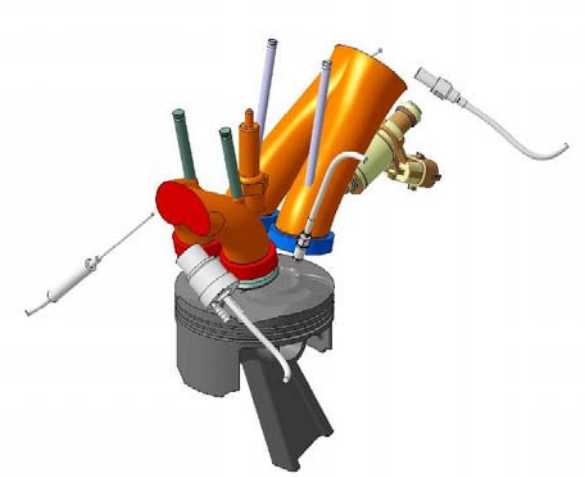




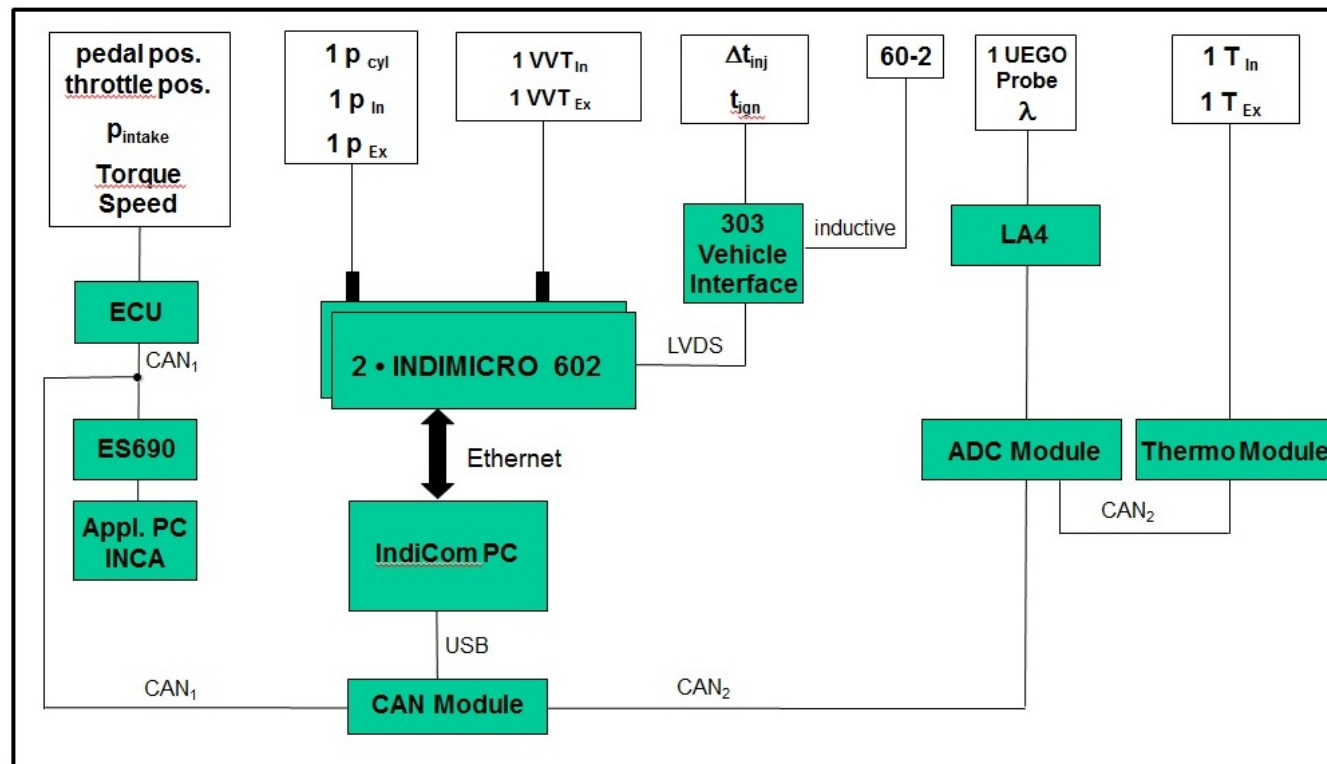
VEHICLE AND MEASUREMENT SET-UP

VEHICLE UNDER TEST



Engine Type	In line 4 cylinder, 16 valves, GDI, RON 95, Variable Phaser, 1StageTurbo
Power	180 kW
Torque	349 Nm
Displacement (bore x stroke)	1.742L (83 mm x 80.5 mm)
Compression Ratio	9.25

