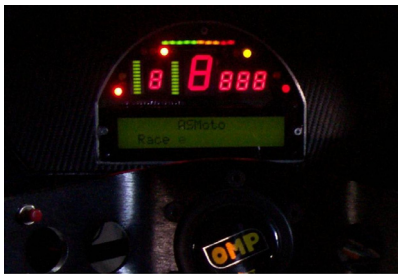




Freely programmable engine-control system for racing purpose

The ASMoto Race Electronics organized for that purpose: offer professional solutions for racing-sport. It's main product the programmable engine-control but it provides for example: DashBoard, DataLogger too as well as a free user friendly software that can be used to programming these products. (ASMoto Race Electronics Manager)

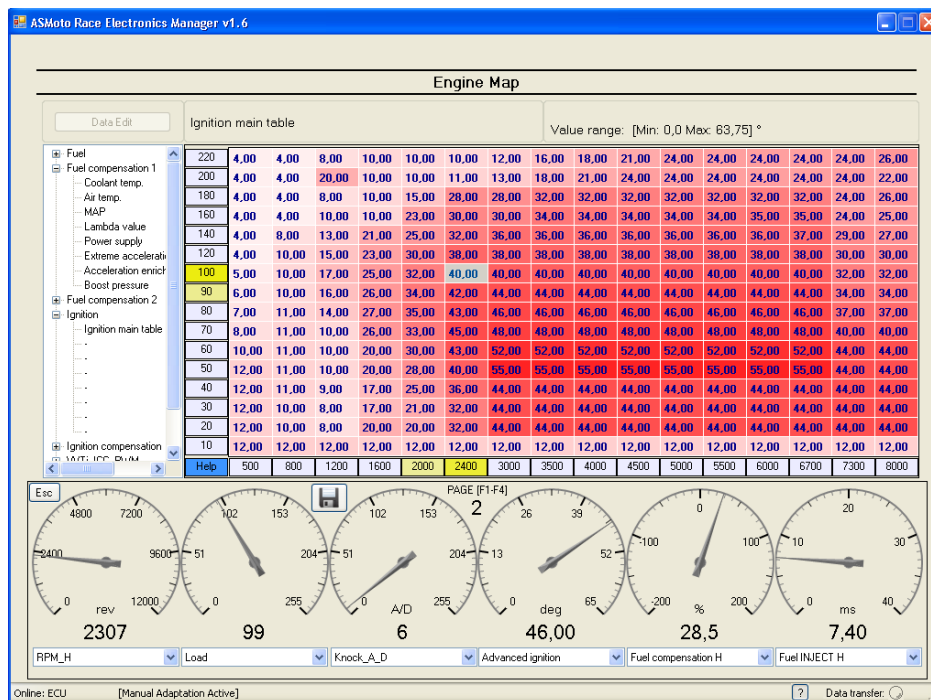
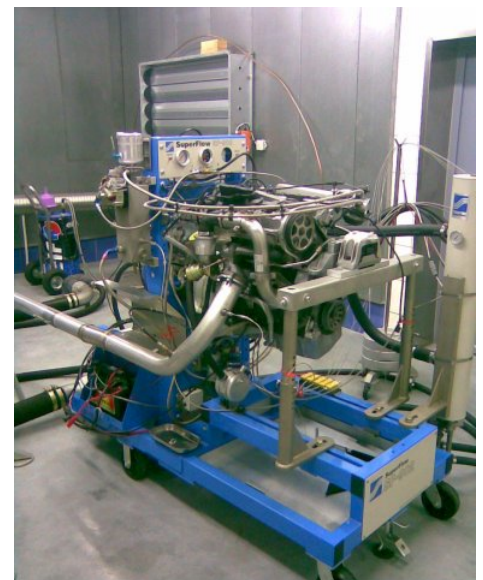
Today's, the developing going with more partners in different places. There are rally-teams, racing cars and it's engines' building companies, ECU-programmers in those partner companies.



With the contributions of this companies there are possibility for this system's full setup in roller or in engine based breaking pads.

In addition the ASMoto Race Electronics can take care of setup this systems, the making of custom cable batches, or the full electronically setup of racing cars.

The ECU22x series is a highly flexible solution for every 4,6 and 8 cylinder based 4-stroke engines' engine-control. It contains many freely configurable functions and extras. Please find more information on the second page.



www.asmoto.eu
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General:

Lightweight and massive aluminum enclosure
55-pin automotive main connector
4 Engine maps
Dimensions: 160 x 158 (without wire side connector) x 40 mm
Weight: 700 grams
Temperature range: -30 ... +70 °C
Power supply: 8 .. 20 Volt

System overview:

40MHz 16 bit DSP processor
Alpha/n or MAP/MAF control strategy
4 cylinders full sequential mode /fuel and ignition/
0-12000 RPM range (4 cylinder)
ECU Control Software stored in updateable Flash memory
Cylinders:
4: Full sequential mode /fuel and ignition/
6: Sequential ignition timed and twin spark output, fuel in grouped mode
8: Sequential ignition timed and twin spark output, fuel in grouped mode
Engines: 4 stroke
Reverse Battery Protection
16x16 breakpoint basic fuel and ignition table programmable real-time

Inputs:

1 inductive or Hall crankshaft sensor
1 Hall camshaft sensor
1 Hall vehicle speed sensor
2 Knock sensor
1 Bosch LSU wide band lambda sensor /4.2 or 4.9/
8 Analogue 0..5 Volt sensor inputs:
- Water temperature
- Air temperature
- EGT
- TPS
- MAP/MAF
- Boost pressure
- Aux 1
- Aux 2
Input in Switch Panel:
- 4 Analogue 0..5 Volt sensor inputs
- 8 Digital (switch) input

Enhanced Anti Lang System:

Ignition cut: RPM/aux 3D table + TPS correction
Ignition retard: RPM/aux 3D table + TPS correction
Low-RPM limit
EGT limit
Time limit
Throttle kicker output

Special features: /incomplete/

4 selectable engine maps separate password protection
Full sequential knock control (4,6,8 cylinder)
1 Boost control /PID or open loop/
1 VVTi control /PID or open loop/
1 Blow off valve control
Idle speed control:
Ignition controlled
Air controlled:
4 wire stepper motor
Solenoid
DC motor
Launch Control /ignition cut and retard/
Internal Traction Control
Gear detection
Shift cut
Internal data log function:
- 11 fix + 3 configurable channel
- 4096 sample
- Selectable sampling rate: 1 , 4 or 10 sample / sec
Two-stage engine cooling fan control
Gear-dependent shift light control
MIL light control + error detection:
fault code save
freeze frame save
Warning light control and measurement timeout:
4 fix + 3 configurable channel
Engine builder setup their own password protection

Outputs:

4 fuel injector drivers (high impedance)
- Sort circuit and open load detection
4 logic ignition amplifier drivers
- Open load detection
4 low side multipurpose outputs
2 low side multipurpose PWM outputs
1 four wire stepper motor or 1 solenoid or 1 DC motor
- For idle run air control
1 Bosch LSU wide band lambda sensor heater
3 sensors supply:
- GND
- 5 Volt
- 10 Volt
Output in Switch Panel:
- 4 low side multipurpose outputs
- GND
- 5 Volt

Communication:

1 CAN 2.0A communication interface
- Diagnostic, tune, immobilizer...
- Data export to DashBoard and Data Logger...