

DATA SYSTEMS

eZ Software Suite

**Flight Test Instrumentation Configuration, Monitoring,
and Data Processing**



FLIGHT TEST SOFTWARE SUITE



**FTI
configuration**



**FTI monitoring
& maintenance**



**FTI data
processing
& display**

COMPLETE SYSTEM SOFTWARE SUITE

Configuration, monitoring,
decommutation, processing and
visualization

EXTENDED CONFIGURATION FLEXIBILITY

End-to-end system from
data acquisition units to data
visualization & analysis

INTEGRATED TELEMETRY OUTPUTS

Compliant with IRIG 106, Chapter 4,
Chapter 7, Chapter 10, IENA and
DAR network standards

SIMPLE DATA MANAGEMENT

Data availability managed at
high level for one-click
modification of data streams

FULL SPECTRUM OF INTERFACES

10GigE, Video, Fiber Channel,
ARINC 429, PCM, MIL-STD-1553,
H.265 Video, Analog...

ENHANCED PRODUCTIVITY

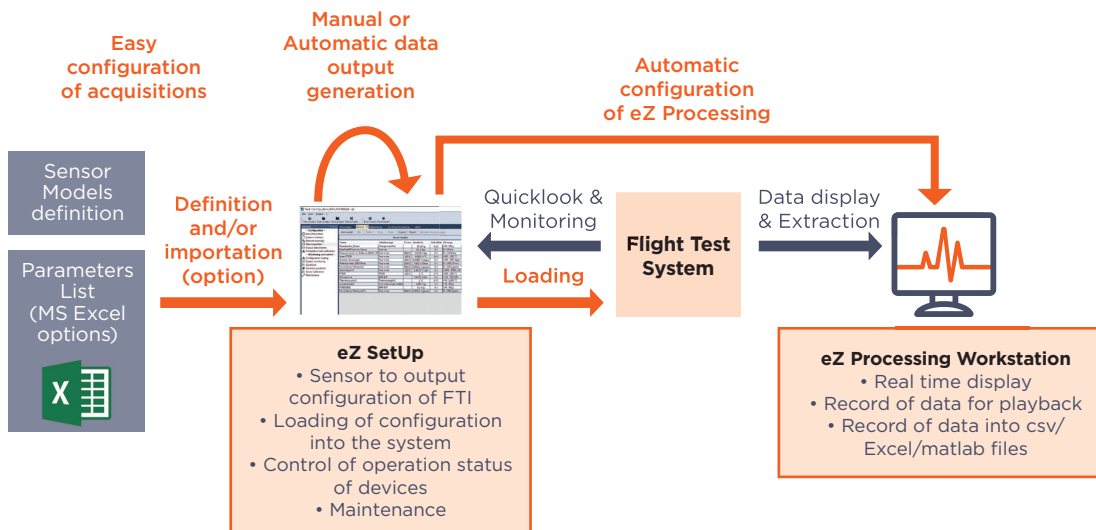
Capture efficiently your needs and let
the automated features propose
you the best configuration settings

