



DATA-CONTROL PC is a leading company, with more that 25 years of experience in design and manufacturing electronic equipment, as well as WINDOWS and ANDRIOD software.



# Consulting

- Support and Help for Innovation, Design Thinking techniques
- Support in the definition of the product
- Advice for CE marking and other regulations



# **Products Design**

- R & D project management
- Mechanical and industrial design in 3D; enclosures, moulds and matrices
- Electronic design and ICT
  - Architecture Hardware, Firmware and Software
  - IoT Technologies, Industry 4.0 (Low Power Designs, Security, Energy Harvesting)
  - Analog design (Sensors, conditioning and acquisition)
  - User interface (Displays, keyboards, touch screen, etc.)
  - Embedded Controls (RTOS, micro-controllers and / or DSPs)
  - Communications by cable (RS232 / RS422 / RS485, Profibus, Profinet, CAN, Devinet, Ethernet, etc)
  - Wireless communications (BTLE, LoRA, Sigfox, Weightless, ZigBee, WiFi, 2G / 3G / 4G, NB-IoT)
  - Power supplies
- Design of printed circuits (PCB)
- Tooling design for verification and start-up
- Generation of all documentation for production, verification and use



#### **Production**

- Management of industrialization projects
- Quality assurance
- Management of the entire value chain (Planning, supply, subcontracting, logistics)
- Manufacturing of:
  - Printed circuits (PCB)
  - Keyboards and overlays
  - Enclosures (FE, Inox, AL, Plastics) and 3D Rapid Prototypes
  - Customized cables
  - Tooling for verification and start-up
- Assembly and verification of printed circuits (PCBA)
- Assembly and verification of electronic equipment (Manufacture of prototypes and series)
- Assembly of electrical control cabinets
- Assembly of mechanical subassemblies
- Management of security stocks and spare parts of our manufactured
- Technical support service after sales

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# Firmware / Software

- Functional analysis
- Technological analysis
- Draft, Layout
- Planning

- Program coding
- Testing and debugging the program
- Program documentation
- Program maintenance



# **EMC Laboratory**

We have the necessary instrumentation to perform, among others, the following tests:

- IEC 61000-4-4 Tests of immunity to fast electrical transients in bursts.
- IEC 61000-4-5 Immunity tests against shock waves.
- IEC 61000-4-8 Tests of immunity to magnetic fields at industrial frequency.
- IEC 61000-4-9 Test of immunity to impulse magnetic fields.
- IEC 61000-4-11 Tests of immunity to voltage dips, short interruptions and voltage variations.
- IEC 61000-4-29 Tests of immunity to voltage dips, short interruptions and voltage variations in DC power accesses.
- EN 61000-6-1 Part 6-1: Immunity in residential, commercial and light industry environments.
- EN 61000-6-2 Part 6-2: Generic standards. Immunity in industrial environments.



#### **Case Studies**

#### Wireless:

- Real-time Wireless Control of Machinery (Safety application in machines)
- GPS-2G personal locator
- High power Sub-GHz Radio-Módem
- 3G communications module
- 3G monitor of drilling machine controlled via CAN bus
- RF-Profibus mixed machine controller.
- Acquisition weighing module thought RF (868MHz)
- Sub-1GHz radio-modem with LoRa modulation
- Anti-theft alarm for bicycles with LoRa and BlueTooth communication
- Weighing equipment on board trucks with BlueTooth communication
- RF-ID identification system (Mifare)
- RS232 / RS485 to Wifi converter (Device Server)

#### Power supply:

- Power supplies, AC / DC and DC / DC converters
- Drivers and drivers for LED
- Uninterruptible power supply system with solar panels and battery chargers

#### Electro-medicine:

- ECG
- Cardiac Monitor

#### Weighing:

- High-speed static and dynamic weighing systems and equipment
- Dosing equipment
- Weighing equipment with gravity compensation system
- Digital and analog load cells
- Module for weight acquisition through RS232 / Rs485

#### Communications:

- RS232 / RS485 to Ethernet converter (Device Server)
- Optoisolated USB / RS232 to RS485 converter

#### Control and signaling modules:

- Monochrome alphanumeric big displays
- Module to control stepper motors through RS485
- Proportional control module for inductive or resistive loads (PWM) through RS485
- Module of digital Inputs and outputs by power relays via RS485

#### Miscellaneous:

- Instrumentation for the textile sector
- Instrumentation for the chemical sector (Laboratory and Process)
- Cable testing equipment (up to 111 x 111 cable)
- Equipment for cloth width gauge and centering
- Applications for Windows and Android, for the control and / or supervision of different electronic devices, using DDBB mySQL, programming in C++ and java, Cable and Wireless Communications



# FROM CONCEPT TO MASS PRODUCTION

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