ECU is the operating unit that controls the whole system. It's completely made by automotive components, being therefore suitable to face high temperatures inside the engine compartment, event though precautions must be taken to not assembly it near white-hot devices such as the exhaust manifold. It incorporates components of the latest conception with a data processing speed higher than most of the original petrol ECUs.

Memory where program and setting data are contained is not volatile, so, once programmed, Fly SF ECU can even be disconnected from the battery with no loss of data. It can be programmed many times without any problem, for instance it can be moved from a vehicle to another one and re-programmed. Some data acquisition channels have been planned in order to be connected to various signals, very different according to the kind of vehicle (e.g. TPS, MAP, and so on). Task of the ECU is collect and process full information and so check all different system functions.

So, Sequent system is able to assure the best integration at electronic and communication level (through serial K-line and CAN BUS) keeping the same petrol control strategies and "translating" petrol ECU injection times into the corresponding gas ones, precisely and fast, adapting itself to gas pressure and temperature variations.

It satisfies OBD regulations thanks to an efficient diagnostic system on each sensor and actuator.

ECU is contained in a strong aluminium case totally watertight, able to face high temperatures and to protect its electronic components, both from external atmospheric agents, and from mechanical stresses it is subjected to, and from electromagnetic radiations irradiated by the engine electrical components or by other sources (transmitters, repeaters, mobile phones, and so on).

Pict.9
Fly SF ECU

We wish to remember that ECU has been planned to withstand prolonged short-circuits, both towards ground and battery positive, on each of its inlet/outlet cables (naturally except for grounds and supplies). This allows not ruining ECU even in presence of the most common wiring errors (polarity inversion, wrong connection of one or more cables, etc...).

Wiring connection passes through a single 56-way connector, which contains all the necessary signals for its different functions, within the limit of max. 4 injectors.

ECU incorporates the following functions, previously obtained by installing many external components:

- "**modular**" function for injectors cutting and emulation,
- **crankshaft sensor adapter** function, even more useful on new vehicle models,
- ECU contains the main **adapters for "current" and "supplied" lambda oxygen sensors**, that on other systems must be assembled externally.