eZ SOFTWARE SUITE eZ

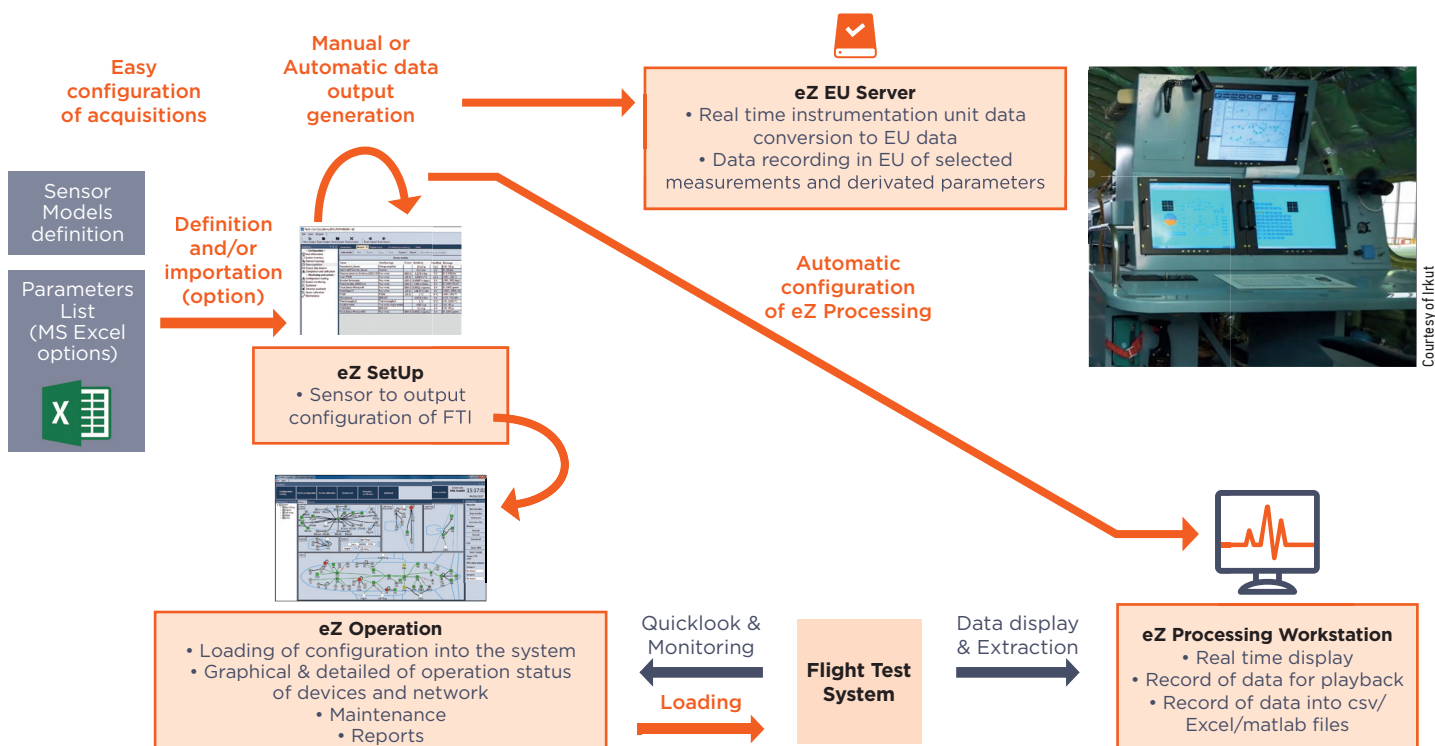
eZ software suite offers end-to-end data management. It provides configuration interface for definition of sensors acquisition and digital bus acquisition, down to real time data display and/or post flight data extraction.

> eZ SOFTWARE SUITE:

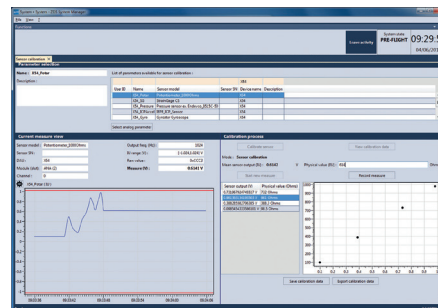
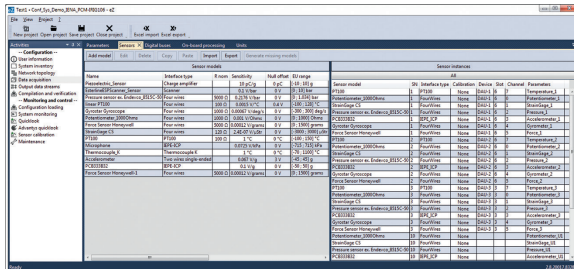
- > eZ SETUP
- > eZ PROCESSING
- > eZ OPERATION
- > eZ EU SERVER



For large Flight Test Systems with many Data Acquisition Units to be managed and an airborne workstation, the eZ Operation software allows seamless and powerful management of the system by automating tasks and summarizing monitoring data in an integrated operator oriented interface. This software can be installed on any PC running Windows 7 or later.



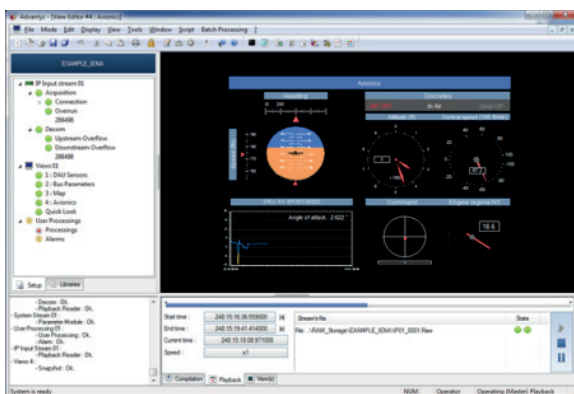
eZ SetUp



eZ SetUp provides high level, user-friendly, interface for configuring a single Data Acquisition Unit to a Full Flight Test System in a network architecture:

