

# Embedded software porting

Finding ways to reduce cost, add capabilities or increase the performance of embedded software is of real importance to many companies. Reusing existing embedded software is one approach.

Embedded software 'porting' is the process of re-using embedded software and making it operate in a system for which it was not originally designed.

## The risks associated with porting

Since embedded software is often closely related to the hardware or software environment it was originally developed for, porting to a different environment can be a complex, risky and time-consuming process.

The process could involve different hardware, a different operating system, different development tools, or a combination of all three.

Completing an embedded software porting project successfully demands experience with a wide variety of hardware, run-time software and development tools. By using specialist services to undertake software porting, effort and risk can be significantly reduced.

## How we can help?

We offer a range of services to help you port software to your target environment reliably and with low risk. This can include advice on how best to undertake a port, through to porting and testing complete software systems.

### 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 porting service

As part of our embedded software porting service we:

- Analyse requirements to ensure the technical and business needs are fully understood
- Create a detailed Statement of Work defining work packages, pre-requisites, deliverables and schedule with explicit milestones
- Review software to identify hardware-related, tool-based or environmental dependencies
- Plan the porting process to enable incremental testing and verification where possible
- Carry out a pilot study to port a subset of the software
- Create a Test Plan to demonstrate correct operation of the ported software in the new environment
- Isolate hard-to-port sections of code to make them easier to maintain and/or re-write
- Document the porting process allowing the customer to understand the rationale
- Use tools and techniques to automate porting and checking where possible, to minimise effort and risk
- Manage the project using our proven process to ensure the project status is always visible and any risks are tackled head-on

### CASE STUDIES

- Ported existing application software (running on 8-bit processor) to a new 32-bit platform for an industrial heating control system.
- Migrated existing software for an industrial control unit to new hardware and a new operating system.
- Ported existing application software to a new platform for a rail control unit.

Visit the case studies section on [www.pebblebay.com](http://www.pebblebay.com) to read about these and other success stories.

## Why Pebble Bay?

There are several benefits that set us apart, 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