NEURON

The programme, originated by the French MoD and supported by Italy, Sweden, Spain, Greece, Switzerland represents a very important effort in maturing new technologies and setting the base for future military programmes (manned and unmanned). This initiative, led by the French Dassault Aviation (almost 50% of the program), envisages the development, manufacturing and test of a full-scale European technological demonstrator unmanned aerial vehicle. Alenia Aeronautica is the first industrial partner, with 22% share of the programme. Alenia Aeronautica is also leader of an Italian companies' pool, including Selex Galileo, a Finmeccanica company, Microtecnica, ASE, TEMA, OMA and UFI Filters.

The demonstration is an important step in technologies maturation process, providing confidence in technologies, by decreasing the level of risk, towards a system development. Neuron is dedicated to the demonstration of key combat technologies, with fallout both on manned and unmanned future complex systems. It includes the design, manufacturing and flight testing of a pilotless combat aircraft, capable of autonomous flight and weapon delivery. Although not a prototype, Neuron is well representative of future combat UAV. In particular, the Italian contribution will concern design and production of the electrical generation and distribution system, of the air data system (flight parameters sensors and algorithm) and, above all, of the integrated weapon system with full autonomous management of the sub-systems (smart integrated weapon bay). Such system will allow discovery, detection, and recognition of the target and the sending of the approval request to the ground station commander and finally the launching of a weapon, all of this under stealth modalities. Neuron's flight tests will be carried out in Italy (Poligono Interforze Salto di Quirra), as well as in France (Istres) and in Sweden (Vidsel) starting from 2012.

Engine
RRTM Adour Mk951 hybrid

Main performance
Approach speed	~	120	kt
Loiter @ 100 km	~	100	min.
Total mission duration	~	3	hrs
Max. Mach	~	0.80 +	

Main characteristics
Fuselage length	~	9.3	m
Wing span	~	12.5	m
Empty Weight	~	4900	kg
MTOW	~	6500	kg

FSC