- Definition of individual units (DAU, Recorder, Switch, Workstations) compatible with: XMA, MDR, MDR-GT, GMDR, μ MA and μ DR
- Network connection definition
- Data Acquisition (Sensors and Digital Bus) defined at high and low level, with Excel importation optional feature
- Manual and automated data output generation compatible with: PCM Chapter 4, Chapter 10, Chapter 7, IENA and DAR
- Loading of FTS
- Real time monitoring of devices and channels status
- Real time Quicklook of acquisition data

eZ Processing (Advantys)

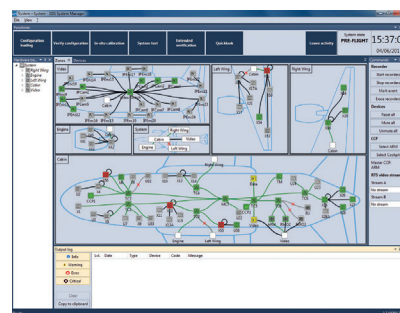
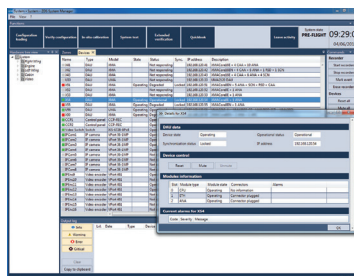


eZ Processing (Advantys) provides advanced data display and decoding functions:

- Real time display of parameters (if installed on an airborne workstation or on ground when using telemetry data link) in view windows completely customizable by the user (up to 10 windows)
- Playback of recorded data with display of parameters in view windows completely customizable by the user (up to 10 windows)
- Extraction of parameters from recorded data, and conversion to physical values stored into EU files (Engineering Units), with calibration function used when applicable

- Generation of computed parameters through C language functions
- Generation of user configured alarms based on parameter's value (which can trigger record or display of a particular view)
- Record of data in raw format for playback
- Tool for converting EU files into common formats (text, Excel, csv, Matlab)
- Tool to generate curves from EU files
- The configuration of the decoding performed by this software is automated thanks to eZ SetUp software (see above). The user can then focus on data analysis

eZ Operation



eZ Operation provides an advanced tool for centralized monitoring and control of a large Flight Test System on-board aircraft from an operator workstation.

- Optimized loading of complex network of DAU, Recorders and Switches
- Real Time Monitoring in synoptic graphical view of the system: monitoring of each DAU, Recorder and Switch status & monitoring of each Ethernet link (data loss, link loss, over rate warning)
- System commands available on same screen (Mute system, Start/Stop of all recorders, other commands on requests, ...)
- Data Synthesis of monitoring data: generate text/PDF log files or reports, including detected FTS hardware, firmware and configuration definition, events and alarms
- Quick look function over the complete list of acquisitions of the system (analog and digital)
- Centralized maintenance function (network discovery, IP settings, and firmware loading)

eZ EU Server

Flight Test System



eZ EU Server

- Real time Instrumentation Unit data conversion to Engineering Unit data
- Data recording in Engineering Units of selected measurements (analog & digital) and derived parameters.



Engineering Unit Data is ready for analysis directly after the test

eZ EU Server allows decoding and converting Flight Test data on the flow during the flight test.

- Data is converted to EU and recorded on a removable disk, making it available for analysis by flight test engineers directly after aircraft landing
- As an option, depending on the format used, the server may be made available through wired or wireless connection as a data server (TDMS, HDF5 formats)
- The server's data selection is performed using high level interface of eZ SetUp seamlessly. Configuration of the data streams and of the server is automatically generated
- This function reduces the time between a flight test performance and the feedback of the engineer, optimizing the overall time and cost of a flight test campaign

Data Dissemination

eZ Software Suite allows a flexible dissemination of all flight data in Instrumentation Units & Engineering Units format to any user being located in the main control center or in remote locations. These data are distributed using the standard Ethernet or IRIG 106 data format.

GLOBAL SALES

5, Avenue des Andes - CS 90101 - 91978 Courtaboeuf Cedex - FRANCE - Tel.: +33 1 69 82 78 00 - Email: sales.sdsy@safrangroup.com

USA

3005 Business Park Dr - Norcross, GA 30071 - USA - Tel.: +1 770 753 4017 - Email: sales@SafranDataSystemsUS.com

