



# Introduction to PolarFire® SoC

30<sup>th</sup> March 2021 – online

In times of fast evolution, staying at the cutting edge of technology is only achievable by continuous learning. With this seminar, Arrow provides you the chance for a job specific training.

Microchip's award-winning PolarFire FPGAs are now available in combination with a 64-bit RISC-V quad-core application processor and a 64-bit supervisor processor. Again, low-Power, SEU-immunity, Security and non-volatile configuration are the key properties of this SoC family ranging from 25 kLUTs to almost 500 kLUTs. The device family's entry level member combines a low-density FPGA with high-end features such as 12.7 Gbit/s transceivers, numerous DSP blocks and a powerful processor. This combination is unique in the industry. The seminar will cover an introduction to PolarFire SoC as well as bare-metal Programming and booting Linux on PolarFire SoC. The Linux section will cover:

- Working through the default PolarFire SoC Boot Process
- Introducing Yocto and buildroot
- Introducing the Hart (= hardware thread) Software Services (HSS) and OpenSBI
- Introducing the PolarFire SoC Device Tree
- Introducing u-boot on PolarFire SoC / Icicle-Kit
- Introducing Linux on PolarFire SoC / Icicle-Kit

**Speakers:** Luca Cattaneo (EMEA FPGA Team Manager, Microchip)  
Daire McNamara (CTO, Emdalo)

**Language:** English

**Prerequisites:** Access to [MPFS-ICICLE-KIT-ES](#) and [SoftConsole v6.6](#) desirable, but not required

**Seminar Actions:** Presentation

**Contact Person:** Andreas Schwarztrauber, [aschwarztrauber@arroweurope.com](mailto:aschwarztrauber@arroweurope.com), +49 177 – 8 58 44 32

## Agenda (Time zone: CET)

09:00 – 09:10	Welcome
09:10 – 09:40	Introduction to PolarFire SoC
09:40 – 10:00	Introduction to Bare-metal Programming on PolarFire SoC
10:00 – 10:55	Booting Linux on PolarFire SoC
10:55 – 11:00	Questions & Answers

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