

# LISA

## STANDALONE ACQUISITION SYSTEM



**LISA is an autonomous acquisition system dedicated to analog parameters.**

**It eases installation of on-ground or in-flight test systems with less wiring and power supply needs.**

**Modular and flexible, LISA either works with your existing test system or runs as a stand-alone acquisition equipment.**

**LISA is a top solution when wiring access is difficult even impossible. Helicopter rotors, moving parts of machines, on-ground sensor transmission are typical examples of LISA applications.**

- ◆ **Analog standalone acquisition system**
- ◆ **Independent data logger or part of a test installation**
- ◆ **8 isochronous channels (6 general, 2 PT100)**
- ◆ **USB or PCM output**
- ◆ **Up to 8 acquisition modules (64 channels) in a single installation**
- ◆ **High synchronization in multiple radio link**
- ◆ **Storage on local SD card**
- ◆ **Data time stamp via external IRIG B signal.**

### **APPLICATIONS**

- Flight test platform
- Test of vehicles
- Vibration on aircraft
- Maintenance

**Combined with its transmitter modules, LISA system allows data transmission to any recorder from any part of the equipment.**

### **LISA Configuration**

LISA acquisition system includes, at least, one MACQ acquisition module. MACQ module can be used alone, as an independent data logger, or connected to your existing acquisition system through an USB or a PCM link.

MACQ module can be installed in a remote (or moving) part of your equipment, transmitting its data through a pair of wireless transmitter/receiver ER-800.

Multiple pairs of transmitters and receivers can also be used, increasing the throughput of the system.

Even when several radio links and acquisition modules are used, data sampling is perfectly synchronous over the entire installation.

### **Setting and Control**

Analog signals are configured by switches on the MACQ module (no software required). Other setting such as current time, selection of master receiver... are defined by a proprietary PC software through the USB port of ER-800 and MACQ modules.

Data acquisition can be started by local switch on MACQ (in stand-alone mode), or centralized with the REM-800 hand held remote control box.

ADAS provides configuration software, a library and tools for real time data acquisition or off-line file processing on PC.

### **Measurements**

MACQ module supports 6 isochronous general analog channels and 2 PT100 (voltage, strain gauge, accelerometers and PT100) and provides sensor excitation. Max sampling rate is 5 K sample per channel and per second (except PT100, 1 kS/s).

Data are time stamped and stored on a local removable storage. Simultaneously, data can be transmitted through PCM output and USB link. The three data flows use the same PCM format.

With several ER-800 or MACQ acquisition modules, our product LISA runs as PCM concentrator.

**MACQ-862 : LISA ACQUISITION MODULE**

Channels	2 x PT100 and 6 General purpose inputs, 12 bits resolution
Data outputs	RS422 NRZL + Clock IRIG 106 output, Fixed rate 660 Kbits. Configuration and auxiliary output : USB 2.0
Local storage	4 GB SD CARD
Power supply	5..18 Vdc. 3.5 W to 5.5 W depending on sensors ER800 supply not included Power requirements may vary depending on sensor excitation
Connectors	Power supply: LEMO EGG.1B.303.CLL Analog inputs: LEMO EPG.1B.314.HLN PCM: LEMO EPG.1B.310.HLN IRIG B: LEMO ENG 0B.302.CLL USB: USB mini connector
Dimensions (L x W x H)	132 x 85 x 35 mm
Weight	0,400 kg
<b>General inputs x6</b>	
Voltage	Differential or single ended, AC or DC
Gain	from 0.25 to 1280, +/-16.38 V max
High pass filter	1st order Fc = 0.10 Hz
Low pass filter	Butterworth 8th order Fc=2 KHz (60 dB attenuation at 5<KHz)
Sampling rate	5 Ksamples/s by default (Factory set), isochronous, 12 bits
Strain Gauges	Full bridge 350 Ohms ; Excitation 5 V
RTD	2 wires, excitation current 4 mA ; Range -50..+50°C
ICP	Excitation 4 or 10 mA selectable
PT100	4 wires PT100 interface
<b>PT100 inputs x2</b>	
PT100	2 wires interface , excitation current 4 mA
Sampling rate	1 Ksamples/s by default (Factory set ), isochronous, 12 bits

