

In today's world of connected devices, there is untapped market need to create deeper, more meaningful relationships with customers. Success depends upon translating those market needs into a complete solution that provides exceptional user experience. Customers are no longer satisfied with great performance of individual parts, but expect seamless and flawless performance throughout a holistic system. Choosing a partner who can translate market need into breakthrough technologies has never been more critical.

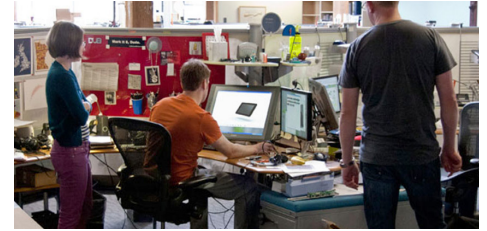
At Logic PD, we work with you to bring together a highly skilled, full-service team of focused experts in design and systems, electrical, software and mechanical engineering. Our systems engineering approach works in tandem with you to help rethink what is possible. When our award-winning designers work seamlessly with our experienced engineers, the result is the kind of synergy that propels clients' businesses beyond their expectations.



LEARN MORE ABOUT LOGIC PD DESIGN & ENGINEERING AT // [www.logicpd.com/capabilities](http://www.logicpd.com/capabilities)

# Design & Engineering Expertise

We operate as an extension of your team and tackle your most complex problems.



## Design Capabilities

With nearly 60 years of product design experience, Logic PD has the expertise to guide you in putting together all the pieces to make a great user experience.

### Design Research

- Contextual inquiry
- Ethnographic studies
- Co-discovery research
- Persona development
- User experience models
- Collaborative design
- Scenario development
- Trend analysis

### Interaction Design

- Graphical and natural UI design
- Physical interface & visual design
- Heuristic analysis
- Interface prototyping
- Usability testing

### Industrial Design

- Concept development & visualization
- Platform strategy
- Competitive product & market analysis
- Compact product packaging
- Wireless technology integration
- Product identity and graphics
- DFX and sustainable design
- Class A surface dev. - Pro/ENGINEER

## Engineering Capabilities

Our firm grasp on the latest technology, including embedded systems and connected device development, helps us solve tough technical challenges when others fear them.

### Systems Engineering

- Cross-functional technical leadership of complex system development
- Requirements management
- Human factors and usability
- Risk management
- Systems integration and testing
- Regulatory expertise

### Electrical Engineering

- Electronic system architecture
- High-speed digital and analog design
- Single- and multi-core microprocessors, from 8- to 64-bit
- Single- and multi-radio RF integration
- Optimized battery-powered systems
- Single- and multi-touch user interfaces
- Digital audio and video systems
- Networks and communication
- Signal processing
- Signal integrity simulation
- High-complexity PCBA design
- FPGA design & simulation
- System- and board-level EMC troubleshooting
- High-end microprocessor subsystem design

### Mechanical Engineering

- Material selection
- Electronics packaging
- Rugged and sealed enclosures
- Design for manufacturing and assembly
- Thermal simulation and analysis
- Complex mechanisms
- Rapid prototypes
- Regulatory and certification testing

### Software Engineering

- Architect, design, and develop software for 8- to 64-bit processing systems
- C, C++, C#, Java and other languages
- For bare metal, uCOSII/III, freeRTOS, Linux, iOS, Android, and Windows platforms

### Test Development

- In-circuit
- Flying Probe
- AOI
- Custom Functional - board and system level
- Environmental stress test

### Device Technology

- Fast boot
- Battery power design
- Thermal/Power management
- DSP design
- PCB design
- SOM embedded and connected devices

## About Logic PD



### Product Development Services

Our Eden Prairie, Minn., headquarters houses our systems integration, prototype production, testing and engineering labs and facilities.



### About Logic PD

Logic PD guides clients through the full product development and electronics manufacturing process to accelerate their growth and capture value.