

MODEL 2073 INTERFACER PRODUCT LINE

IOC412

LOW PASS /
PRE-MODULATION
FILTER MODULE

REAR VIEW



SIDE VIEW

FEATURES

➤ INPUT

- Single Ended BNC
- Synchronous TTL
- 5 kbps to 5 Mbps
- NRZ Data with 0° Clk or BIØ
Data with 2X CLK
- Data and Clock Input
Termination selection
(50 Ω, 75 Ω)

➤ Low Pass Filter

- -3dB Points Auto Set at 0.7 Times Bit Rate for NRZ
- -3dB Points Auto Set at 1.4 Times Bit Rate for BIØ
- Constant Delay-type Filter
- Input Illuminates LED on Front Panel of 2073 Chassis

➤ OUTPUT

- Single Ended BNC
- Bipolar
- Adjustable Gain up to 2.8V
into 50 ohms
- Adjustable DC Offset
- 50 Ω or 75 Ω drive

OVERVIEW

The IOC412 Pluggable Interface Module (PIM) is a LOW PASS FILTER. The filter cutoff frequency is automatically set with the -3dB point set at 0.7 times the input bit rate for NRZ signals (1.4 times input bit rate for BIØ inputs). The input serial data stream is sampled by a Finite Impulse Response filter which provides a constant group delay for all frequencies. The resulting values are translated back into a serial data stream by a digital to analog converter. An anti-alias filter minimizes sampling noise. The Input data rate is automatically detected requiring no setup by the user. The unit includes two user controls to set the output signal level and output offset. The IOC412 uses two BNC input connectors and one BNC output connector and operates from 5 kbps to 5 Mbps. The Data and Clock inputs drive the Daisy Chain bus or the Global Bus of the 2073 chassis. The A and B LEDs on the front panel of the 2073 chassis illuminate when J1 and J2 are connected to an active data and clock source. A built-in test mode, when selected, provides a sinusoidal output at one half the input clock rate. The IOC412 requires 1 slot of the 14 available slots in the Model 2073 chassis.

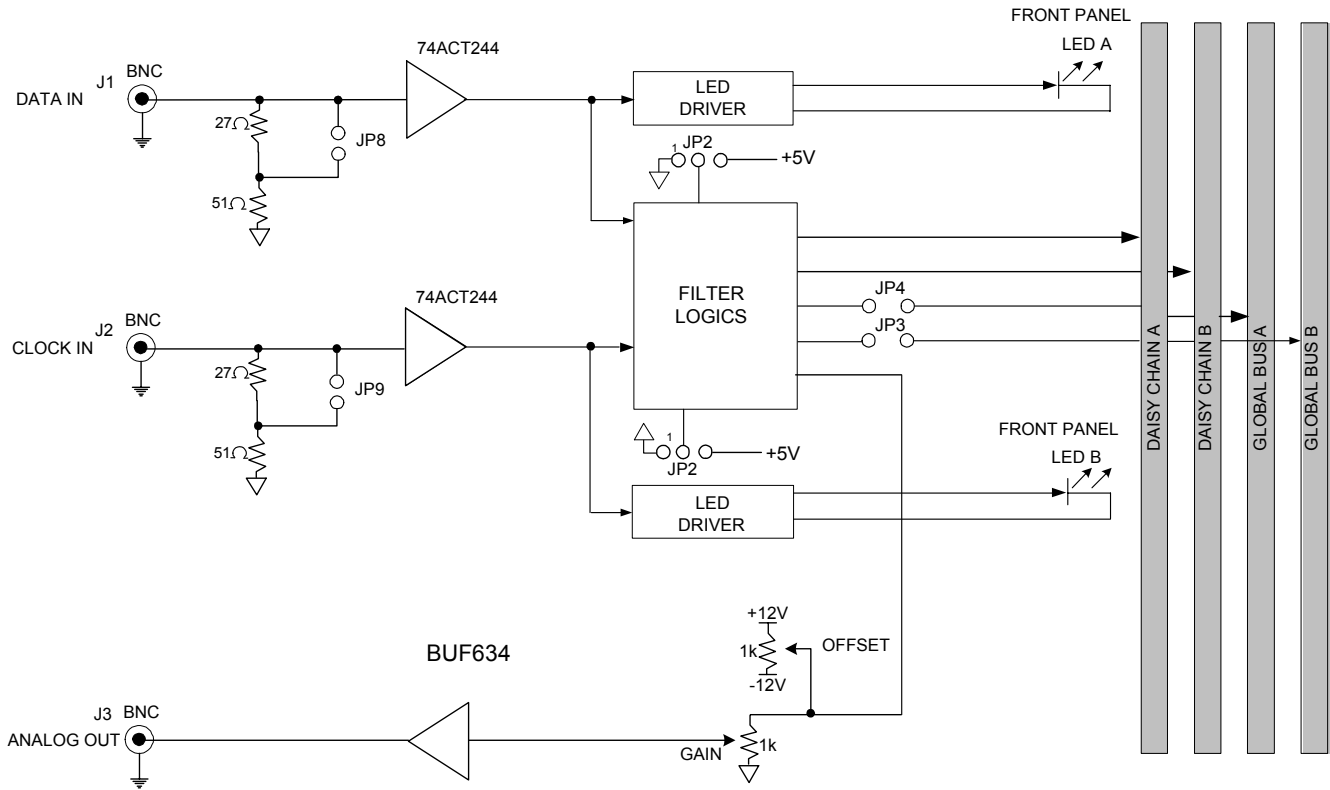


Figure 1: Model IOC412 Block Diagram

SPECIFICATIONS

GENERAL

- 1 Independent channel
- 1Slot Module (3" x 6" x 0.9")
- Model 2073 Pluggable Interface Module

INPUT

- TTL Level Inputs
- J1 - Data
- J2 - CLK
- 5 kbps – 5 Mbps
- Synchronous NRZ-L Data and Clock
- 2x clock required for B10 codes
- BNC Connectors
- 50/75-ohm Impedance selectable termination

OUTPUT

J3 – Filtered Data on BNC

Low Pass Filter

- 3 dB point is 0.7 times bit rate NRZ Data
- 3 dB point is 1.4 times bit rate B10 Data
- Constant Delay filter
- Auto tracks input data rate
- High Current (250 mA) drives 2.8 Vp-p into 50 Ω
- Manual gain and offset control

APPLICATION INFORMATION

- The IOC412 is used as a pre-modulation filter for digital data.
- 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

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