

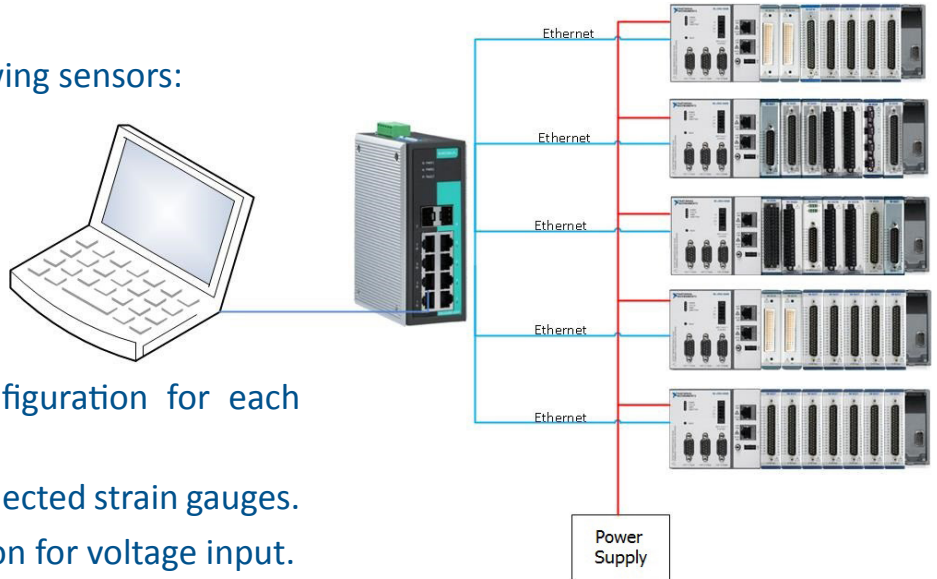
Flight Parameter Logger

Overview

Flight parameter logger is intended for parameters measurement and logging from different types of sensors. The system based on five cRIO-9068 real-time controller by National Instruments. The measured data from the sensors are transferred to the host computer through Ethernet channel. For this purpose a special protocol has been developed. The communication among 5 controllers realized by using an industrial unmanaged switch.

Features

1. Checking connectivity with following sensors:
 - Thermocouple
 - Strain gage sensor
 - Thermal resistor
2. Possibility of sampling rate configuration for each module.
3. Configuration of types of the connected strain gauges.
4. Measurements range configuration for voltage input.



Channels Specification

Input/Output Type	Channel Quantity	Range, Sensors Type
Voltage	128	$\pm 0,2$ V/ ± 1 V/ ± 5 V/ ± 10 V
Voltage	8	± 60 V
Voltage, isolated	4	± 500 mV
Thermocouple	64	J,K,T,E,N,B,R S type
RTD	8	PT100 type
Strain gage	64	Half of sensor, full of sensor, quarter of sensor
Current input	32	± 20 mA
Frequency	8	± 40 B, 50 kHz
Sine-cosine transformer	5	$\pm 1^\circ$
Digital output	8	24 B, 1A, 1 MHz
Digital input	8	up to 60 V, 4 kHz