**BATT: BATTERY FOR LISA ACQUISITION MODULES**

Type	Lithium-Ion technology, complies with EN50020 (Intrinsic Safety) regulation	
Voltage output	7.3 Vdc nominal	
Connectors	Power supply : LEMO EGG.1B.303.CLL	
Model	<b>BAT-848</b>	<b>BAT-822</b>
Capacity	4.8 Ah	2.2 Ah
Size (L x W x H )	144 x 85 x 35 mm	100 x 58 x 35 mm
Weight	460 g	250 g

**ER800: LISA TRANSMITTER / RECEIVER MODULE**

Standard	IEEE 802.15.4 compliant
Frequency Range	Software configurable frequency bands 8 possible choices from 847 to 875 MHz Other frequencies on demand according to national regulations
Power supply	5..18 Vdc
Stand-by	0,7 W, transmit mode 1.75 W
Connectors	Power supply: LEMO EGG.1B.303.CLL PCM: LEMO EPG.1B.310.HLN IRIG B: LEMO ENG 0B.302.CLL USB: USB mini connector
Size (L x W x H)	80 x 60 x 35 mm
Weight	0,150 kg (Antenna not included)

**ACCESSORIES****PWR-820: POWER SUPPLY AND BATTERY CHARGER**

Input/output voltage	28 Vdc-12 Vdc conversion
Outputs	4 outputs, 600 mA each

**THK-800: THERMOCOUPLE ADAPTER**

Thermocouple Inputs	3 inputs
---------------------	----------

**IN-862: GENERIC SIGNAL INPUT BOX**

Termination box. 4mm banana sockets.

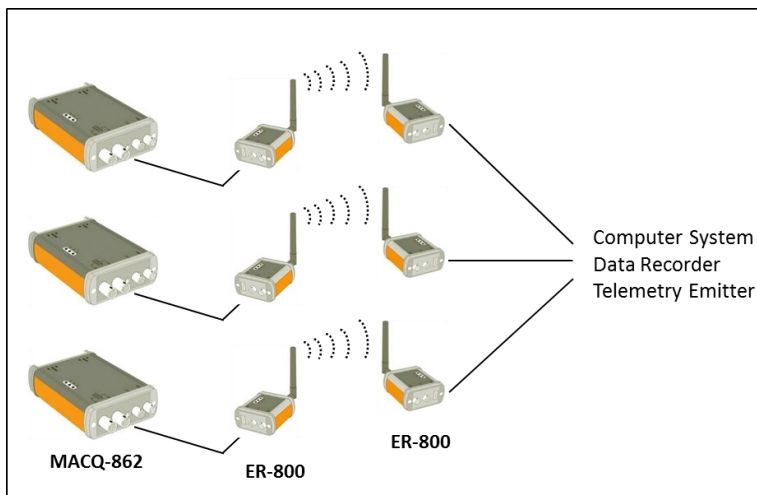
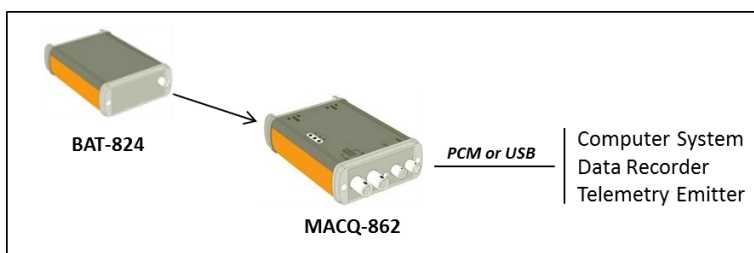
**REM-800: LISA REMOTE CONTROL**

