

About

Circuitree is a forward thinking electronics design and product development company based in the North East of England.

With development of innovative timely solutions, Circuitree helps its clients to create world class products and to remain competitive in rapidly evolving marketplaces.

Circuitree works with industrial designers, PCB manufacturers and product designers to provide a whole product introduction and manufacture service to its clients.

Technical Expertise

Circuitree has wide ranging expertise covering all areas of electronics. The experience and diversity of Circuitree's engineers allows the company to be flexible, and provide comprehensive solutions based upon whole systems that are designed and implemented with a high level of competence. Core areas of expertise include GPS, RFID, PCB design and wireless communications.

Core areas of expertise:

Hardware:

- Microcontroller/microprocessor based hardware development.
- Microprocessors including 4-bit (Atmel MARC4), 8-bit (AVR, 8051, PIC), 16-bit (Cyan eCOG) and 32-bit (ARM7, ARM9, Cortex M3) devices.
- Reconfigurable logic based design, Altera and Xilinx FPGAs and CPLDs, design implementation and verification flows.
- Mixed signal design, A/D and D/A converters and other peripherals.
- Buses (I2C, 1 Wire, SPI) and interfaces (RS-232, USB, DVB SPI, LVDS).
- Digital and mixed signal system Design For Test and Design For Manufacturing.
- Switch mode power supply, analogue signal chain power conditioning, and protection circuit design.
- Schematic capture, component library management and PCB layout.
- Design debugging, fault deduction and verification in simulation and at board level.

Wireless Communications

- M2M, GSM, GPRS, 3G, Bluetooth, Zigbee, ISM bands.
- Specialist knowledge of 2.4 GHz RF PAN communications and broadband fixed wireless access systems.
- Theoretical and applied background on coding, modulation, physical channel, radio propagation, and radio and cellular technologies.
- Test and measurement equipment, and head end equipment (DVB satellite modulator, digital receiver, cable INA, MPEG-2 encoder).

Software:

- Software architecture
- C, C++, Labview, Perl, Matlab, Linux, Java, VHDL
- POSIX systems programming, TCP/IP, embedded systems and Linux driver development
- CADSTAR design suite
- AVR Studio
- GNU Toolchains
- Max+Plus II, Quartus II, ModelSim, Electronic Workbench, Protel, Simulink

Contact Details

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