

MAG_DATAREC4

MAGALI SOFTWARE FOR DATAREC4



DESCRIPTION

The **DATaRec4** is an acquisition system combining flexibility, high speed, accuracy and high synchronization. It benefits from the expertise of Zodiac Data Systems in Automotive and Flight Tests.

With more than 1400 licences used all over the world, the acquisition and analysis software **MAGALI** is a reference in multisource data acquisition and processing systems.

From the alliance of both leaders results the **MAG - DATaRec4** solution, a cost-effective and flexible Data Acquisition System with optimum performances.

KEY FEATURES

- Run simultaneously all sources
- PCM, MIL-STD-1533, ARINC 429, Video, Voice, analogues extraction
- Real time and post-processing functions : visualization, analysis, alarms, reports...
- Network Distributed architecture available

The MAGALI station is connected to the DATaRec4 Acquisition System via Ethernet - It operates the main system control functions:

- definition of the system configuration according to the modules inserted in the DATaRec4 System.
- definition of the configuration parameters , depending on the format of the data stream.
- control of the DATaRec4 System during real time.
- during the acquisition, performs the real time functions (visualization, processing, alarms...)
- after acquisition, all MAGALI functions are available for post processing: visualization, analysis, tests, reports...

MAGALI SOFTWARE MODULES

Analogue module

Analogue channels are extracted for visualization and processing.

Voice module

Voice is extracted and generated. The audio is transmitted synchronously with other data sources and video streams.

Video module

The video streams can be viewed in real time or in replay mode. Video display is synchronized with the parameter display issued from the other sources (PCM, 1553, analogue, ...), using recording dating.

Dating or parameter value can be inserted in video display. Several video channels can be visualized; each one of them is synchronized.

PCM module

The module extracts data from the PCM streams. Data are received in bit streams.

A frame synchronization module is applied to retrieve the minor frames, and then a decommutation module is applied to extract the parameters (for example : IRIG 106 decommutation module).

- **Frame Synchronization Module**

The module synchronizes and extracts the minor frames included in the input bit stream.

The synchronization is based on a strategy search –control –lock. It allows a tolerance on the number of error bits and on the slip bit number.

From the minor frames, different decommutation modules can be applied, IRIG 106, CE83, CCSDS...

The main features are :

Word length	3 to 32 bits
Minor frame length	2 to 16383 words
Major frame length	to 1024 minor frames
Bit order	MSB/LSB first
Synchronization	Up to 64 bits
Sync error tolerance	0 to 15 bits
Sync slip tolerance	0 to 15 bits

- **IRIG 106 Decommutation Module**

The module decommutes PCM streams in IRIG format. It is active in real-time (during transfer or acquisition) and post processing (after data storage) modes.

The module manages decommuted, sub-commuted or super-commuted parameters as well as embedded messages. The parameters included in the minor frames can be decommuted and converted into engineering units. Parameter dating can be internal, implicit, or deduced from the point number or from another parameter.

MIL-STD-1553, ARINC-429, Serial, Ethernet, and ARINC-664 modules

The modules extract data from the incident streams, according to the format. Message packets are extracted, decommuted and time stamped. All parameters included in the messages can be decommuted and converted into engineering units.

ORDERING INFORMATION

MAG_DATaRec4	MAGALI software for extraction, visualization, analysis and tools Communication module with DATaRec 4
MAG_DATaRec4/IRIG	IRIG decommutation module, class 1 and class 2
MAG_DATaRec4/CE83	CE83 decommutation module
MAG_DATaRec4/CCSDS	CCSDS decommutation module
MAG_DATaRec4/1553	1553 extraction module
MAG_DATaRec4/ARINC429	ARINC 429 extraction module
MAG_DATaRec4/VIDEO	Video stream extraction and replay MPEG - 4 channels

*Specifications are subject to change.
Please, verify the latest specifications
prior order.*

NEXEYA FRANCE

Route d'Elne
66200 MONTECOT - France
Phone: + 33 (0) 4 68 37 36 35
Fax: + 33 (0) 4 68 37 36 34
E-mail: sales-tis@nexeya.com

www.magali.com