

## **Advanced technology for customized solutions**

With its offices and laboratories located in the industrial district of Milan, **IPSES** is specialized in laboratory scientific instrumentations and in customized electronic solutions, designing and manufacturing specific equipments and integrating clients' devices. IPSES' staff ensures fast and qualified consulting services, including assistance with accessories and spare parts purchases, installations, implementations, training, driving clients to optimum instrumental solution choice and use.

## **Experience and reliability**

**IPSES** works in the field of advanced technologies, mainly devoted to develop innovative solutions for its clients through the integration of its technological *know-how*.

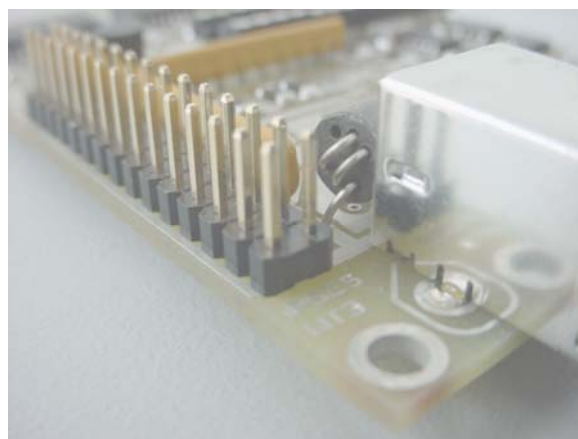
**IPSES** is dedicated to provide the highest level of customer service. Furthermore, **IPSES** is guided by the core values of service, integrity, respect, and responsibility. Our goal is to deliver technology-driven solutions that make sense to our client, work well, meet his/her requirements, and perfectly match his/her expectations.

Our professional staff consists of highly competent individuals whose experience is extremely strong in the field of innovative **hardware, firmware and software**. Due to constant updating and technical development, IPSES is a leading company, combining the dynamism of a young group with the competence and reliability of a qualified staff.

IPSES works closely together with its clients to determine the best technologies and methods to use in solving their problems. Starting with a detailed requirements document and field surveys in combination with user and task analyses, IPSES' team oversees all phases of its system projects. Each project we execute is a custom job.

Clients will find:

- **A high qualitative level**
- **A focus on their core business**
- **No compromise**
- **Flexible project solutions**
- **Competitive and flexible costs**
- **No long-term investments**



## Our services

### *Conceiving and Planning*



IPSES conceives and plans embedded electronic systems to optimally answer to specific clients' demands. In addition, we develop customized hardware, firmware and software. We have a huge experience in programming with ANSI-C, Assembler, VHDL, LabVIEW, LabWindows/CVI, TestStand.

We are Microchip Authorized Design Partner.

### *Development*

We develop and engineer high-level systems conceived by our clients, carrying out the studies or the transfer of technologies necessary for the realisation or optimisation of their projects. Among other things:

- We can solve and realize PCB;
- We can purchase and install all the necessary equipment;
- We can test the whole system;
- We can project and realize the mechanical devices;

### *National Instruments hardware integration*

We have an excellent knowledge of all National Instruments platforms and a wide experience in using and integrating NI hardware (CompactRIO, PXI, CAN, DAQ, etc.) and software (LabWindows/CVI, LabView e TestStand), so we can offers our clients customized solutions and services, providing both technological and economic benefits.

We conceive and project test and measurement systems based on PC, CompactRIO and PXI, especially oriented toward industrial and scientific applications.

### *Documentation*

We provide the documentation of the whole project and the user's guides of our system in Italian, English and French.

### *Computer Systems*

We furnish companies, public corporations and private persons with complete hardware and software systems, both simple and complex ones, helping our clients to determine the best solutions for their specific needs.

### *Microcontroller programming*

Thanks to its wide experience in firmware developing and in programming microcontrollers and other electronic devices, IPSES offers a high quality service to answer to customized clients' needs.

We program the most part of electronic devices on the market, even if they are out of productions. Especially, we program all PIC models from Microchip, several Motorola microcontrollers (even the old series such as the 68HC11), the most part of devices programmable by JTAG.

