

## Telemetry needs have evolved... So have we.

# Introducing the next generation Apogee Mux.



# 20 years of telemetry experience in one box.

# AL1112

# **Dual Channel TMoIP Processor**

## 2-Channel Capability in a Single Chassis



The AL1112 distributes Serial PCM data over a wide range of commercial IP-based networks, in real time and with very low latency... either short distances through a LAN or longer distances through a WAN or ISP. The system enables the transmission of multiple telemetry streams from one point to multiple locations while maintaining their time-data relationships, making it a highly reliable and economical alternative to dedicated serial interconnection systems. Moreover, the embedded system management software is easy to set-up and enables monitoring of the distribution network via a user-friendly Graphic User Interface (GUI) or secure SNMP Connection.

- Cost effective Ethernet transport of 2 PCM Links
- TCP/IPv4 and TCP/IPv6 compliant
- Minimal overhead and ultra-low latency
- Serial PCM channel TTL/422, 1kbps 40Mbps
- Web browser-based remote control

- Flexible Configuration: Each channel can be configured as either an input or output
- 10/100/1000 Mbps Ethernet interface
- Integrated BERT with link delay
- Low profile form factor 1U Chassis
- Front Panel Display and LEDs for set-up and status

Optional Bit Sync capability for data sources which are asynchronous. Contact us to discuss your specific requirements!



#### PCM DATA INPUT

- 1 kbps 40 Mbps
- TTL/422 data/clock Input 50/75 Ohm, BNC/Triax connector
- Optional Bit Sync capability. Contact factory for details.

#### PCM DATA OUTPUT

- Supports rates from 1 kbps to 40 Mbps
- TTL/422 data/clock output BNC/Triax connector drives a 50/75 Ohm load

#### **BIT ERROR RATE TESTER (BERT)**

 Integrated BERT Interface • Rates from 100 bps - 40 Mbps

#### POWER

- 2.5mm circular jack
- +10 VDC to +30 VDC

#### **ENVIRONMENT**

- Operating temperature: 0° C to +55° C
- Storage temperature: -40° C to +70° C

#### **RELATIVE HUMIDITY**

Humidity: up to 95% non-condensing

#### **ETHERNET INTERFACES**

- SNMP v2 and v3
- 10/100/1000 Mbps Ethernet connectivity •
- Protocols supported:
  - TCP/IPv4 & IPv6 • UDP/IP Unicast
  - TMoIP
- UDP/IP Multicast

SSH / Telnet

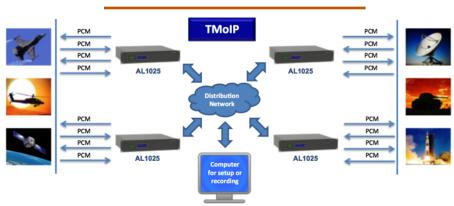
- SMB
- ICMPv6
- TIMING
  - SNTP (Optional)
  - IRIG-B

Although Apogee Labs does attempt to provide specifications that are accurate, these specifications are subject to change or correction. Please contact a Sales Engineer to discuss requirements.

## SYSTEM MANAGEMENT SOFTWARE

https://192.168.0.5/cgi-bin/getpage.xx			✓ C Q Sea	☆自	+ 1		** ~	
APOGEE LABS		3 4 5	6 7 8	9 10				LO
Modules   1 - PCM IO Ver A   2 - PCM IO Ver A   3 - PCM IO Ver A   4 - PCM IO Ver A   5 - PCM IO Ver A   6 - PCM IO Ver A   6 - PCM IO Ver A   9 - PCM IO Ver A </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>Configur</td> <td>e LED th for slot 1</td> <td></td>						Configur	e LED th for slot 1	
		PCM IO Versi	on A - Slot 1				I OF SIDE 1	
	Ethernet Flow	Transmit	Remote IP	192.168.0.5				
	Protocol	RUDP	Remote Channel	6				
	Tx Rate	31,354,896	MTU Size	1500				
	Tx Bytes	127.02 MB	Rx Buffers (ms)	8				
	Rx Rate	0	Input Termination	75	•			
	Rx Bytes	0 B	PCM Rate	29,999,664				
	Dropped Packets	0	PHY Status	1000				
	Retransmits	0	Status	Ok				
	Out Of Order Packets	0	T.					
		Clear						

Ease of set-up and use and rapid diagnostic capabilities are the cornerstones of our embedded TMoIP system management software. (AL1020 shown in illustration.) The specialized software provides top level management information on each end of the TMoIP connection, including data to assess network functionality. Moreover, with remote control capability, operators at any end of the TMoIP network can drill down to view the telemetry data from any input channel and assess channel status, I/O counts and parameters, IRIG timing, and error counts, among other data... all through the user-friendly Graphic User Interface (GUI) or a secure SNMP connection.



### APPLICATION OVERVIEW

- ARP
- DHCP UDP/IP Broadcast RUDP