In-roads to accelerated development and a stronger business using the Xilinx Multiprocessor System-on-Chip (MPSoC).
The complexities of configuring an MPSoC shouldn’t stand in the way of launching your new products and changing lives around the world.

DornerWorks engineers were some of the first to work with the Xilinx UltraScale+ MPSoC, and have collaborated with Xilinx and others on its earliest applications.

We can help you:

• Quickly get your applications or operating systems up and running on your platform

• Identify critical features of your MPSoC

• Refine your MPSoC configuration to optimize performance

• Grow your business

Xilinx recognizes DornerWorks as an Alliance Program Premier Partner and one of the first design firms in North America to work with the RFSoC.
MPSOC DEVELOPMENT TIMELINE

Early investigation
Hardware selected
Design phase
Development
Pre-deployment

Product development stages

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**MPSOC QUICK START PACKAGE**

**WHEN YOU NEED IT**
- Early investigation phase, before you have selected the hardware for your project
- When you are using your hardware for the first time and require initial training
- When you want to increase the size of your team and don’t want to pull engineers away from development to train new staff.

**WHY YOU NEED IT**
Start developing on hardware quicker, and grow your team’s ability to work on the MPSoC without losing momentum.
CONFIDENCE in your MPSoC development

Choosing the right hardware for your project is one of the first steps in development, but it may require substantial investment.

Make sure you’re on the right track with a Quick Start Package from DornerWorks. You’ll get a better understanding of your chosen platform, and the tools you need to accelerate development.

- **On-Site Training**
  Get a handle on the capabilities, I/O, and performance characteristics of your MPSoC platform.

- **Architectural Consultation**
  Learn more about your platform’s security features, virtualization, and trust-zone.

- **Reference Design & Work-Flow**
  Build on this working platform as your scale your product and grow your business.
WHEN YOU NEED IT

Once you have chosen an MPSoC for your project, or are seriously considering it, and would like benchmarks for your custom hardware.

WHY YOU NEED IT

Getting good performance numbers on a new chip can be costly in time and money.
BENCHMARK DEFINITION FOR
HIGHLY CUSTOMIZABLE MPSOC PLATFORMS

With an MPSoc chosen for your project, the Performance Characterization Package will give you confirmation that you’ve made the right decision, and important benchmarks for your custom hardware configuration.

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We will provide you with relevant and repeatable benchmarks such as:

- CPU performance
- Memory usage
- Boot time
- Worst-case latency
- I/O
- Memory throughout
WHEN YOU NEED IT
Once you are confident in your selection of the MPSoC and have non-trivial resource allocation needs, or are simply confident that you’d rather spend your time elsewhere.

WHY YOU NEED IT
Allocation configurations can eat up precious time and resources. If you don’t have the capability or bandwidth to do it yourself, we can create one for your:

- APU
- RPU
- FPGA soft core
- Trust-zone
- APU virtualization
- Boot sequence
- BSP
- PMU extensions
A WORKING CONFIGURATION
That you understand

Requirements Work-Through
Increase your product confidence with a thorough vetting of your requirements driving required allocations.

Analysis of Requirements
Understand your allocations inside and out.

Reference Design
See how your desired allocation of resources and processing elements will affect your final product.
WHEN YOU NEED IT
Once you've determined you need communication between different processing elements on your MPSoC.

WHY YOU NEED IT
A unified framework will help you use multiple, interacting processing elements (RPU, APU, FPGA soft cores, PMU extensions, trust-zone, VMs) in your system, and save time and money over the cost of building it yourself.
A UNIFIED FRAMEWORK FOR
COMMUNICATION & REMOTE PROCEDURE CALLS

Complex development needs a stable footing and DornerWorks Heterogeneous Support Package will provide the foundation you need to move toward launch with confidence.

Your unified communication framework will cover:

- Design (your understanding of how it works)
- Source code
- User instructions

We will also provide you with a reference design of the framework in use, and expected performance numbers.
WHEN YOU NEED IT
During development, or later in the process, when you want to get more performance, higher throughput, decreased latency, or increased determinism out of your MPSoC.

WHY YOU NEED IT
You can still improve performance late in the development process without making massive changes to your code base, or moving your schedule back.
A FULL KNOWLEDGE BASE
So you can tune your MPSoC on your own

Configuration & Source Code Changes

Improvement Explanation

Test Code Demonstration

DornerWorks Performance Optimization Package will give you insight into the source code elements that will bring out the most your MPSoC is capable of, and evidence of the improvements made.
TECHNOLOGY ENGINEERING  
SO YOU CAN FOCUS

We can help you accelerate product development at any stage in your timeline.

Get started with an MPSoC Service Package that will help you overcome development challenges and grow your business. Contact DornerWorks today!

DornerWorks.com