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TECHNOLOGY GROUP

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Find the *Delta Information Systems / GDP Space Systems FDM001* at our website: *Click HERE*

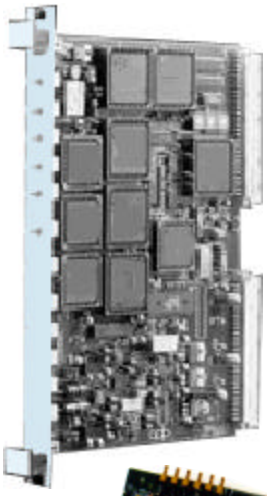
SGLS DEMODULATOR

FDM001 / 002

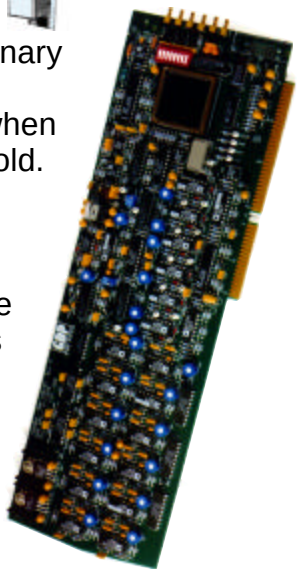
Features

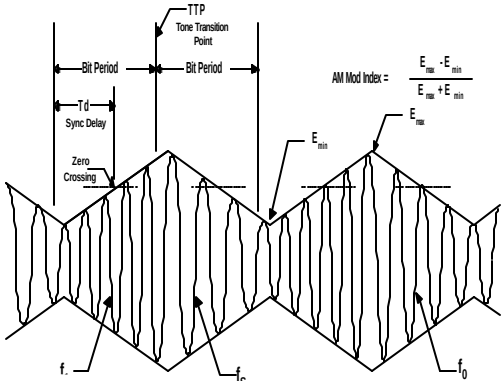
- Zero(0)-Hz IF SGLS Demodulator
- Performance to within 1 dB of theoretical for Eb/No of 10 dB
- Auto-rate detection between two command data rates, 1 kbps and 2 kbps; or
- Fixed single rate detection, selectable, 1 kbps or 2 kbps

General Description

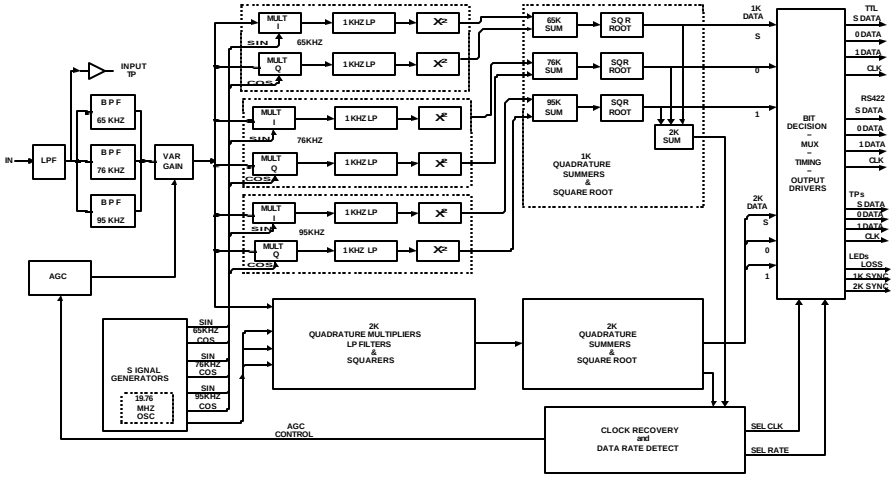


The FDM001(VME) / FDM002 (ISA) SGLS Signal Demodulator is a high performance FSK/AM demodulator that receives and demodulates the standard Space Ground Link System (SGLS) FSK/AM tri-tone signal. It reproduces 1, 0, and S ternary data outputs with a coherent command clock derived from the received SGLS modulated subcarrier tri-tone signals (65 KHz, 76 KHz, 95 Khz) at command rates of 1 Kbps and 2 Kbps. The command data rate is automatically detected. The Demodulator accepts one SGLS signal input, and provides both TTL and RS422 ternary (1,0,S) data and clock outputs. A squelch capability is provided to inhibit data output when the input signal drops below a preset threshold. No user setup or control is required.





The card is a single-slot 6U x 160 mm VME module (FDM001) or ISA module (FDM002). SMA interface connectors for the Demodulator signal input (INPUT), TTL outputs (S,0,1, & CLK) and the RS422 output (RS422 DATA/ CLOCK) are accessible at the front panel. Three sync status LEDs are located on the front panel.



300 Welsh Road Building 3 Horsham, PA 19044-2273 **URL: http://www.gdpspace.com**
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SGLS DEMODULATOR

FDM001

SPECIFICATIONS

Input:
FSK/AM Signal per SGLS

FSK Tone Set: 95 kHz, 76 kHz, 65 kHz

SMA Connector, 50 Ohm Input Impedance

Signal Level: 0.07 Vp-p to 2.0 Vp-p (50 Ohm)

AM Modulation:
Frequency: 500 Hz or 1000 Hz triangular waveform for 1K or 2K command data rate.

Modulation Index: 0.5

Synchronization Delay: 0.6 bit period

Demodulator:
Zero(0)-Hz IF SGLS Demodulator

Performance to within 1 dB of theoretical for Eb/No of 10 dB

Auto-rate detection -1 kbps and 2 kbps

Output:
Ternary 1, 0, S Data
Coherent Command Clock

TTL: SMA Connectors

TTL levels capable of driving, 50 Ohm Load.

RS-422 balanced, 100 Ohm load

Test and Status Outputs:
Open circuit output voltage levels nominal 0 and 1 volt

Buffered FSK/AM Input Signal.

Demodulator Output Data (1, 0, S) & Clock:

LED Indicators:
1kbps LOCK (Green)- ON if 1 kbps data rate is detected and synchronized.

2 kbps LOCK (Green)- ON if 2 kbps data rate is detected and synchronized.

LOSS (Red)- ON when the input signal level is below a preset threshold.

Power:
+5 Vdc @ 1.3 A
+12 Vdc @ 150 mA
-12 Vdc @ 500 mA
(+5V and ± 15V, optional)

Ordering Information

FDM001-00	VME Card
FDM002-00	ISA Card
OPFDM-01	+5V / ±15V Power

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

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