



# AMP with Microchip PolarFire™ SoC – Blending deterministic real-time Functions with rich OS Capabilities

25<sup>th</sup> May 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.

Typically, hard real-time requirements are met with dedicated control loops running in highly deterministic loops on predictable processors. Modern SoCs are being asked to blend this requirement with rich OS support, for example Linux. Linux implies caching and instruction pipelines with branch prediction. These, in turn, are associated with execution jitter as cache hits have different timing to cache misses and pipelines are flushed.

PolarFire™ SoC, the 3<sup>rd</sup> generation of FPGA SoC from Microchip, can use its multiple RISC-V 64-bit cores, innovative memory hierarchy, and memory protection features to concurrently run both real-time applications and a variety of rich OS.

The webinar introduces the PolarFire™ SoC memory hierarchy and illustrates how it can be partitioned between cores to create a Linux context and a deterministic bare-metal context. Furthermore the memory protection features of PolarFire™ SoC will be presented, which can be used to keep each context completely separate at a hardware level.

**Speakers:** Martin Kellermann (Microchip), Daire McNamara (Emdalo Technologies)

**Language:** English

**Prerequisites:** None

**Seminar Actions:** Presentation

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## Agenda (Time zone: CEST)

09:00 – 09:10	Welcome
09:10 – 09:30	Introduction to Microchip PolarFire SoC AMP (Asymmetric MultiProcessing)
09:30 – 10:20	Working with Microchip PolarFire SoC AMP (Asymmetric MultiProcessing)
10:20 – 10:30	Questions & Answers

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