



## **Electronic, Software & Product Design**

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### **Profile**

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Founded in 2000, Chapel Design is an independent consultancy with practical experience of electronic hardware and software design across a broad range of applications primarily within the industrial, automotive and communications industries. Chapel Design has a track record of delivering innovative solutions to challenging problems on time and to budget.

### **Objectives**

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- To build long term partnerships with customers by providing engineering resources in a professional and cost effective way and to always consider the wider picture when making decisions.
- To act with integrity at all times and to give full visibility of project costs and timescales.
- To keep abreast of technology and always be in a position to provide the most appropriate solutions to customer requirements.

## Skills & Experience

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Chapel Design has acquired a solid base of skills and experience over many years of product development. This page highlights these skills and experience:-

### Industries & Applications

- Automotive telematics & diagnostics
- Asset tracking
- Wireless communications
- Healthcare
- Production test
- Building services
- Aerospace & defence

### Electronic Design

- High speed digital
- Analogue & mixed signal
- FPGA (Altera, Xilinx, Actel)
- Low power
- Interfacing; digital & analogue
- Signal conditioning
- RF development & test

### Microprocessor Systems

- ARM7, CORTEX, PIC, H8 and PowerPC
- Memory & storage systems
- Bus systems; standard & proprietary

### Radio Communications

- M2M (Machine to Machine), ISM Band
- Bluetooth
- Wireless LAN
- GSM, GPRS
- Multi-radio systems & co-existence

### Power Supply & Battery Management

- Switching & linear supplies
- High efficiency, low noise
- Battery charging & management
- Custom battery solutions

### GPS

- Location & tracking systems
- Assisted GPS (A-GPS)

### Audio

- Audio signal conversion, codecs
- Amplifiers
- Radio voice communications

### System Design

- System & architectural design
- Requirements capture
- Technical & commercial feasibility

### Embedded Software Design

- Real time embedded software
- 'C' & assembler
- Proprietary operating systems
- Communication protocols
- Audio & video processing
- User interfaces
- Video display systems
- Built In Test (BIT)

### Application Software

- Commercial, industrial & scientific
- Database schema design & optimisation
- Reporting & analysis tools

### User Interfaces

- Custom keyboards & displays
- Input devices
- Software user interfaces

### Production & Test

- Design for test (DFT)
- Design for manufacture (DFM)
- Production test system design
- Production support
- High & low volume, UK & offshore

### Product Approvals

- Design & testing for EMC
- CE, R&TTE, safety (EN60950)
- Automotive VCA 'E' marking
- Wireless approvals
- Bluetooth qualification
- Foreign market approvals

### Project Management

- Full turn-key product development
- Project planning & costing
- Production Management