### *Consulting and Training*

We works closely together with our clients to analyze the feasibility of their projects, carrying out the studies or the transfer of technologies necessary for their realisation. We define all the specifications and give all the support for the planning and developing of the project.

Corresponding to clients' requirements, IPSES can offer training sessions in which it teaches, supports and updates technical staff. We can teach both private persons and employees of a firm and/or of an operating company in handling, installing as well as in the professional maintenance of electronic scientific devices.

Besides, IPSES organizes workshops and courses on **FPGA** and other **programmable logics**.



## Our Products

IPSES conceives, projects and markets electronic systems and scientific devices according to clients' specifications, dealing with *hardware* (digital, analogical and miscellaneous), mechanics and *software*. IPSES' efforts on behalf of its customers do not end when the project is completed and approved; we will provide complete post-project support once the system has moved into its operational phase.

The best guarantee we can offer our customers around the world is a successful completion of system projects.

### Some of our projects and scientific devices:

#### Stepper motor control cards



Our motion cards are the perfect solution to manage stepper one- axis or multi-axes motors with a nominal current up to 0.75A. The position commands are directly sent to the motor by the personal computer through USB, serial or ethernet interface, in order to optimally answer to all customers' necessities.

MT2 and MT3 cards are small-size low-power control devices which can control both two or three bipolar and two or three unipolar stepper motors (i.e. 8 and 4 lead motors, and 6 lead center tapped motors) and their respective limit/home detection sensors (with programmable polarity).

#### Thermoluminescence laboratory

IPSES provides the client with everything he/she needs to organize a thermoluminescence laboratory, from project to installation, from final test to post-sale technical support. It can supply the client especially with: a thermoregulation unit, a vacuum oven, a photo-detector, a radioactivity measurement unit (for alpha activity) and a high voltage power supply. Our laboratories are already used in: **University of Milan (Material Science Department)**, **University of Turin (Physics Department)**, **National Institute for the Physics of Matter (INFN)**, **University of Lecce**, **University of Bari**, **Pastis CNR (National Research Centre) of Brindisi**, **Arcadia Technologies for Cultural Heritage of Milan**, **Curatorial and Conservation Department - Xian Museum (China)** and the **Tubitak Marmara Research Institute**, Gebze (Turkey).



#### Test board handler

IPSES has realized automatic board handlers for electronic device quality control tests for automotive as well as aerospace applications. IPSES has also executed control systems on industrial production lines. Among our clients are: Alfautomazione S.p.A., Galileo Avionica, Controls S.r.l.

#### I/O cards

Cards for managing optocoupled and/or relay inputs and outputs by USB interface.

**IO69-USB:** card with USB interface which allows to manage 6 optocoupled inputs and 9 relay outputs.

**IO1616:** card with USB interface which allows to manage 16 optocoupled inputs and 16 optocoupled outputs.

**CAN-IO:** Input/output card with 16 inputs and 16 outputs and CAN interface.

**WEB-IO:** Input/output Card with 16 inputs and 16 outputs, ethernet interface and integrated web and telnet servers.

**IN8:** card with USB interface which allows to manage 8 optocoupled inputs.

**9-O:** card with USB interface which allows to manage 9 outputs.

## Contacts

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### IPSES S. r. l.

**Registered office:**  
Piazzale Giulio Cesare, 9  
20145 Milan  
Italy



**Research and development office:**  
via Trieste, 48  
20020 Cesate (MI)  
Italy

**tel.** ++39 02 99068453  
**fax** ++39 02 700403170  
**e-mail:** [info@ipses.com](mailto:info@ipses.com)  
**http://**[www.ipses.com](http://www.ipses.com)

## Technical support

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All customers should feel free to contact the appropriate engineer at IPSES S.r.l. directly.

Telephone : +39 02 99068453 +39 02 320629547  
Fax : +39 02 700403170  
Email : [support@ipses.com](mailto:support@ipses.com)

