

## Software SCE-DAQ

### Low Speed DAQ and Single Cylinder Test Bed Control

#### Abstract

Software is dedicated for a single cylinder research test cell system integration. The software has been implemented and used at the single cylinder test cells at laboratories of combustion engines at the Czech Technical University in Prague and at the University of Michigan, Ann Arbor, Michigan, USA. The software allows automated control and low speed data acquisition, test cell safety system and building management system integration. Open software architecture allows modifications without the need of additional payments. Main features – Automated control of the test procedure and test cycles, emission measurement equipment integration: - AVL/Horiba gaseous emission test bench integration via UDP or TCP IP AK protocol. Smokemeter, opacimeter and particle counter integration. Engine/Dyno speed and load control, boost pressure and back pressure control, coolant temperature control, fuel pressure and temperature control, Kistler/AVL high speed DAQ system integration, engine ECU calibration software integration. Intake air/exhaust pressure, temperature and flow measurements, preparation for EGR measurement and EGR control.

#### Screenshots

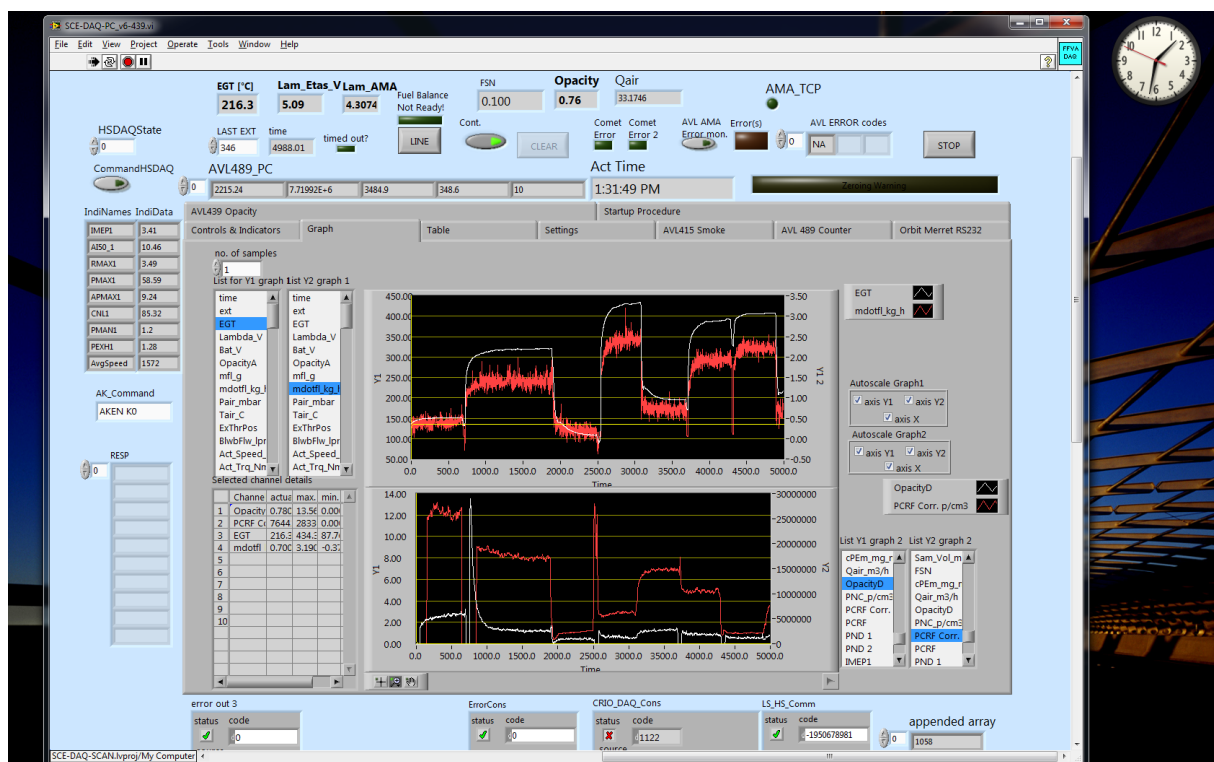


Figure 1 Low speed DAQ front panel

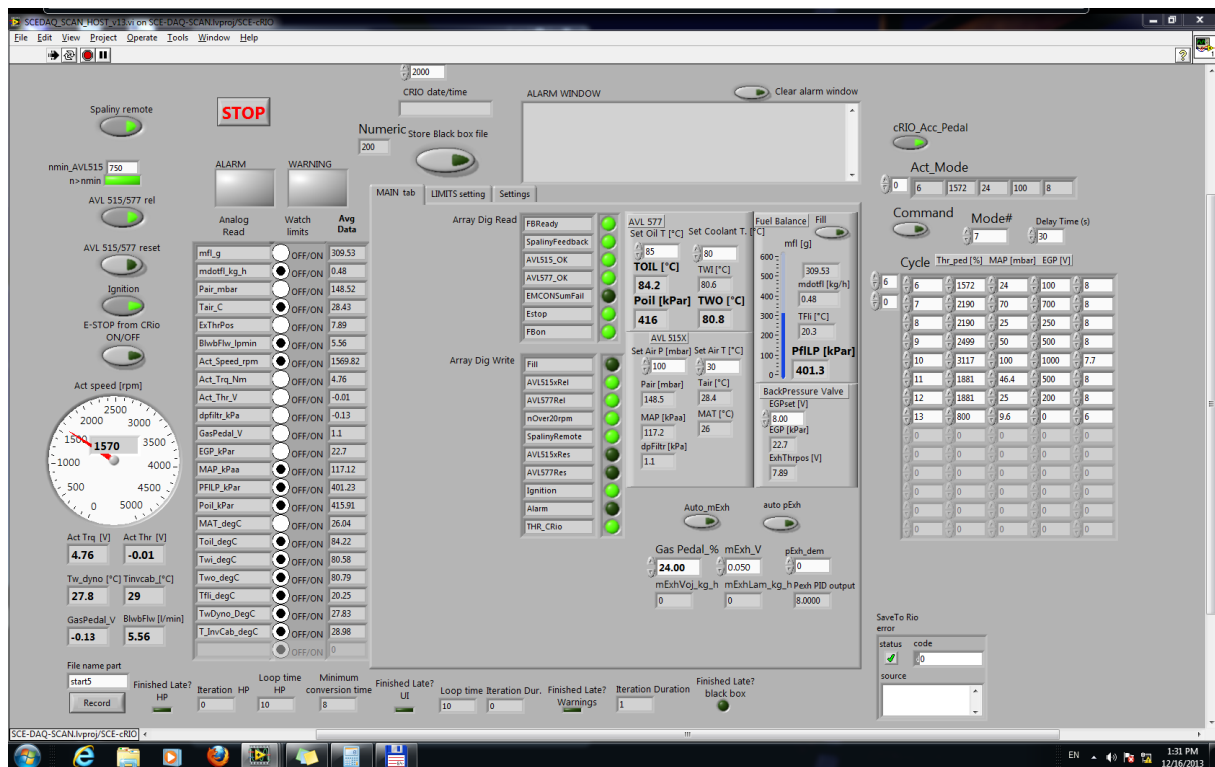


Figure 2 Single Cylinder Test Bed Control Panel

## Availability

SW SCE-DAQ Location: Code Library U12120, Vehicle Center of Sustainable Mobility, Czech Technical University in Prague, Faculty of Mechanical Engineering

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