

# Embedded system development

Embedded systems are a combination of custom-designed hardware and software, which both need to be developed in parallel.

When developing a new or unique product or device, the integration of hardware, software, and programmable logic needs to be carefully planned.

This calls for a specialist and experienced approach to embedded system development.

## The need to work with a reliable team

Many companies may lack the expertise or resource “bandwidth” to develop a complete embedded system, and may prefer to contract out the development to reduce project cost, timescales or risk.

Whatever the reason for contracting out the development, it must be undertaken by a competent and reliable team with a blend of in-depth knowledge, practical experience and project management skills.

## How can we help?

Working with our hardware design partners, we act as a single point of supply for complete embedded system development. This often includes designs based on simple microcontrollers running “bare metal” software, through to 32-bit and 64-bit processors running real-time operating systems with extensive middleware and programmable logic.

Depending on your needs, we can deliver pre-integrated hardware and software platforms complete with device drivers, or a turn-key system with application software.

### OVERVIEW

- High quality and reliable embedded software solutions
- More than 30 years experience
- Effective blend of embedded talent, tools and industry specific experience

### ABOUT US

Pebble Bay is an embedded software development company providing specialised solutions that enable customers in a range of industry sectors to build reliable, high-performance and easily maintained embedded systems.

With vast project experience and specialist market expertise, we have a proven ability to significantly reduce development time and minimise project risk and cost.

### WHY PEBBLE BAY?

- Extensive embedded experience
- Strong project management
- Speed and increased time to market
- Lower project lifecycle costs
- Reduced project risk
- Strong partnership network

## Our service

As part of our service we:

- Analyse requirements to ensure the technical and business needs are fully understood
- Identify suitable partner(s) for hardware design
- Create a detailed Statement of Work defining work packages, pre-requisites, deliverables and schedule with explicit milestones
- Design hardware and software in parallel
- Use an iterative approach based on prototyping to minimise risk
- Provide fully documented deliverables, including schematics, layout files, source code, test plans, and user manuals
- Manage the project using our proven process to ensure the project status is always visible and any risks are tackled head-on

## Why Pebble Bay?

There are several benefits that set us apart from our competition, including:

### Highly effective project and quality management

We actively manage all embedded projects, minimising your effort. Our approach is disciplined and pragmatic, keeping you fully informed throughout. This has given us an enviable track record of efficient, on-time and within-budget delivery. We adopt a similar approach to quality management, allowing us to deliver reliable and easily-integrated solutions.

### Scalable solutions

We provide embedded software development and consultancy services covering all product lifecycle phases, from initial feasibility study through to system development and product improvement.

### Strong technical focus

We have unparalleled experience of hardware and software integration and the development of low-level software that forms the basis of high-performance embedded systems.

### Flexible partner resources

Our network of partners enables you to benefit from specialist resources for software, hardware and FPGA design. We provide a single point of supply to deliver your project in conjunction with our partners.

“We have worked with Pebble Bay and in all cases we have found the standard of work extremely high, without failure and delivered on time, complete with full support documentation.”

SIEMENS