



EONART

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## **PRESENTATION OF THE LABORATORY CAPABILITIES**

Reference document

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### **1- FUNCTIONAL CAPABILITIES**

1.1 Management and production of engineering projects in the fields of analog and digital electronics including specialties in audio, in automation and control as well as in communication.

1.2 Conception of multi-layered printed circuits ( Gerber and Target formats), simulation and optimization of circuits and schematics (Spice, Vsm and proprietary formats), analysis and measurements of electronic devices (performance, harmonics, distortion, temperature, etc.)

1.3 Assembly of electronic circuits and quality assurance. Development of embedded softwares and control softwares.

1.4 Assistance, research of errors or of problems, technical validation, and audit.

### **2- ELECTRONICS AND AUDIO**

2.1 Around thirty adjustable power supplies of 3.3v to 6Kv, Ac and Dc up to 10A, two programmable loads 150W, two loads of 1000W, around twenty bench multimeters, several oscilloscopes up to 300 MHz digital and analog domain, arbitrary signals and pulse generator up to 160 MHz, counters, bench LCR of high precision with comparison, five Variac, four 2KVA isolation transformers, about twenty inductance, resistance and capacitance decade boxes.

2.2 Several data acquisition analyzers up to 256 analog and digital channels. Many audio analyzers for electronic devices, acoustic speakers and room analysis (Audio Precision, Clio and Phonic), distortion analyser from 10Hz to 100KHz, earth analyser, curve tracers for transistors (Mcp) and tubes (Amplitrex)

2.3 Audiophiles sources (Oracle Delphi, Marantz TT1) and Cd (Oracle cd1000, Icosy Fado, Marantz 6605), audiophiles amplifiers (Eon Art hybrides, Atoll A/B, 300b Triode), audiophiles acoustic loudspeakers (Venus Cassiopea, Venus Cybela, Venus Caldera, Triangle Celius, brand name hi-fi cables (Supra, Audiovox, Mpc Audio, Canare etc.),



## EON ART

more than fifty pro-audio devices such as dsp, active filters, "direct box". ,mixers, sound cards, microphones, amplifiers as well as monitor and high efficiency loudspeakers up to 107dB)

2.4 Multiples hardware development platform, analog and digital breadboards, a consequent component inventory and a large technical library and records and cd's collection.

2.5 An optimized auditorium with mobile acoustic panels to take measures

### **3- SCIENTIFIC AND CONTROL COMPUTING**

3.1 Optimization and simulation of circuits by proprietary software based on Spice.

3.2 Development of network and embedded software (Pic, Picaxe, X86, Arm, Linux, Windows, Dsp, Fpga) with programming languages C, C++, Basic, SQL and Windev.

3.3 Three workstations for engineering and printed circuit boards drawing. (2 with 6 screens and 1 with 4 screens)

3.4 Two mobile engineering and printed circuit boards drawing workstations: "Lunchbox Portable Workstation" (6 cores, 12 threads, 24 Gb of Ram, 6 29-inch screen and 3 17-inch screens, 2x gforce), as well as "Sager Laptop Workstation" (4 cores i7-6700K desktop chip, 8 Threads, 64 Gb of Ram, 1 17-inch screen, 2x gforce)

3.5 One Supermicro simulation workstation (64 cores, 64 Threads, 256 Gb of Ram, 6 27-inch screens, 2x Quadro) as well as an simulation cluster (800 cores, 120 Gb of Ram, 8 Gpu)

3.6 Secured environment with internal network protected by material firewall with Nas, RDP servers, and a "large format" printer. All the personnel are subject to a non-disclosure agreement.

### **4- HUMAN RESOURCES**

4.1 The team is comprised mainly of several senior employees with extensive practical experience in project management, robotics, advanced computer science, marine electronics, RF and satellite communication, as well as in commercial audio electronics and high fidelity. The team also consists of a group of young employees to ensure continuity.