



AL8400

DATA ACQUISITION MULTIPLEXER

1. FEATURES

- Laboratory Data Acquisition Applications
- Various Signal Types Accepted
 - Analog
 - Digital
 - Time Code
 - Audio
- Time Division Multiplex (TDM) PCM Technology
 - Up to 20 Mbps
- IRIG 106 Compliant Output
- Expandable Configuration
 - Up to 128 Analog Inputs
 - Up to 256 Discrete Inputs
- Front Panel and Ethernet Setup and Control
 - RS-232 and IEEE-488 Options Available

2. PURPOSE

The AL8400 Data Acquisition Multiplexer accepts a variety of analog and digital signals and multiplexes them together into a single stream of digital data bits for recording, transmission or IRIG compatible decommutation. The unit utilizes standard sampling techniques and generates standard IRIG PCM telemetry formats. A standard Class I or Class II decommutator / frame synchronizer may be used to extract the data. Alternately, data may be ingested by a computer for storage and processing.

The unit is configured using a simple remote control program which requires a minimum of operator interaction. All Model AL8400 control and setup information passes through the micro-processor of the PCMGEM module. In order to keep the front panel menu driven display simple, the software is configured according to the data acquisition modules that are installed. Separate documents are provided that describe, in detail, the installed modules. This document centers on the functionality of the chassis.

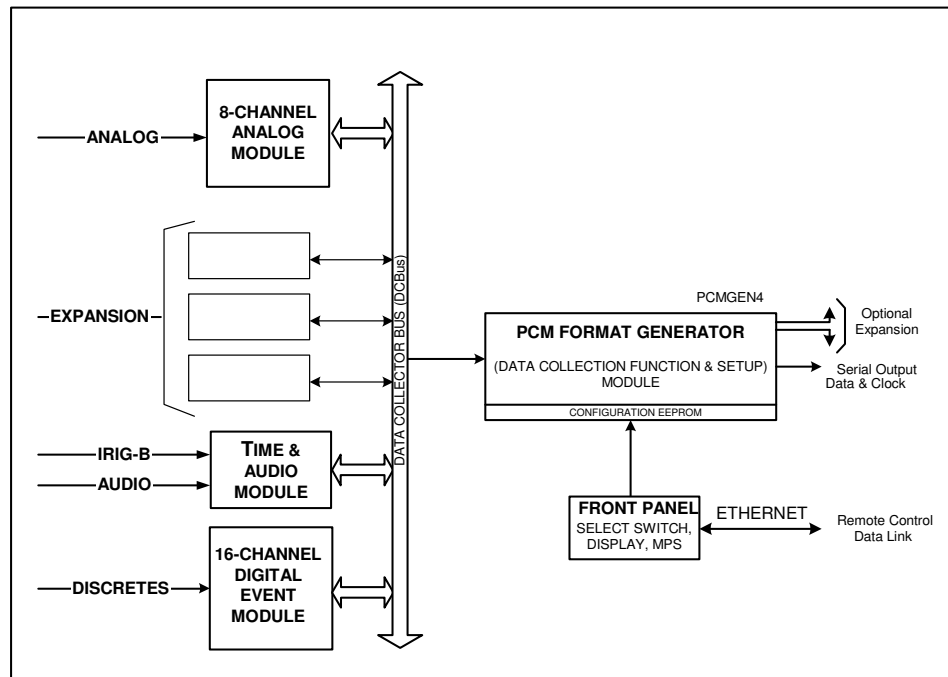


Figure 1 AL8400 Overall Block Diagram

3. SPECIFICATIONS

PHYSICAL

Chassis dimensions:

5 ¼" high x 19" wide x 15.75" deep
Rack-mountable or stand-alone

16 slots available for channels per chassis
max 8 chassis (option) per installation

Weight:

35 lbs. maximum

Power:

110-240 VAC, single phase, 57-63 Hz,
<75 watts

Environment:

0° to +50°C operating temp
15 to 95% relative humidity
Sea level to 10,000 feet altitude

Sampling

Controlled by Frame Rate and specific module requirements over the range of 100 s/s to 500,000 s/s

Acquisition Modules Support

Analog Signals: Unipolar or bipolar, in various voltage ranges, single ended or Differential

Discrete or Event Digital Signals:
Single ended or Differential

Voice Signals: 3k Hz bandwidth

Time Code Signals: IRIG and NASA codes,
AM 1k Hz carriers

Serial Data Streams: Synchronous or
Asynchronous TTL streams

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