



## AL2073 INTERFACER CHASSIS



### FEATURES

- 19" x 3.5" x 9" Rack mountable, Front or Rear
- 14 Individual Card Slots
- 80 Watt Main Power Supply
- Optional 40 watt -5V Redundant Power Supply (2 slots)
- Optional 40 watt +5V,  $\pm 12V$  Redundant Power Supply (2 slots)
- Optional 40 watt +5V,  $\pm 12V$  Redundant Power Supply (2 slots)
- 2 Status Indicators per slot
- Front Panel Power Indicator
- Card-to-Card Bus Structure
- 10 Position Rotary Switched slots (Optional)
- Heavy Duty Aluminum Chassis

### OVERVIEW

The Apogee Labs Model 2073 Telemetry Signal Interface/Distribution chassis is a cost effective user configurable unit which provides a convenient method of connecting equipment having dissimilar signal interfaces and/or distributing a single input to multiple outputs. Holding up to 14 individual cards, signals are received and properly terminated via an input only or input/output card, translated/buffered and properly driven to industry standards.

Front panel status of the input signal, the most common status being signal transitions, is available for most modules, providing a quick look capability that input data and clock are present to a particular card in the chassis. A recessed 10-position rotary switch is available on certain slots depending on the chassis model option, providing an easy means of selecting up to 10 unique functions which are available on several interface modules. A Global bus structure provides a convenient method of buffering and distributing the input from one card to the remaining 13 cards, enabling a single input to drive up to 52 outputs. A Daisy Chain bus structure limits signal distribution to the slot adjacent to the input signal module slot allowing for the distribution of multiple or dissimilar input signals in the same chassis. The 2073 chassis is available in several options, depending on customer preference.

Over 100 unique interface/distribution modules exist for the 2073 chassis covering a varied set of input and output standards. In addition to the standard set of modules, custom interface modules can be developed.

### MODULE FEATURES

- Clock Regeneration
- Telemetry Code Conversion  
(Bi-Phase / NRZ-L ; NRZ-L / RNRZ-L)
- PCM Signal Level Conversion  
(TTL, RS-232, RS-422 ; ECL, LVDS ; Bi-Polar)
- Signal Distribution  
(TTL, RS-232, RS-422)
- Impedance Matching
- Logic Change (ECL ; TTL)
- Time Distribution  
(IRIG A,B,G NASA 36 Bit)
- Communication Protocol  
(T1, AMI/TTL, TTL/T1, AMI)
- Opto Isolation
- Fiber Optic Modem
- Video Switching
- Custom Conversion

## CHASSIS SPECIFICATIONS

### PHYSICAL

Size: 19" W x 3.5" H x 9" D

Weight: Less than 15 lbs empty

### POWER SUPPLY

109—240 VAC (47-63 Hz)

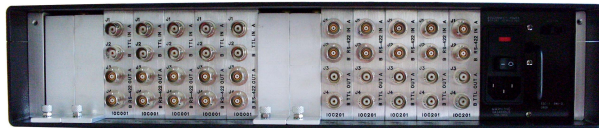
80 watts (+5V, -5V, +12V, -12V)

### ENVIRONMENTAL

Operating Temp: 0° to 50° C

Relative Humidity: 15-95% non-condensing

Altitude: Sea Level to 10,000 feet



Model AL2073-014 Backplane

## CONFIGURATION SETTINGS

The INTERFACER product is a user configured unit that provides the flexibility needed to convert equipment having dissimilar interface signals. The user selects the types and quantities of Pluggable Interface Modules (PIMs) required for each application. The Chassis back plane provides the electrical interface for up to 14 PIMs. A pluggable power supply module provides power; pluggable redundant power supplies are available. There are two primary signal path pairs on the back plane. One signal path pair is a chassis-wide bus, which a single module with input receivers may be configured to drive. This GLOBAL bus provides the A and B inputs to any output module located in any slot of the chassis. The second path is a bus structure between all the consecutive slots (Daisy Chain), slot 1 outputs to slot 2, slot 2 to 3, etc. The A and B signals can be passed from board to board, yet each open slot or input PIM will break the chain. This feature allows several groups of boards to inhabit one chassis and distribute a multitude of signals to any number of outputs. With this approach, it is possible to provide 'M' to 'N' capabilities, that is, buffer three sets of input signals, each with five separate buffered outputs. If necessary, a 10-position rotary switch (optional) located on all odd numbered slots is accessible at the front panel of the 2073 chassis. The switch provides a 1 in 10 selection capability for a module inserted in that particular slot.

## SAMPLE CONFIGURATIONS

- RS232, TTL or RS422 to RS232, TTL, or RS422
- IRIG Time Distribution
- TTL Distribution
- Analog to Fiber
- RS232, TTL, or RS422 to Fiber
- Fiber to RS232, TTL, or RS422
- ECL, LVDS Conversion

## APPLICATION INFORMATION

The basic 2073 chassis accommodates up to 14 Pluggable Interface Modules (PIMs). Each module typically supports two input signals, either as separate sources or as a "circuit" consisting of data and clock. Using the chassis backplane, an input module can convert or buffer a signal and then distribute the results to any number of separate isolated outputs. In many applications, such as converting a single RS-422 signal into 20 TTL outputs, only six conversion modules would be required. Front panel switches are optionally provided on some chassis to allow certain modules to be switched from one function to another, such as selecting an output code on a module that converts NRZ-L to one of several popular NRZ or Bi-Phase codes.

## OPTIONS

- |              |                                       |
|--------------|---------------------------------------|
| AL2073-014:  | Standard Chassis—No rotary switches   |
| AL2073-012:  | Recessed Rotary Switch on Odd Slots   |
| AL2073-012B: | Recessed Rotary Switch every 3rd Slot |
| AL2073-012C: | Rotary Switch with Knob on Odd Slots  |
| 2073-881:    | Redundant 40 Watt +5, ±12V supply     |
| 2073-882:    | Redundant 40 Watt -5V supply          |

Checkout our website  
[www.apogeelabs.com](http://www.apogeelabs.com)  
 for a complete listing of our  
 Pluggable Interface Modules.

If you don't see it, contact us!

215-699-2060  
 757-336-7292  
[Sales@apogeelabs.com](mailto:Sales@apogeelabs.com)