MEASUREMENT SET-UP



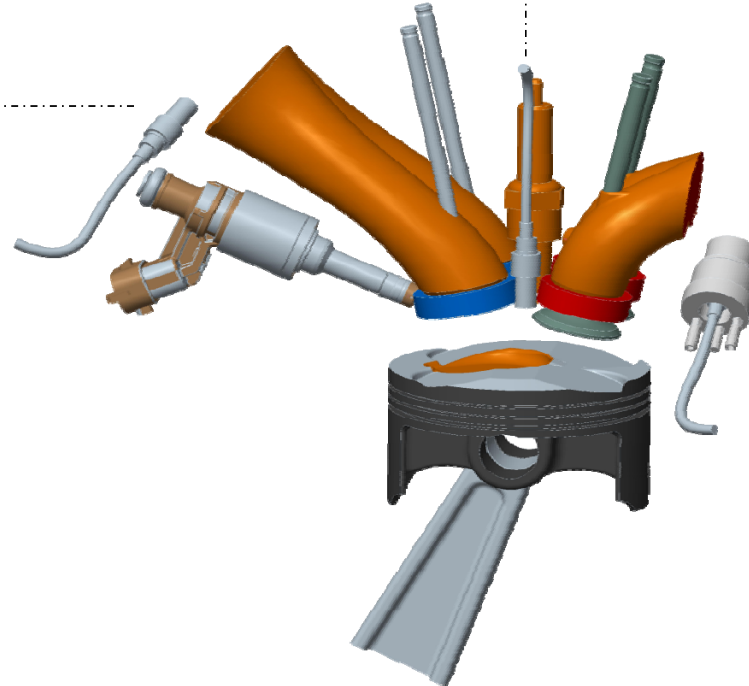
PRESSURE SENSORS IN USE



**Piezo Electrical High Pressure
Spark Plug Sensor ZI33**



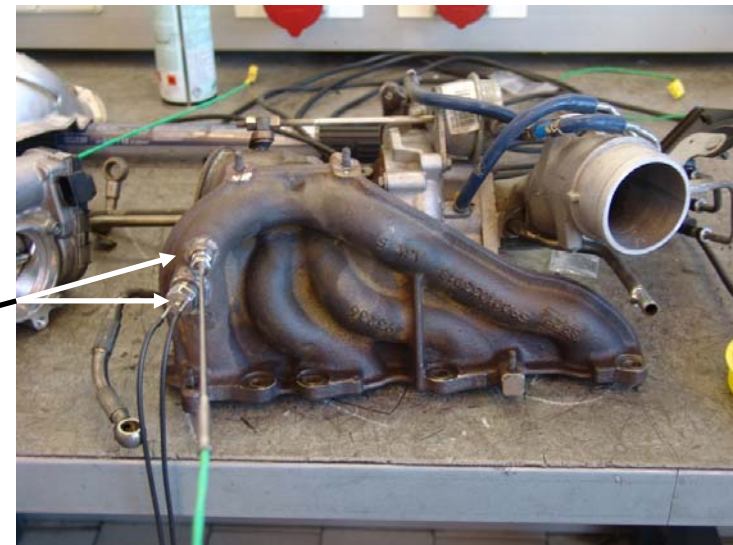
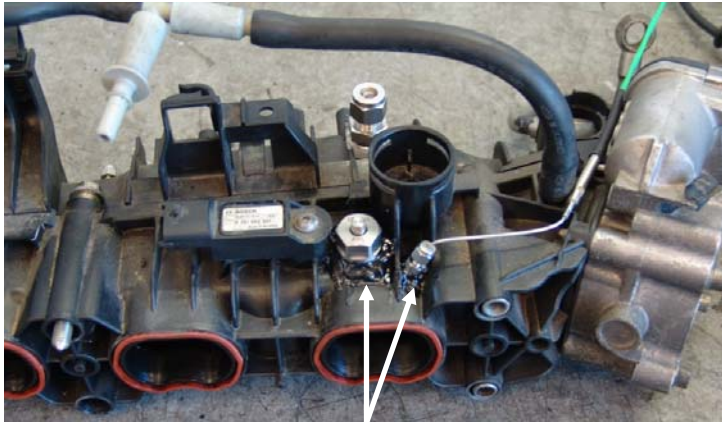
**Piezo Resistive Low Pressure Sensor
for Intake Manifold**
LP11DA



