panel of the 2073 chassis. The IOC556 TX ECL input module must be inserted into one of the odd numbered slots in the chassis to utilize the test mode.

Test patterns and rates are generated, moved across the optical link and received by the IOC556 RX module. Test pattern for all internal test modes is FAF3EB90 HEX.

Switch Selection	Function
1-4	Normal operation
5	311 Mbit
6	155.52 Mbit
7	103.68 Mbit
8	77.76 Mbit
9	Normal operation