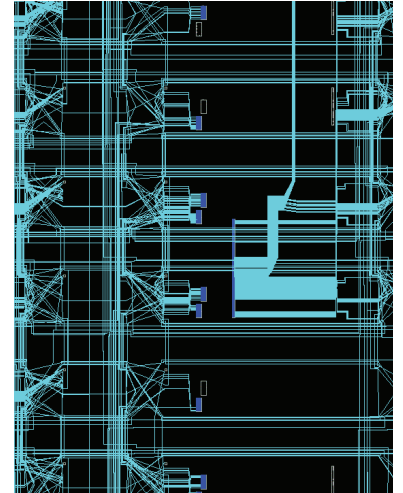
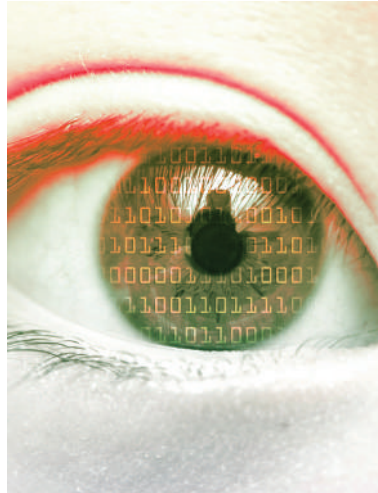


# FPGA and SoC Engineering Service



## Working With Red: The Benefits

- Professional, experienced team
- Expertise in FPGA technologies and tools accumulated over many years
- Quick mobilisation with proven infrastructure and process
- Access to latest Xilinx tools and IP
- Practical, thorough, delivery-focussed approach
- Flexible service configurable to your needs

## Flexible FPGA/SoC service brings broad expertise to any project

Red Embedded provides a range of engineering services targeted at projects that use FPGA/SoC devices. Our breadth of experience enables us to help clients in all aspects of FPGA/SoC development, providing a team built to fit a project's requirements.

The disciplines needed to develop FPGA related projects are widening; many projects require expertise in Hardware, DSP, Embedded CPU, Board Support Package, OS, networking, communications and Application Software. Red Embedded covers all these disciplines; our deep experience across a broad skillset can be exploited to deliver complex solutions on time and on budget.

Our engagement is flexible and tailored to your needs. We can provide help in a single area, deliver a component, or take a FPGA based project from initial conception to final delivery.

Red Embedded is a Xilinx Alliance Program Member.

*where experience delivers*



# FPGA and SoC Engineering Service



## Application Expertise

- Professional broadcast equipment
- Low latency networking and arithmetic
- Image and signal analysis
- Medical equipment
- Modulation and networking equipment
- Industrial control
- Functional test equipment

## FPGA/SoC projects demand multi-skilled teams

### Requirements Capture and Design Specification

Requirements capture and product specification are fundamental to a project's success. Red Embedded has a great deal of experience in this area. The breadth of experience held by our engineers in hardware, FPGA and software enables them to produce realisable, cost-effective designs.

### Choice of Device, IP, Device Pinout and Tool-chain

Device selection, design partition and IP selection must be done carefully to avoid implementation problems due to fabric limitations, or waste money on a needlessly high-spec device. It is also vital to invest effort upfront in the FPGA pinout, saving time in the long-run.

As a Xilinx Alliance Program Member, Red Embedded has access to Xilinx's All Programmable devices, tools and Video and Image Processing IP, and has years of experience in the practical issues of targeting designs to a range of FPGA families.

## Design Capture, Verification, Constraining and Implementation

Red Embedded can bring good-practice to the design cycle, helping to find the right level of verification to deliver a project on time. We have experience in tricky areas such as clock-domain crossings and timing-constraints. Red Embedded also offers time on its High Performance Build Servers, which can reduce build times and help to deliver on time.

## Debug and Validation

Every project should plan for a debug phase. With experience, it's possible to make this process efficient by anticipating potential problem areas, and designing-in debug mechanisms.

When the project is complete, Red Embedded's Validation Team offers a flexible service, covering software and hardware, which provides an objective appraisal of your product, and can reduce the risk of costly in field failures.

where *experience* delivers



# Working With You

We bring our specialist experience and technical capability to work on your projects. We work in a flexible way, allocating the right skills mix to your project. We provide a project-based service, ranging from complete turnkey service to individual work packages tailored to your specific needs.

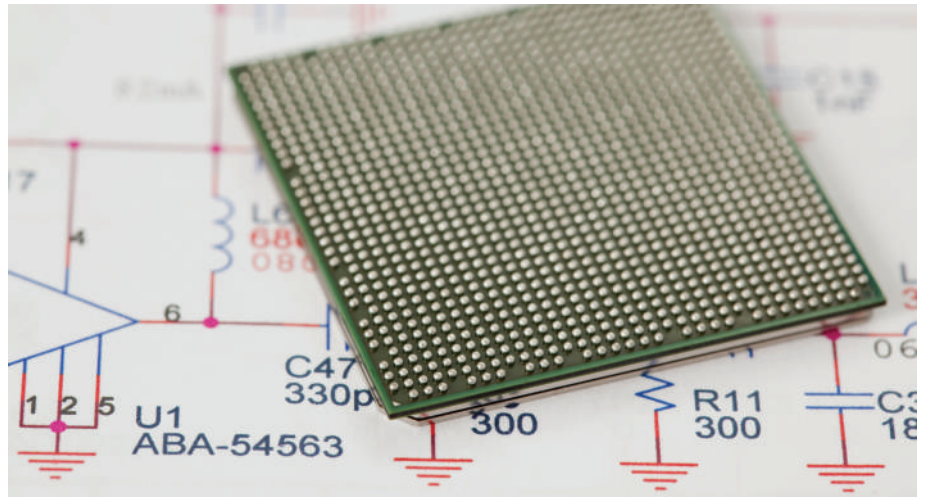
You'll find us practical and plain speaking, thorough and innovative, with the capacity and skills to help deliver your project, right first time.

## About Us

Red Embedded Consulting was formed in 2008 to bring a range of practical, innovative and technology-led consultancy services to the digital technologies market.

We've built a strong reputation for our practical, thorough, cost effective consultancy services. We work closely with you and your partners around the world to realise your technological goals.

Founded by a team with extensive experience in defining, developing and launching new products in the high volume digital consumer market, the group has gone from strength to strength. Based in the UK, the company is privately owned and now employs over fifty best-in-class engineers.



## Design Study

One example of Red Embedded's capabilities is a recent Professional Broadcast project, which used a large Xilinx Virtex6 device. The Red Embedded team took full responsibility for:

- Project Management, with full visibility to customer
- Requirements Capture
- High Level Product Design
- Device, IP and tool-chain selection
- Design Capture, and integration of IP
- Design verification
- Pinout and constraints
- Implementation
- Debug
- Embedded software and Application software, running on Linux
- Web-based GUI design
- Hardware Design (with signals running at up to 3Gb/s)
- Mechanical Design (19" rack, with bespoke metalwork, front and rear panels)
- Prototyping
- Test specification, and running of a full suite of product-tests

This project began with a list of high level requirements from the customer. Red Embedded worked with the customer taking the project from product concept through to successful delivery, making all project data (plans, schematics, source code, documentation etc.) available to the customer at all times. The customer has since come back for repeat business.

## Contact Us

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