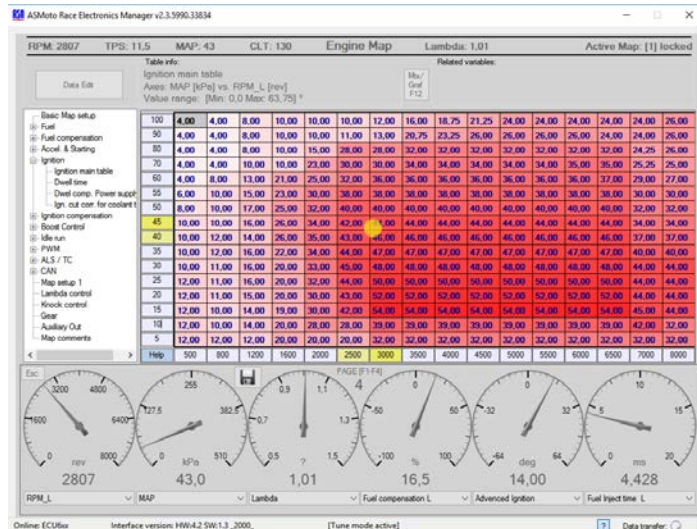




Freely programmable engine control system for racing purpose

The ECU-6xx series is the second generation engine controlling unit from ASMoto. Our controlling unit is manufactured with precision method. The used quality materials are light but the product is robust. The controlling unit integrates the state of the art but affordable technologies without losing the ordinary reliability and accuracy of the predecessors.



Our product, like the Standalone ECU is the perfect choice for controlling of any four stroke 4-8 cylinder engine. The configurational possibilities and the extras are immediately recognizable, which is described on the second page. Of course, the Standalone ECU is communicating with the other ASMoto products (DashBoard, PowerModule, DataLogger). However, it could be easily integrated into different system in order to have the possibility to test our products.

Our purpose was to go along with the state of the art technology without having negative effects of the improvements. Therefore we applied the known and easy to use, continuously updating and free AREM (ASMoto Race Electronics Manager) software in order to handle the more difficult algorithms. It is flexible, accurate, effective, and simple in order increase the customer satisfaction to a higher level.

There is a possibility for a complete setting for our system with chassis or engine dynamometer. Furthermore, we perform the installation of our products, manufacturing special cable harnesses, or building the complete electric system of racing cars.





General:

Lightweight and massive, CNC-milled aluminum chassis
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:

60MHz 16 bit processor
Alpha/n, MAP/n or other control strategy
6 cylinders full sequential mode /fuel and ignition/
200-12000 RPM range (4 cylinder)
ECU Control Software stored in updateable Flash memory
Cylinders:
4-5: Full sequential mode /fuel and ignition/
6: Sequential ignition timed, and sequential or twin spark output
8: Sequential ignition timed and twin spark output, fuel in grouped mode
Engines: 4 stroke
Reverse Battery Protection
16x16 breakpoint all 3d table, programmable real-time
There are many possible triggers

Inputs:

1 inductive or Hall crankshaft sensor
1 inductive or Hall camshaft sensor
1 Hall vehicle speed sensor
2 Knock sensor
1 Bosch LSU wide band lambda sensor /4.2 or 4.9/
5 dedicated analogue 0..5 Volt sensor inputs:
- Coolant temperature
- Intake air temperature
- EGT
- TPS
- MAP/MAF
7 configurable analog or digital input
12 Input in Switch Panel (optional):
- 4 Analogue 0..5 Volt sensor inputs
- 8 Digital (switch) input

Communication:

2 CAN + 1 ISO 14230-4 (EOBD k-line):
1 CAN 2.0A /ASMoto/ communication interface
- Diagnostic, tune, input from PowerModule...
- Data export to DashBoard and Data Logger...
1 CAN programmable
- Data import / export to other devices...
1 ISO 14230-4 (EOBD k-line) error code and live data

Special features: /incomplete/

4 selectable engine maps separate password protection
Full sequential knock control (4,5,6,8 cylinder)
1 Boost control /PID or open loop/
4 programmable PWM control /PID or open loop/
1 Blow off valve control
Idle speed control:
<i>Ignition controlled</i>
<i>Air controlled:</i>
4 wire stepper motor
Solenoid
DC motor
ETC Electronic throttle control
Launch Control /ignition cut and retard/
Internal Traction Control
Gear detection
Shift cut
Two-stage engine cooling fan control
Gear-dependent shift light control
MIL light control + error detection:
<i>fault code save</i>
<i>freeze frame save</i>
Warning light control and measurement timeout:
4 fix + 4 configurable channel
Engine builder setup their own password protection

Outputs:

max. 6 fuel injector drivers (high impedance)
- 4 dedicated injector, 2 configurable
- Sort circuit and open load detection
max. 6 ignition driver, logic or power drivers
- programmable logic level, or direct cool driver
- 3 dedicated ignition, 3 configurable
- Sort circuit and open load detection
4 low side multipurpose outputs
4 three state output: (2 H bridge)
- 1 four wire stepper motor
- 1 ETC electric throttle
- 2 PWM out
- 4 logic level outputs
1 Bosch LSU wide band lambda sensor heater
3 sensors supply:
- GND for sensors
- 5 Volt
- 10 Volt
Output in Switch Panel (optional):
- 4 low side multipurpose outputs
- GND
- 5 Volt

Enhanced Anti Lang System:

Ignition cut and retard
Low-RPM limit
EGT limit
Time limit
Throttle kicker output