## MICROCHIP AUTHORIZED DESIGN PARTNER



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# Ionocom Designs Custom Electronics, Delivers Production-Ready Drawings and Firmware

lonocom designs electronic products for clients, specializing in radio communications, analog and low-power projects. We are experienced in analog and digital designs, embedded processors and firmware.

Most projects start with a meeting at which the client presents a design brief, or simply a verbal description of the requirements. The meeting allows prospective clients to meet the team and see our facilities. After the meeting we work with the client to develop a written specification and statement of work. We then work from the specification, performing circuit design, component selection, schematic capture and printed circuit board design, writing firmware and performing integration and testing.

Our deliverable to our clients is a drawing set that typically includes schematics, bill of materials, PCB artwork and fabrication drawing, assembly drawings, test specifications and firmware. The drawing set is suitable for the client to use to manufacture the product, or to send to a contract manufacturer. We have good working relationships with several local contract manufacturers and are happy to help clients get production up and running.

#### **UPS with Ethernet Interface Provides Remote Monitoring**

When a local battery pack assembly company approached lonocom with a view to designing a UPS with an Ethernet interface for remote monitoring we immediately considered the Microchip PIC18F67J60. Not only did the microcontroller have plenty of digital and analog IO pins, a good set of built-in peripheral functions and generous amounts of RAM and Flash memory, but also the Microchip-supplied TCP/IP stack was a significant advantage. It enabled us to get network functionality up and running quickly. The open way that the Microchip engineers communicate with users of the stack was also good; via the forums we were able to submit several bug fixes and enhancements and were pleased to see many get incorporated in later releases of the stack. In the end we were able to deliver a design that not only included all the battery



charging and management circuitry, but also supported a web interface, a telnet interface for configuration, and an SNMP interface for device management. Our client was very happy and is actively marketing the product to telecoms customers.

#### **Broad Experience**

lonocom designs a wide variety of products for a range of clients spanning consumer to industrial. Over the years we have designed Microchip PIC microcontrollers in to state-of-charge indicators for military batteries and commercial fuel cells, transmitters and receivers for an offender tagging system, industrial devices such as air flow meters, and many other unique projects. Often the designs include a radio communications element, and it is becoming more common to see some wireless aspect in many projects. We have completed many designs with short range radio links at 433 MHz. The other band we frequently encounter is 2.4 GHz where we have used several proprietary solutions as well as standards such as WiFi, Bluetooth and ZigBee®.

### Are you looking for technical resources to take your products to the next level?

An **Authorized Microchip Design Partner** has the unique advantage of helping you get to market faster. This program provides you, as a customer, a specialized resource that has been technically and commercially qualified by Microchip. The Design Partner Program offers special support and technical training to keep its partners current with the latest technology and device offerings from Microchip.

This support is not limited to Microchip's broad line of 8-bit microcontrollers, but also includes the growing line of analog products, 16-bit microcontrollers and digital signal controllers and 32-bit microcontrollers. If your design could use a boost, let a design partner help you get to market faster with Microchip.

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**RETURN TO FRONT PAGE**