MAG_200/SIM-RF

MOBILE RF TELEMETRY SIMULATOR STATION

DESCRIPTION

MAG_200/SIM-RF is a mobile RF Telemetry Simulator System. It is a robust lunchbox and go-anywhere system suitable for harsh/severe environments and mission critical applications.

It generates RF telemetry signal IRIG 106, CE83, CCSDS..., either by acquisition playback or data simulation.

Based on the Magali Telemetry software, **MAG_200/SIM RF** includes all functionalities to test, qualify and maintain on field telemetry chains.

KEY FEATURES

- **Highly mobile platform** to test and qualify ground telemetry systems .
- Generation of **PCM data stream with FM modulation**
- **Data Rates up to 20 Mbps (**NRZ codes), 10 Mbps for other codes
- Evaluation of bit synchronizers and PCM decommutator performance
- **Error generation** on a bit by bit basis including frame sync loss
- Embedded time (IRIG A, B, or G)

SPECIFICATIONS

PCM SIMULATOR / IRIG TIME / FM MODULATOR

Simulator

Outputs	NRZ-L PCM Data, Code Selectable PCM Data, 0 degree clock, Minor frame strobes
Output Levels	Single Ended - TTL, Differential - RS-422
Differential Outputs	Capable of driving RS-422 or TTL compatible inputs
Output Data Rates	64 bps to 20 Mbps (NRZ) , 64 bps to 10 Mbps (others)
PCM Codes	NRZ-L/M/S; Bi-Phase-L/M/S, DM-M/S, M2, RNRZ-L-11/15, k=7 Convolutional Encoding Rate 1/2, 1/3
Word Length	3 to 16 bits programmable on a word-by-word basis
CRC Generation	CRC16/CCITT
Major Frame Length	Up to 65,535 words per major frame
Major Frame Depth	Up to 1024 Minor Frames per Major Frame
Bit Order	MSB or LSB first, word by word
Frame Sync Pattern	Unlimited
Major Frame Sync	FCC (FAC), SFID
Common Words	Data may be changed (word-byword) while operating
Waveform Words	Unlimited. Data may be changed while operating.
Baseband Output Level	+/- 2 Volts p-p open circuit +/- 1 Volt p-p into 75 Ohms

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Time Code Generator Output

Time Codes	IRIG A, B, or G
Modulated Output levels	
. Carrier Output Low	1 Volt p-p
. Carrier Output High	3.3 Volts p-p
DC Level Output	Demodulated representation of IRIG Time carrier output

Pre-modulation Filters

Pre-mod Filters	5 Pole Butterworth
Selectable	1 of 8 values
Standard values	250k, 500k, 1M, 3M, 6M, 9M, 12M, 15M Hz; unless otherwise specified at the time of order

RF Modulator

Modulation Type	FM
Frequency Range	S-Band (2200-2400 MHz) , L-Band (1435-1540 MHz), for other bands consult us
Transmitter Deviation	Programmable by software
Deviation (Max)	7 MHz (peak)
RF Output Level	Programmable from -60 dBm to 0 dBm by software

CONTROLLER

Model	Rugged, Shock Resistant Aluminium Chassis
17", 1280*1024	Keyboard, with integrated Touchpad
Power Supply	ATX power supply 650 W
Accessories	Caddy Trolley or Transport Container
Chipset	Intel C204
CPU Speed	Intel i3-2100, dual Core, 3.1 GHz
Free Slots	1xPCIe2.0*16, 2xPCIe2.0*4 (10 x 8)
I/O	6*SATA, 2*Rj45, 1*IMPI LAN, 8*USB2.0, 2*Serial (one onboard)
RAM	4 GB ECC DDR3 RAM (max. 32 GB)
Hard Drive	1x500 GB SATA, 7200 rpm, internal
VGA	on board
DVD R/W	Slim DVD
Operation System	Windows 7, 32-bit
Dimension ca.	433 mm x 347 mm x 229 mm
Weight	13.5 Kgs

ORDERING INFORMATION

MAG-200/SIM-RF	PCM generator, all PCM codes
MAG-200/SIM-SFM	PCM generator, all PCM codes with S-band FM
MAG-200/SIM-LFM	PCM generator, all PCM codes with L-band FM

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