GDP SPACE SYSTEMS

ACROAMATICS
TELEMETRY SYSTEMS

PCM Frame Validation System
Model 2618P

Software Features:

- Removable USB Flash Drive Storage of System Configuration and Log Files
- Monitor up to 8 Independent PCM Streams
- Quick Visual Indication of Signal Quality
- Log File Creation with Data export to spreadsheet applications
- Wizard Software assists with USB flash setup

General Description

The Model 2618P PCM Frame validation System will monitor as many as eight independent streams, providing a quick visual indication of the signal quality of PCM data and verification that the received data corresponds to the expected frame characteristics.

The 2618P accepts clock and data from PCM decryptors or Bit Synchronizers (up to eight) and bright LED indicators on the unit's front panel indicate the data quality of each stream. At the same time, each stream is converted to a randomized NRZ signal for input to a downstream processor. A log file is also generated that records the system setup, plus time annotated frame status that can be imported into Excel or other applications for inclusion in mission reports.

Wizard software, which can be run on any Windows computer, guides you through the simple setup procedure to create or modify configurations. A USB flash drive transports the setup to the 2618P. Once the configuration is downloaded, the data monitoring and logging operation automatically starts, so virtually no additional operator action is required. At the end of each mission, a simple press of a button uploads the log file to a USB flash drive.

The 2618P is a 1U rack-mountable. It provides convenient front panel setup, data access and display of PCM stream status.

7230 Hollister Avenue, Suite 100, Goleta, CA 93117
Phone: 805-967-9909 Fax: 805-967-8375

www.acroamatics.com
sales@acroamatics.com

GDP SPACE SYSTEMS

ACROAMATICS
TELEMETRY SYSTEMS

Frame Sync Verification Unit

Input

Sources	Eight channels, each accepting RS-422 Differential 0° clock & NRZ data
Impedance	120Ω input impedance, TTL compatible
Bit Rate	Up to 20 Megabits per second
Polarity	Programmable, automatic polarity correction
Frame Length	Programmable, 16 to 16384 bits

Synchronization

Mainframe Sync	Provides for programmable sync pattern and mask, complement pattern recognition, and variable length frame decommutation. Pattern length up to 64 bits.
Alternate Complement Sync	Synchronizes to formats in which the minor frame sync pattern is complemented on alternate frames
Complement Frame Sync	Synchronizes to format that complement the minor frame sync pattern at a major frame rate
Automatic Polarity Inversion	Input polarity is inverted when two consecutive complemented sync patterns are found
Sync Modes	Fixed, Adaptive and Burst
Sync Strategy	Search, Verify and Lock
Sync Error Tolerance	0 to 15 errors, programmable
Sync Slip Window	0, ±1, ±2 & ±3 bits, programmable
Data Polarity	Normal, Inverted and Automatic detection
Clock Rate Monitor	A programmable delay counter is provided to return the synchronizer to Search is the clock input is lost.

Output

Time	The Time Code Translator can be read from the PCI bus.
PCM Status	A status word is available for each PCM frame synchronizer via the PCI bus.
Discrete Status	The Lock status of each frame synchronizer is output as an RS-422 signal.
Serial Setup Output	A serial RS-422 output allows data to be sent from the PCM bus to an external device.
CVT	128k x 32 bit CVT memory, addressed by assigned PCM word ID tag. Read by the PCI bus, it contains last value from up to 128k TM sources.
Block Buffer Memory	Used to format and input up to 512k messages of 32 bit words. Six programmable formats: 4 with ID tags and 2 data only. May include programmable time stamp and header message.
DMA	Dual buffered DMA channel for transferring messages formatted for the block buffer memory directly to Host memory.
Mezzanine Card	A mezzanine connector supports an optional Time Code Translator/Generator (with or without PCM/PAM Simulator). The mezzanine card provides the following signals: IRIG B In Amplitude modulated IRIG A, B, or G with 100mV to 10 V peak to peak signal input amplitude. Simulator output is RS-422 NRZ-L data and 0° clock.

Chassis

Processing

CPU	VIA C3® 1.0GHz EBGA Processor
Memory	1 GB DDR PC3200
OS	Windows XP Professional

Physical

Dimensions	17” W x 19” D x 1.75” H
Weight	Approx 16 lbs.
Material	18 Gage Mild Steel
Finish	Powder Coat, Black
Power	115/230 VAC 6-50 Hz, 3A max

Environmental

Humidity	Operating 20-90% Storage 20-95%
Temperature	Operating 0° to 60° C (32° to 140° F) Storage -40° to 85° C (-40° to 185° F)
Shock	Operation 6G, Non-operational 50G
Vibration	Operating 0.5G, 5 to 2000 Hz, Non-operating 1.2G, 5 to 600 Hz

Specification subject to change without notice.

7230 Hollister Avenue, Suite 100, Goleta, CA 93117
Phone: 805-967-9909 Fax: 805-967-8375
www.acroamatics.com
sales@acroamatics.com