APOGEE LABS

AL1002
SERIAL DATA GATEWAY

Full Duplex Capability

Front Panel

Rear Panel

FEATURES

- 10 / 100 / 1000 Mbps Ethernet connectivity
- TCP / IP, UDP / IP (Unicast, Multicast, and Broadcast), TMoIP, SMB, ICMPv2, DHCP, ARP, and Telnet protocols
- Serial PCM channel TTL and RS-422, 1 kbps to 35 Mbps
- Time code input (IRIG A/B/G) with auto recognition and flywheel capability
- Data packet structure
  - Raw data IP packets
  - PCM frame aligned IP packets
- OS independent remote control
- Apogee Extended Remote Control (APEX) Compatible
- Web Browser—Mozilla Firefox (1.5 +) and Microsoft Internet Explorer (6+) supported

OVERVIEW

The AL1002 Serial Data Gateway provides a flexible, scalable, and cost effective Ethernet transport for serial PCM data. Consisting of a serial PCM input node (AL1110), serial PCM output node (AL1111), 5 port Ethernet switch, and a universal power supply, the AL1002 accommodates full duplex (input/output) links in a 1U chassis. The packetized data stream may be sent directly to systems on the user's network or via the Internet, such as remote monitoring or display stations, data processors, or mass storage devices.

The AL1002 enables transport of PCM data and clock with serial rates up to 35 Mbps across LAN's and WAN's at network speeds of 10/100/1000 Mbps with minimal overhead and latency. Time stamps of data packets for time correlation on mission critical or other events may also be generated by use of the AL1002's internal clock or a user supplied IRIG A/B/G time reference. The product line is built on a core technology that supports full duplex transport speeds in excess of 320 Mbps, which allows for future expansion to utilize the capabilities of higher bandwidth network designs.

Designed for ease of use in a wide range of applications, users need only modify a few settings on the AL1002 to begin transmitting data. However, to accommodate the needs of advanced networks, users may also modify packet sizes, port numbers, protocols, MTU sizes, and other lower level settings.

SPECIFICATIONS

PCM DATA INPUT

- 1 kbps – 35 Mbps
- TTL data/clock Input - 50/75 Ohm, BNC connector
- RS-422 data/clock Input – 110 Ohm, female Triax

IRIG-A/B/G TIME CODE INPUT

- 600 Ohms ± 5% AC-coupled
- BNC Connector

PCM DATA OUTPUT

- Supports rates from 1 kbps to 35 Mbps
- TTL data/clock output - BNC connector drives a 50/75 Ohm load
- RS-422 data/clock output – female Triax drives 100 Ohm load (differential)

IRIG-TIME OUTPUT

- IRIG-A/B/G time code output
- BNC connector, drives a 600 Ohm load

POWER

- IEC 320-C14 jack
- Supply voltage 90 – 264 VAC

MECHANICAL

- 16.63" W x 13" L x 1.75" H
- Weight: approximately 6.5 lbs

ETHERNET INTERFACES

- 10/100/1000 Mbps Ethernet connectivity
- Protocols supported:

  - TCP/IP
  - TMoIP
  - SMB
  - ICMPv2
  - DHCP
  - UDP/IP Unicast
  - UDP/IP Multicast
  - UDP/IP Broadcast
  - Telnet
  - ARP

REMOTE CONTROL

- Operating system independent remote control interfaces
- APEX Compatible
- Web Browser – Mozilla Firefox(1.5+) and Microsoft Internet Explorer(6+) supported
- Telnet – Unix/Linux Telnet and Microsoft Telnet supported (Subset of functionality)
- NNAT Compatible
- User level access control

ENVIRONMENT

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

RELATIVE

- Humidity: up to 95% non-condensing

APPLICATIONS

Real-time transmission of telemetry data from its source location to one or multiple destinations… either short distances through a LAN or longer distances through a WAN or ISP.

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