Commands	Start/stop and record
Leds	Power and Records

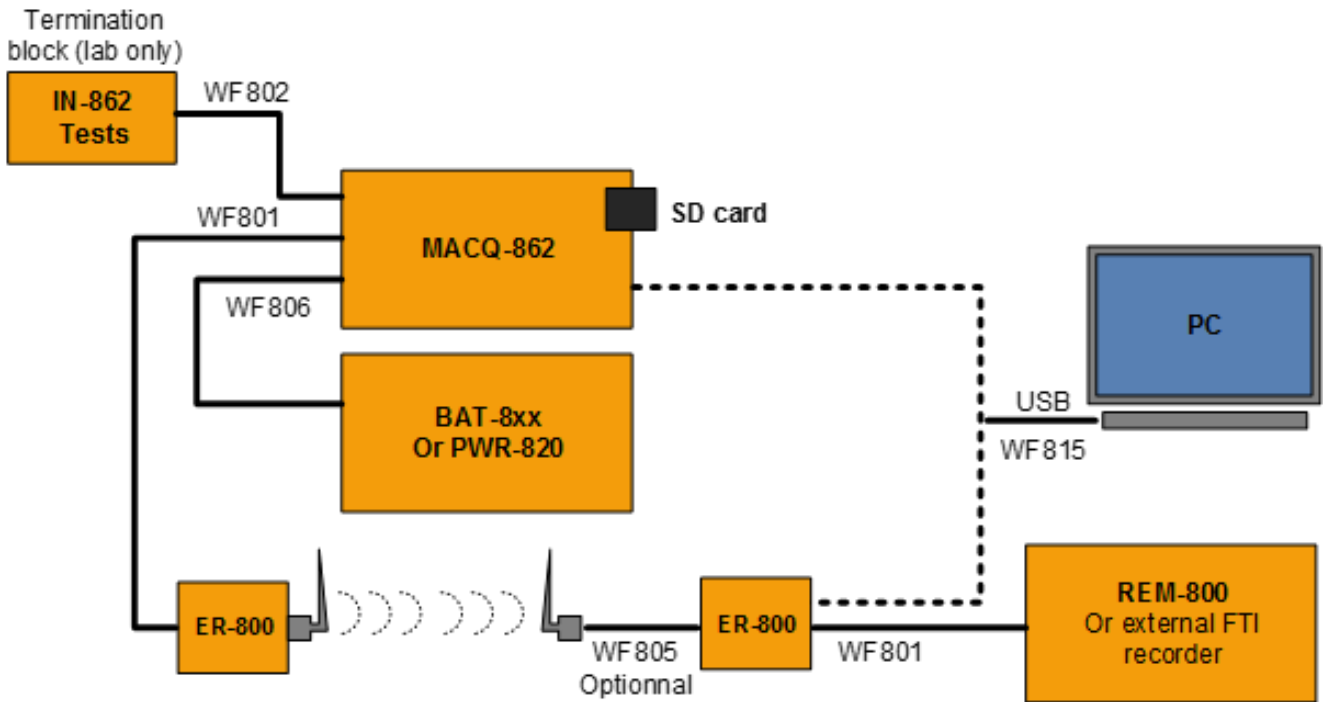
*\*Specifications given for 25°C*

**LISA CONFIGURATIONS**• **STANDALONE MODE**

- 8 Isochronous CHANNELS : 6 general (5Ks/s) + 2 PT 100 (1Ks/s),
- Local SD card
- USB output
- PCM output

• **MULTI-CHANNEL TRANSMISSION MODE**• **DIRECT WIRING MODE**

**LISA COMPLETE MODULES & WIRING**



**ORDERING INFORMATION**

LISA-MACQ862	LISA Acquisition Module (2 x PT100 and 6 General purpose inputs )
LISA-BATT848	Battery for LISA Acquisition Modules, 4.8 Ah capacity
LISA-BATT822	Battery for LISA Acquisition Modules, 2.2 Ah capacity
LISA-ER800	LISA Transmitter/Receiver Module
LISA-PWR820	LISA Module Power Supply and Battery charger
LISA-THK800	LISA Thermocouple Adapter
LISA-IN862	LISA Generic Signal Input Box
LISA-REM800	LISA Remote Control

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

Release : 14/12/16