



MPSOC/RFSOC SUPPORT MENU

| In-roads to accelerated development and a stronger business
using the Xilinx Multiprocessor System-on-Chip (MPSoC).

TECHNOLOGY ENGINEERING

SO YOU CAN FOCUS

The complexities of configuring an MPSoC or RFSoc 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 the RFSoc, and have collaborated with Xilinx and others on its earliest applications.

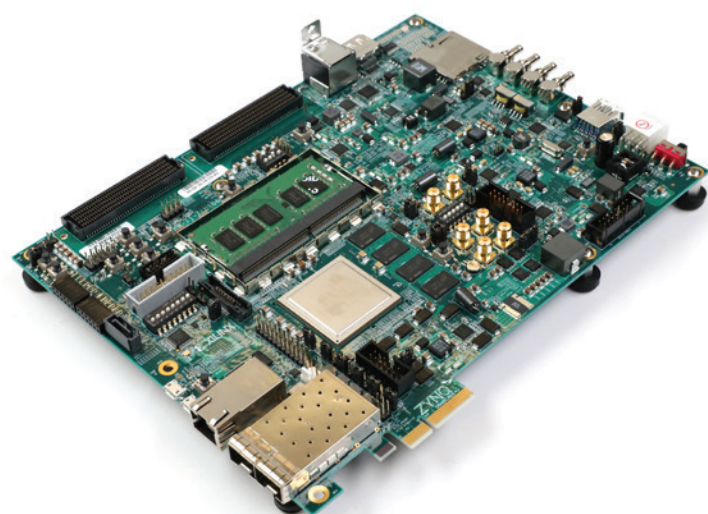
We can help you:

- Quickly get your applications or operating systems up and running on your platform
- Identify critical features of your MPSoC/RFSoc
- 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/RFSoC DEVELOPMENT TIMELINE



Product development stages

Early investigation

01

02

Hardware selected

Design phase

03

04

Development

Pre-deployment

05

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01

MPSoC/RFSoc

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/RFSoc without losing momentum.

CONFIDENCE

in your MPSoC/RFSoc 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 you scale your product and grow your business.



02

MPSoC/RFSoc

PERFORMANCE CHARACTERIZATION



WHEN YOU NEED IT

Once you have chosen an MPSoC/RFSoc 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/RFSOC PLATFORMS**

With an MPSoC/RFSoc 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.



Defined Performance Requirements



Benchmark Results



Analysis of Results



Source Code and Instructions

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

- CPU performance
- Memory usage
- Boot time
- Worst-case latency
- I/O
- Memory throughout





03

MPSoC/RFSoc

ALLOCATION CONFIGURATION



WHEN YOU NEED IT

Once you are confident in your selection of the MPSoC/RFSoc 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 you:

- 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.

**04**

MPSoC/RFSoc

HETEROGENEOUS SUPPORT



WHEN YOU NEED IT

Once you've determined you need communication between different processing elements on your MPSoC/RFSoc.



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.



Communication Framework



Architecture Refinement



Performance Evaluation

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.





05 MPSOC/RFSoc PERFORMANCE OPTIMIZATION



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 KNOWLEDGEBASE

So you can tune your MPSoC/RFSoc 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/RFSoc Service Package** that will help you overcome development challenges and grow your business. Contact DornerWorks today!

DornerWorks.com