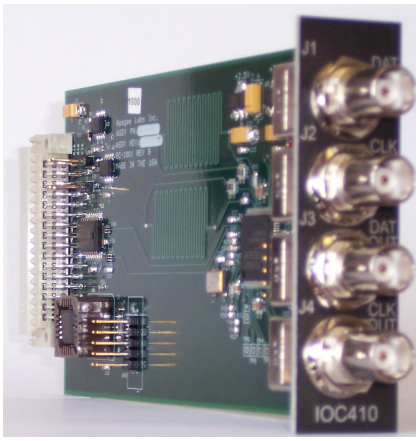
APOGEE LABS

IOC410
CLOCK ALIGNMENT MODULE

TTL BNC Inputs, TTL BNC Outputs



FEATURES

- TTL Level Data and Clock Input
- TTL Level Data and Clock Output
- Inputs Illuminate Front Panel LED's
- Input Clock Phase Shift (0°- 359 °)
- Output Clock Alignment to Data Mid Bit
- Selectable Input Termination (50Ω and 75Ω)
- Drives Daisy Chain and Global Bus
- High Current Outputs
- Independent Output Polarity Selection
- Operates up to 30 Mbps

OVERVIEW

The IOC410 Pluggable Interface Module (PIM) is a clock alignment module designed to place a clock transition to a corresponding data signal. Input clock skew can be from 0° to 359°. The output clock will be a negative transition at the data mid bit. Data and clock inputs can be terminated to either 50Ω, 75Ω, or 10KΩ. The clock and data output signals are high current and capable of driving long lengths of coaxial cable. Clock and data output polarities can be inverted independently. The IOC410 uses two BNC input connectors, two BNC output connectors, and operates up to 30 Mbps. The IOC410 outputs are also available on the daisy chain bus and the global bus in the Model 2073 Chassis enabling the user to create multiple buffered outputs of the realigned data and clock. The "B" LED on the front panel of the 2073 chassis will illuminate when J2 is connected to a clock source while the "A" LED on the front panel of the 2073 chassis will illuminate when J1 is connected to a data source. The IOC410 requires one slot of the fourteen available slots in the Model 2073 chassis.

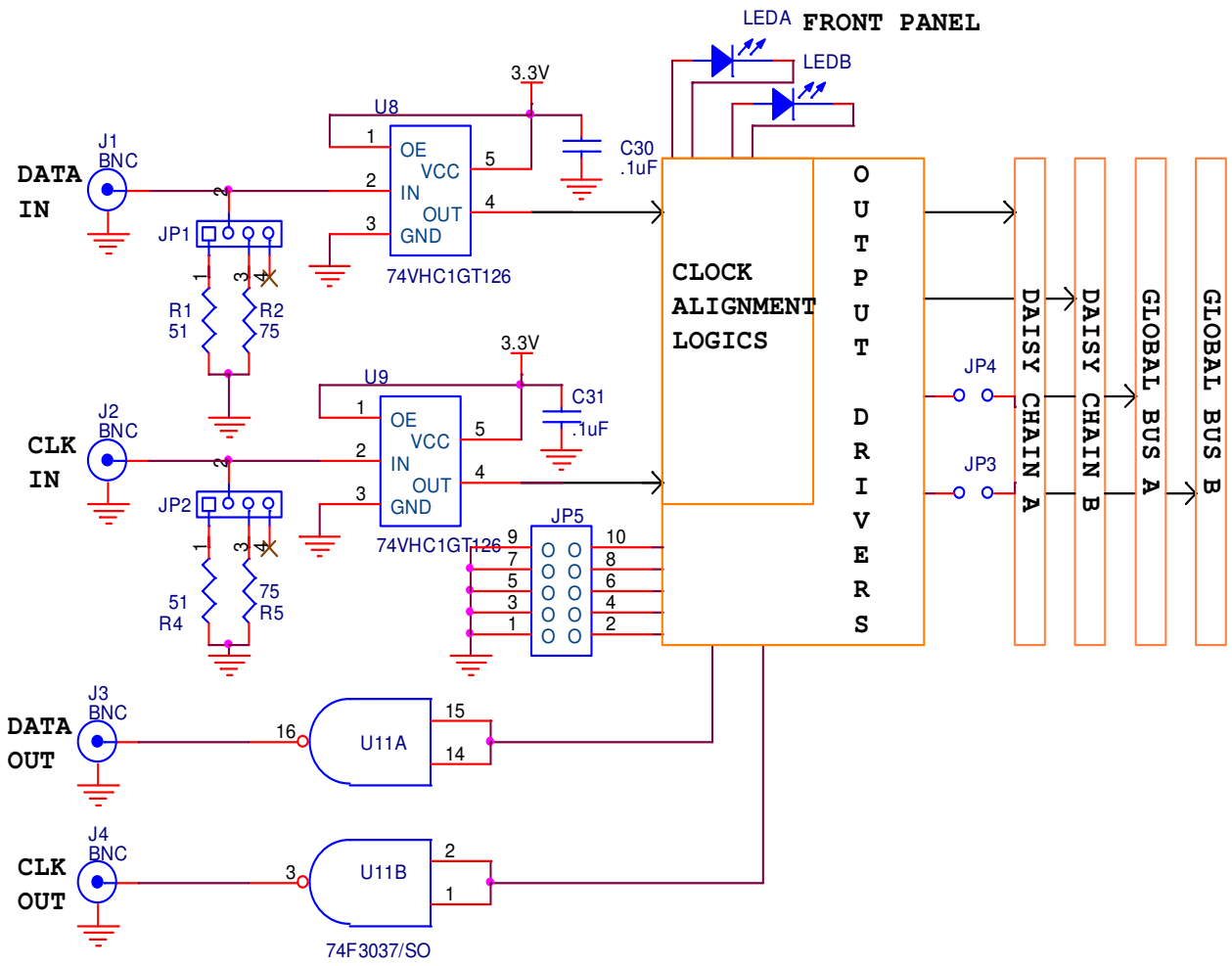


Figure 1: Model IOC410 Block Diagram

SPECIFICATIONS

GENERAL

One Independent Channel (data and clock pair)
Single Slot Module (3" x 6" x 0.9")
Model 2073 Pluggable Interface Module
Output Enable Capability

INPUT

TTL BNC Level Inputs (J1 data, J2 clock)
Synchronous NRZ-L Data and Clock
50Ω / 75Ω / 10KΩ selectable termination
Data rate range of 1 bps to 30 Mbps

OUTPUT

TTL BNC Level Outputs (J3 data, J4 clock)
NRZ-L Output
High Current

APPLICATION INFORMATION

The IOC410 is used to align a skewed clock signal to the data mid bit.

The IOC410 can also be used in a distribution application where the Daisy Chain Bus or Global Bus is used to distribute multiple copies of the output signals.

This module can also be plugged into Apogee Models:

2907 and 2908: Data Acquisition Mux/Demux

6801: 5 Channel BERT Operation

6804: Multi Channel Clock Recovery Unit

2873: Configurable Interface Unit