BiPOM Electronics, Inc.

From Concept To Deployment

Project Design Capabilities

From Concept through Production to Follow-on Development

BiPOM Electronics has the technology and hardware/software capabilities to develop and support a project from concept state to field deployment and follow-on development.

These services are available:

1. Research
2. Concept Design
3. Product Specifications
4. Schematics
5. Simulation and/or In-Circuit-Emulation (ICE)
6. Ultra-fast Prototyping
7. PCB Layout / Design and Sourcing
8. Parts Sourcing and Procurement
9. PCB Prototype Assembly
10. Firmware and Software Development (Assembly, C, C++, BASIC and others)
11. Enclosure Design/Prototyping
12. Testing And Debugging - Hardware and Software
13. Pilot Model Production
14. Production - Up To 5,000 Units / Year
15. Field Support
16. Follow-on Development

Consulting And Custom Development

In-Depth Capability - Like having your own Development Team on call

- From Concept to Field Support
- Integration into Larger Systems
- Support for/in lieu of In-House Staff
- Hardware, Firmware and Software Capabilities
- Ultra Fast Prototyping - Skip Breadboards
- Fast Software testing and debugging in parallel with hardware development
- International support for microcontroller applications
- Long term, wide industry experience
- CE and UL Certifications

ARM CONSULTANT

BiPOM Electronics is a proud ATMEL® Consultant for AVR® and ARM® (SAM7, SAM9 and AT91RM9200) families of microcontrollers.

AVR CONSULTANT

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Advantages of Using BiPOM Electronics

Why BiPOM Electronics?

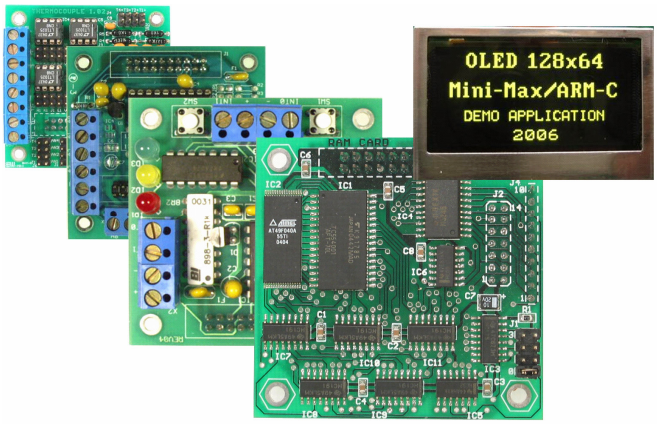
OZ, the Wizard

- **Innovative Solutions** - BiPOM's experts have a world of experience in solving difficult real-world problems using microcontrollers
- **Fast Turnaround** - BiPOM's large staff of hardware and software development engineers can produce fast and documented results
- **Cost Effective** - Use BiPOM in place of high cost in-house staff
- **Bypass Breadboards** - BiPOM's development kits and peripherals are powerful hardware modules to test design concepts and software/firmware while skipping breadboard style prototyping
- **Fast / Easy Project Scope Development** - Just call Oz, the Wizard and discuss what you want to accomplish
- **Schedule Recovery Support** - BiPOM Engineers, with their in-depth experience, can support your design team to recover behind schedule projects or solve specific problems.

Ultra Fast Prototyping (Bypass Breadboard Step)

Using BiPOM's Development Kits, family of microcontrollers, peripherals, and application software, a fully functional prototype can be assembled out of the box without soldering in a matter of a few hours.

This modular system completely skips the breadboard stage and provides a reliable platform to test concepts and develop firmware and software. Because the hardware and application software is well-proven and reliable, it eliminates problems and errors unrelated to the new application concept itself. Thus, the design/prototype development is completed faster than traditional methods at a much lower cost.



Custom Design/Development to OEM Production

In addition to Custom Design and Development, BiPOM can provide prototype, pilot and small to medium quantity production up to 5,000 units per year.

