



Multi-Channel Data Quality Monitor

Model 941

Features:

- Up to 8 Ch DQM
 - ◆ 6 Word Status
- Frame Synchronizer
 - ◆ Up to 15 Mbps / Stream
 - ◆ 16 to 262,144 Bits / Frame
 - ◆ Auto. Polarity Correction
 - ◆ Bit Slip Compensation
- Sub-Frame Synchronizer
 - ◆ 2 to 512 Fr / SF
 - ◆ 9 Bit ID Cntr
 - ◆ 32 Bit RCY
- Decommulator
 - ◆ 4 to 16 Bits / Word
 - ◆ MSB / LSB Alignment
 - ◆ Parity Check

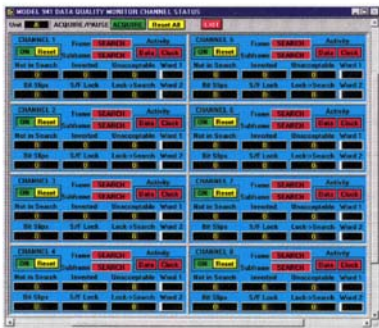
General Description:

The Model 941 is a Multi-Channel Data Quality Monitor (DQM) system packaged in a 10.5" x 19" EIA rack mountable chassis. The system supports eight PCM data streams. The unit provides information pertaining to the data stream quality as well as frame and subframe synchronization states. Channel status is displayed locally with leds located on the front panel. Decommuted data, frame and subframe status, word and frame number (with timing markers), is also provided in parallel word form on the unit rear panel.



Six counters accumulate Data Quality information. These counters are activated on command and can be simultaneously reset.

1. # of frames in Minor Frame Check or Lock (valid frames).
2. # of Minor Frames received with complemented synchronization patterns (inverted data).
3. # of frames in Minor Frame lock with unacceptable synchronization patterns (flywheel frames).
4. # of Minor Frames with a bit slip detected.
5. # of Minor Frame Lock to Search transitions (dropouts).
6. # of Minor Frames received while in Major Frame (Subframe) Lock (valid Major Frame).



All functions are controlled through either the local front panel display and keypad, or an IEEE-488 (RS232 is optional) remote control port. Virtual Instrument (VI) software is provided to allow the user to control the unit in a Windows point and click environment. The software provides a single-screen display of all statistics and status for all channels.



Multi-Channel Data Quality Monitor

Model 941

SPECIFICATIONS:

Input Format

- NRZ-L Data & 0-degree clock
- 1 Bps to 15 Mbps rate.
- Input signal levels are EIA RS-422 differential.

Data Output

- Sixteen data bits.
- 14 word number & 9 frame number bits.
- Frame & Subframe Status
- Word, Frame & Subframe timing signal.

Frame Synchronizer

- Frame lengths - 16 to 262,144 bits.
- Bit Slips - 0 to ± 3 bits / frame.
- Sync pattern up to 64 bits, maskable.
- Pattern positioned - first or last
- Normal sync, Alternating Frame Sync (AFS), and Subframe Sync Compliment (SSC).
- Search, Check, Lock, & Flywheel errors 0 to 30 bit errors.
- Check 0 to 15 Frames to advance to Lock.
- Flywheel 0 to 15 Frames to revert to Search.
- Search, Check, Lock, and Flywheel.

Subframe Synchronizer

- Subframe sizes from 2 to 512 frames / subframe.
- SID counter (up or down) lengths from 1 to 9 bits.
- Sync pattern up to 32 bits, any combination of bits maskable.

Decommutator

- Automatic Polarity Correction (APC)
- Up to 16,384 words / frame -4 to 16 bit words.
- MSB/LSB can be modified per word
- Strips parity bit in MSB or LSB per word
- Selectively pass/drop each word

Data Quality Monitor Event Counters

- Up to 16384 events.
- Counter #1 - Number of frames in frame check or lock state.
- Counter #2 - Number of inverted frames received.
- Counter #3 - Number of frames with a bit slip detected.
- Counter #4 - Number of lock to search transitions.
- Counter #5 - Number of frames with unacceptable frame sync patterns detected.
- Counter #6 - Number of frames received while in subframe lock.

Data Quality Monitor Data Capture

- Two individual word capture registers.
- Sixteen bit wide registers.
- Capture data based on word / frame number

FRONT PANEL

- Bright, high contrast 6-line by 40-character Vacuum Fluorescent (VF) display.
- Twenty (20) position keypad.

LED Indicators (one for each channel)

- Clock activity, bi-colored. (Red = no activity, green = activity)
- Data activity, bi-colored. (Red = no activity, green = activity)
- Frame Search
- Frame Lock
- Subframe Search
- Subframe Lock

REMOTE CONTROL

- IEEE STD 488 GPIB Interface
- RS232 Serial Interface (Optional).

Ordering Information:

MD941-00-02 Two Channels
MD941-00-04 Four Channels
MD941-00-08 Eight Channels

Support: Recognizing that no standard product can meet all the needs of all users, GDP stands ready to provide units tailored to unique applications.

300 Welsh Road - Building 3 - Horsham, PA 19044-2273
Phone: 215-657-5242 Fax: 215-657-5273

URL: <http://www.gdp.space.com>
E-mail: gdpinfo@gdp.space.com