

Companies building next-gen communication systems rely on complex digital signal processing (DSP) systems that transform and filter signals so other applications can respond.

DornerWorks helps those companies unlock the potential of their systems with expert DSP engineering services.



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VERSATILE DEVICE EXPERTISE

• Zynq Ul<u>traScale+</u>

GROW YOUR BUSINESS

WITH CONFIDENCE

You can scramble to develop complex technology and meet market deadlines with a product that doesn't work

the way you want it to, or you can rely on the guidance of expert engineers who have been there before, and

DSP engineering services from DornerWorks will give you the freedom to focus on growing your business.

can bring clarity to your development.

- RFSoC
- ・Zynq 7000
- Artix
- KintexVirtex
- ・RTG4
- ARRIA 10

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SIGNAL TRANSLATION

- Transformation
- Filtering
- Windowing
- Radar Signal Processing

SYSTEM MINIATURIZATION

• Reduce the size, weight, and power (SWaP) of your advanced radar systems

Direct signal conversion
with RFSoC technology

SPEED & TIMING

Interface with different devices knowing your data will be processed and fused as needed, when needed.



SCHEDULE A CONSULTATION

DornerWorks.com

+1.616.245.8369

DornerWorks is a professional, flexible, AND AN ESSENTIAL PART OF OUR TEAM

ADVANCED RF SYSTEMS **RFSoC ENGINEERING**

A defense contractor wanted to miniaturize the SWaP-C and improve response time of their advanced radar systems that detected and mitigated oncoming airborne threats.

The design DornerWorks delivered was based on one of the first three Xilinx Zynq UltraScale+ RFSoC boards ever available.

The RFSoC system helped the client receive and process data almost instantaneously:

- 12 direct digital synthesis modules drive 12 samples per AXI-Stream to RF data converter DAC
- Costas codes
- Software-controllable
- ADC at 4 GSPS with complex output, decimation by 8, with one sample per AXI-stream at 500 MHz from RF data converter
- DSP pipeline:
- FIR filter
- Equalizer
- Doppler FFTs
- Data timestamped at detection

CLARITY & CONFIDENCE FOR COMPLEX DEVELOPMENT

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Digital signal processing can be complicated, but it doesn't have to slow you down. Contact us about **DSP engineering services** today and replace your worries with confidence!

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