The Advantages of Using BiPOM:

1. Automated Testing - Provides 100% yield of production units
2. Cost Effective Production - Economical prototypes and medium quantity production (up to 5,000 units per year)
3. Custom Design and Overall Systems Integration - Experience in large scale and embedded systems
4. Product Life Cycle Engineering Support:
    - During design and development
    - Pilot and Initial production
    - Field trials and field customer support
    - Follow-up redesign, field problem resolution, product upgrades, and follow-on models
5. Superior component selection, testing, substitution and sourcing, optimizing for performance, reliability, cost and availability.
6. Fast Turnaround - From Concept to Deployment in the shortest possible time.
7. Cost Effective - Reduces/Eliminates in-house engineering costs - BiPOM has full range of international support

Typical Customers

BiPOM has over 3000 customers worldwide in 54 Countries as well as North America (USA, Canada, Mexico).

Please see Industry and Customer Examples on enclosed pamphlet.

Industry Experience

Microcontroller applications are no longer "Industry specific" as they once were years ago. Almost any type of organization, activity or business can make good use of microcontroller technology. All it takes is a creative engineer and a review of all the products, services, and support that BiPOM has to offer.

Some examples of our industry experience include:

Aerospace/Military
Energy
Medical/Nutrition
Transportation
Government
Power/Industrial
Communications
Research
Electronics
Controls
Entertainment
Education (over 80 Universities and Technical Schools)

WebCatPlus
Small, Efficient, Flexible Web Server

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BiPOM Electronics, Inc.

Your Development Team - On Call

Custom Projects

MADE IN U.S.A.

Some Custom Projects that were successfully completed by BiPOM Electronics.
All our boards are manufactured in the USA.

Organic LED (OLED) Display Evaluation Board: A miniature controller board that stores graphics images in data flash memory and drives an OLED graphical display. Includes 4Mbit Flash memory. Based on AT89C51RD2 microcontroller.

Gas Detector: Monitors, logs and displays presence of gases such as oxygen, hydrogen-sulfide, carbon dioxide. Based on AT89C51RD2 micro-controller. Includes 11 channels of 12-bit A/D converter, LCD display, temperature and humidity measurements, battery charger and intelligent power supply.

Solenoid Tester: Performs various checks such as ohm measurement, pull-in/drop-out, megaohm leakage and others on solenoids that are used in subsea oil fields. Based on AT89C51ED2 micro-controller.

AIRMAX On-board weight indicator and sensor interfaces for 18-wheeler trucks. Developed using Dallas 80C320 and ATMEL® AT89C2051 microcontrollers. Interfaces to both strain gages and pressure sensors to support both air-ride and spring suspension systems. Includes RS232 and RS422 interfaces.

16-channel programmable power supply: An intelligent power supply that controls loads up to 7 Amperes on each channel. Monitors fault conditions and shuts down channels accordingly. With BQ2060 battery charge monitoring, I2C and SMBUS support. Based on AT89C51RD2, PIC14000 and Matrix Orbital serial VFD displays.

Torque Controller: Precisely controls the makeup and/or breakout torque level of downhole pipe joints at oil rigs. Logs events to a 64 Megabyte Multimedia Card (MMC). Includes Graphical LCD display, EPSON SED1335 display controller, Real-Time-clock. Based on the Dallas DS5000T and ATMEL® AT89C51ED2 micro-controller.

Mud Counter: For oil rigs. Ultra low-power design based on PIC16C923 microcontroller.

Digital Loadcell : With strain gages, AVR® ATMEGA® microcontroller and precision bridge amplifier.

32-channel (expandable to 256 channels) 8-bit serial data acquisition system for PC's: Connects to serial port and requires external mains adapter as a power supply. With driver software on the PC. (Designed for Methodist Hospital in Houston, Texas.)

Low-pass Filter for micro-motion measurements: Designed for Methodist Hospital in Houston, Texas.

LiDAR System: Our engineers helped develop and test an airborne Laser-based terrain mapping system that generates a high-precision 3-D image map of a geographical area for a local customer. Based on SUN SPARC processor, Freescale (Motorola) 68020 and GPS.

BiPOM Electronics, Inc. is a proud solutions partner of Mobile Pathways, Inc. in supplying the US Army, Air Force and other US government agencies and OEM's with state-of-the-art micro-controller based power supplies. Please contact us or Mobile Pathways, Inc. for portable/ programmable power supply solutions.

Mobile Pathways INC.