

# Data Acquisition (DAQ) System

*The advanced testing solution for propulsion engine systems*

The production of state-of-the-art propulsion solutions and equipment is just one step of how we support our worldwide customer's missions. The other, equally important, is accurate testing and calibration for ensuring consistent product quality. To acquire consistent product quality, EDePro developed the data acquisition system (DAQ) to test and verify the performance and reliability, as well as the safety of produced solutions. Our DAQ system consists of measurement devices, sensors and data acquisition software.

## MAIN SPECIFICATIONS

- » Modular Test Stand
- » 4 Types of Sensors
- » Signal Conditioning | ADCs
- » DAQ Software for data logging and analysis

### The Purpose

The primary purpose of the EDePro DAQ system is to acquire and store the data regarding testing propulsion systems and their additional equipment. The system monitors the condition of the complex machinery of all types of propulsion systems, as well as energy consumption and energy efficiency in the production process and many other monitoring scenarios.

### The Sensor Types

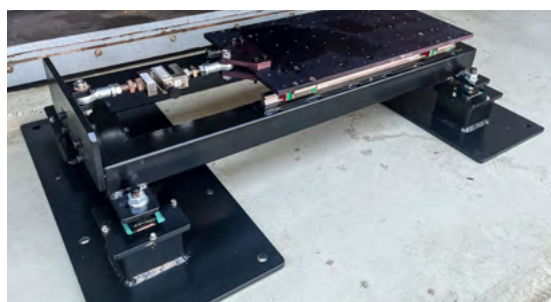
EDePro DAQ system provides its customers with 4 types of sensors - pressure, thrust, temperature and flow meter. The system enables the modular design that can be used on all-terrains where there is a need for testing propulsion systems. Also, our system is compatible with a variety of sensors that can be connected via a provided suitable signal conditioner, up to 16, depending on the customers' requirements.

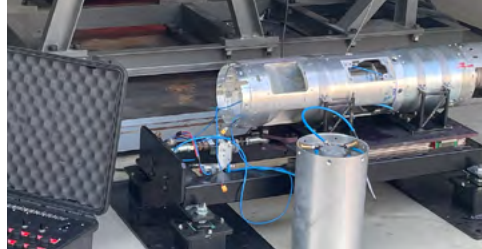
### The DAQ Solution Software

Our advanced software solution has the ability to visualize the acquired data in real time. EDePro DAQ software provides data storing, data review and data analysis using various mathematical and statistical calculations and visual representations.

### The Test Stand

Our laboratory, designed for testing and calibrating propulsion systems, is equipped to perform numerous procedures, such as standard production and sea-level acceptance tests. We also test thrust, power and efficiency, operating limits and stall margin, auxiliary power extraction, fuel flow, specific fuel consumption, engine airflow, bleed airflow, vibration levels, pressures and temperatures, humidity, rotor speeds and the engine pressure ratio, among other tests.





**TECHNICAL SPECIFICATIONS - the sensor's range**

Parameters	PX 602-150GV	LC111-500	THERMOCOUPLE	V2S-007-ALU
Range	0 ÷ 10.3 BAR	0 -500 lb	-40 ÷ 1200 °C	0.07 ÷ 5 l/min
Accuracy	± 0.4% BFLS	0,03 lb	/	± 1 %
Operating temp. range	-48 ÷ 91 °C	-40 ÷ 91 °C	-40 ÷ 1200 °C	-25 ÷ 100 °C
Input resistance	1500 Ω	350 ± 10 Ω	/	/
Output resistance	100 Ω	350 ± 10 Ω	/	/

**DAQ SYSTEM COMPONENTS**



**BENEFITS**

- » Modular design of TEST STAND;
- » Modular design of DAQ System, extendable up to 16 channels;
- » DAQ Device can collect data from a wide variety of sensors;
- » DAQ Device is equipped with a built-in real-time processor;
- » EDePro DAQ Software for real-time data visualization.