**Piezo Resistive Low Pressure Sensor
for Exhaust Manifold**
LP11DA with AE04



INTAKE AND EXHAUST



temperature & pressure

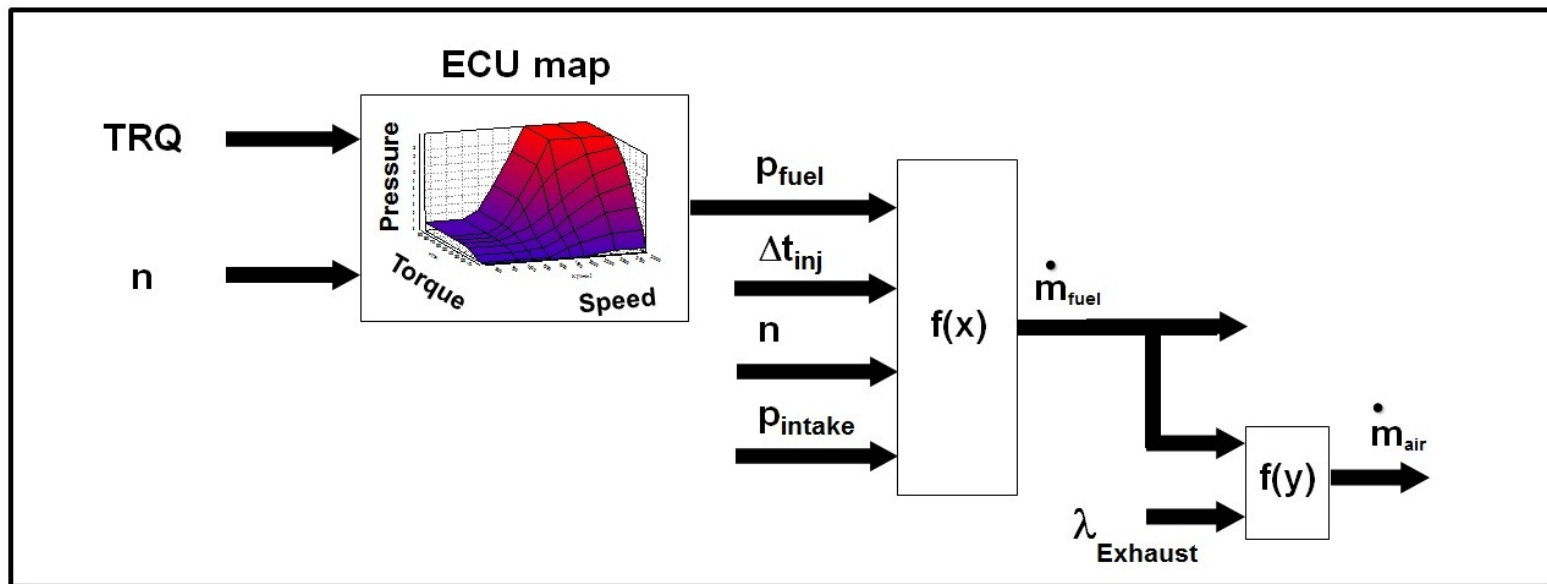
IGNITION & INJECTION



FUEL & AIR MASS FLOW



CalcGraf Model



WINDOW "CYLINDER & PORTS" IN GCA LAYOUT AT VEHICLE

