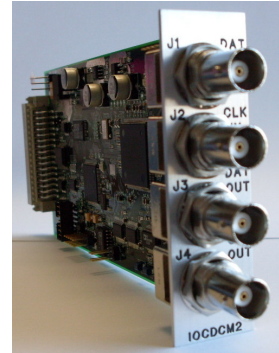




IOCDM2 PCM DECOMMUTATOR MODULE



FEATURES

- PCM decommutator input module (decoder)
- IRIG 106 Class I and II compatible output
- TTL Data and 0°CLK
- Input rate: Up to 20 Mbps
- Input Data and CLK Status
- Sync Status
- Programmable features:
 - ◊ Input codes: NRZ-L, RNRZL-15
 - ◊ Frame sync pattern: 1st two words (up to 32 bits)
 - ◊ Frame sync mask
 - ◊ Word length: 8 to 16 bits
 - ◊ Frame length: Up to 4096 words/frame
 - ◊ Sub-frame ID location, length and orientation
 - ◊ Data word display: 1 word
- Frame sync derived BER (Frame Sync Error Rate)
- Supports expansion to second chassis
 - ◊ TTL data and clock output

OVERVIEW

The IOCDM2 module is the data and clock input portion of an AL2873 telemetry decoder or DECOM system. This module is responsible for Frame Syncing to an input PCM data and clock stream and providing data to the individual output modules in the system.

A setup and status screen is provided that allows the user to set the Frame sync pattern/mask, input code, word length and frame length and display word. Sync status and DATA/CLOCK present status is available on the setup screen in addition to a FRAME ERROR COUNT which measures Frame Sync Errors. A second setup and status screen is available to configure the SFID length, location and orientation. All configurations are stored in non volatile memory and reloaded at power up.

The data decommutation or output modules installed in the system are configured separately from the DECOM. These modules receive the digital data synced by IOCDM2, which is being streamed across the backplane, and processes according to its configuration. An additional 13 data output modules can be configured in an expansion chassis and be part of the decommutator system.

APPLICATION NOTES

The IOCDQM2 is the PCM Frame Sync portion of a data decommutation system. This module is used in conjunction with the suite of data output modules that comprise an AL2873 Data Acquisition/DECOM system. A fully configured system is capable of decommutating analog, digital, PC Com ports, audio, and IRIG timing. Several typical signals are receiver AGC levels, Bit Sync and Frame Sync lock status, station timing, station voice, GPS RS-232 outputs, and serial data streams from antenna position encoders.

System block diagrams are shown below.

Figure 1: Fully Populated Chassis

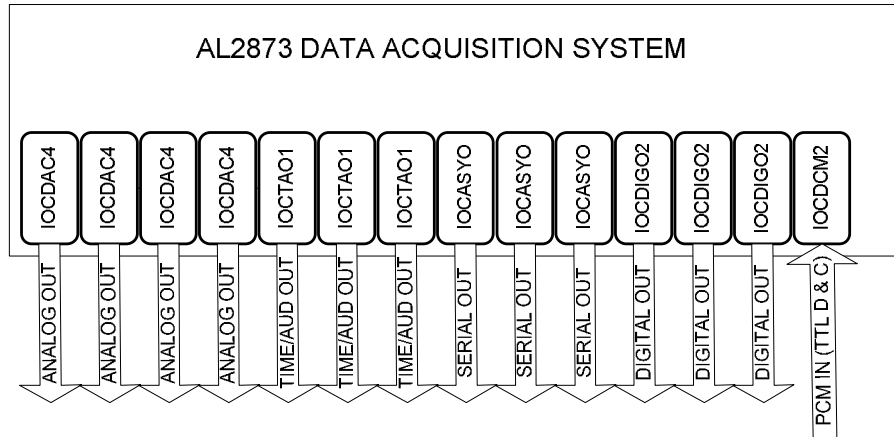
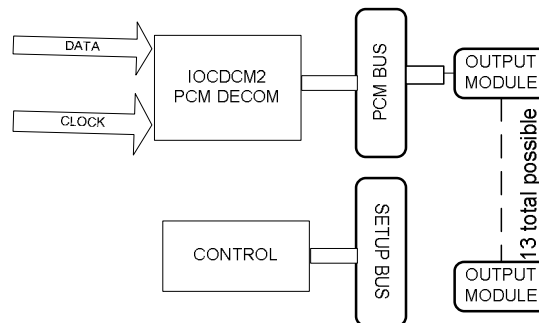


Figure 2: Functional Block Diagram



SPECIFICATIONS

GENERAL

- Single slot module (3" x 6" x 0.9")
- One module per chassis

INPUT

- TTL data and 0° clock / BNC connectors
- Up to 20 Mbps
- 50Ω and 75Ω jumper selectable termination
- Codes: NRZ-L, RNRZ-15

OUTPUT (expansion chassis use only)

- TTL Data and 0° Clock
- 51Ω / 75Ω driver
- Codes: NRZ-L

ENVIRONMENTAL

- Operating temperature: 0° to 50° C
- Relative humidity: 15% to 95%; non-condensing
- Altitude: Sea level to 10,000 feet

POWER

- +5V input from AL2873 chassis backplane

MEAN TIME BETWEEN FAILURES

- ~ 100,000 hours