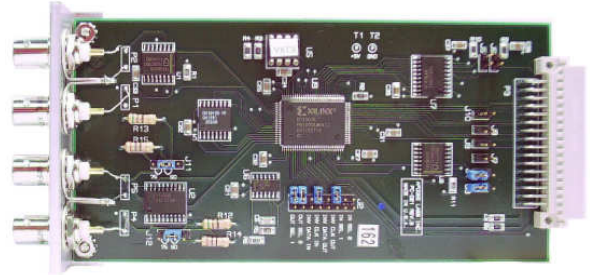




MODEL IOC413
CONVOLUTIONAL
ENCODER MODULE



REAR VIEW



SIDE VIEW

1. FEATURES

- **TTL Data and Clock Input / Output**
- **Data and Clock Input Termination selection (High Impedance, 50 Ohms , 75 Ohms)**
- **High Current TTL Output**
- **Rate: $R=1/2$**
- **Constraint Length: $K=7$**
- **G1 or G2 First**
- **Invert G1/G2**
- **Daisy Chain Bus and Global Bus compatible**
- **Detected Input Signal Illuminates Front Panel LED on AL2073**

2. PURPOSE

The IOC413 Pluggable Interface Module (PIM) is a Convolutional Encoder. The encoder generates two symbols per bit received, effectively doubling the input data rate to a 2X symbol rate. A 2X user clock is not available nor is provided with this module. Both order and polarity of the G1 and G2 symbols may be jumper selectable. The IOC413 uses two BNC input connectors and 2 BNC output connectors and operates up to 20M symbols per second. Input to the IOC413 is jumper selectable between the J1 and J2 inputs, the Daisy Chain bus, and the Global Bus. It can also drive the daisy chain bus and the global bus in the AL2073 Chassis enabling the user to create multiple copies of encoded data signals. The Daisy Chain bus may also be looped from the RX to the TX side for distribution prior to Encoding. The B-LED on the front panel of the AL2073 chassis will illuminate when J2 is connected to a clock source. The A-LED will illuminate when the B-LED is lit and J2 is connected to a data source. The IOC413 requires 1 slot of the 14 available slots in the AL2073 chassis.

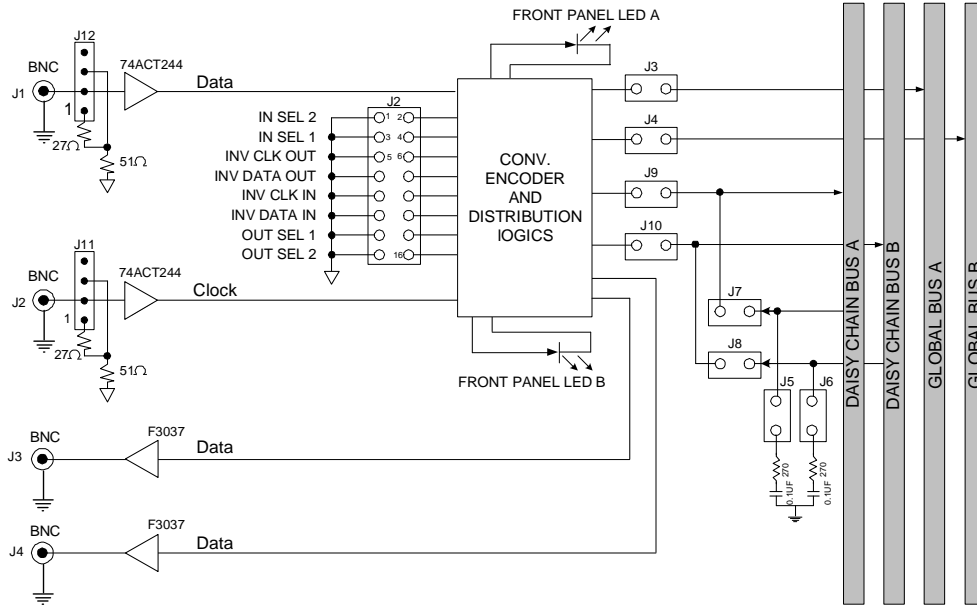


Figure 1: Model IOC413 Block Diagram

3. SPECIFICATIONS

GENERAL

1 Independent channel
 1Slot Module (3" x 6" x 0.9")
 AL2073 Pluggable Interface Module

OUTPUT

J3 - Encoded Data on BNC
 J4 - Encoded Data on BNC
 Bit Code: NRZ-L
 Constraint Length K=7
 Rate R=1/2
 G1 = 1718
 G2 = 1338
 High Current

INPUT

J1 - Data
 J2 - Clock
 2K bits-per-second to 10M bits-per-second Data and Clock
 TTL Level Inputs
 Synchronous NRZ-L Data and 0° Clock
 BNC Connectors
 50/75-ohm or High Impedance selectable termination

4. APPLICATION INFORMATION

The IOC413 is used to generate a Convolutional Encoded data stream from a synchronous Data and Clock stream.

This module is compatible with:

- 2907 and 2908: Data Acquisition Mux/Demux
- 6801: 5 Channel BERT
- 6804: Multi Channel Clock Recovery Unit

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