PolarFire FPGA

Industry leading low power:

◆ The lowest static power: 1/10 static power vs. competing devices

◆ Transceiver optimized for 12.7Gbps, which yields 1/2 the power vs. competing devices

◆ Total power: up to 50% lower power than competing SRAM-based FPGAs

**Integrated Hard IP:** DDR PHY, PCIe endpoint/root port, crypto processor

Flash-based Architecture: Instant on after power-up

Microchip PolarFire™ Field Programmable Gate Arrays (FPGAs) deliver up to 50% lower power than equivalent SRAM FP-GAs. The FPGAs deliver low power at mid-range densities with 12.7Gbps Serializer/Deserializer (SerDes) transceivers for security and reliability. The FPGA product family is ideal for a wide range of applications within wireline access networks and cellular infrastructure, defense and commercial aviation markets, and industry 4.0 which includes the industrial automation and Internet of Things (IoT) markets.

High-Speed Connectivity

PolarFire FPGAs provide cost-effective bandwidth processing capabilities for the increasing number of converged 10Gbps ports with a low power footprint.
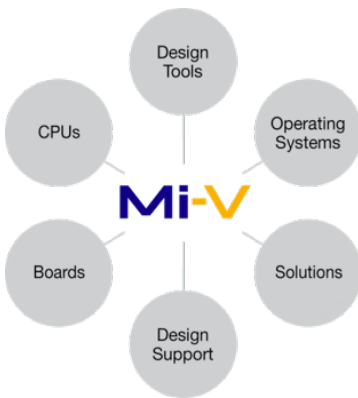
Robustness

The FPGA product family addresses concerns over reliability issues that face deep sub-micron SRAM-based FPGAs as they relate to single event upsets (SEUs) in their configuration memory. PolarFire FPGAs are immune to this kind of events.

Video and Imaging

PolarFire Video and Imaging Kit offers a high-performance evaluation of 4K image processing and rendering using dual camera sensors as well as numerous display interfaces. The kit is purpose-built for effortless prototyping of popular imaging and video protocols including MIPI CSI-2 TX, MIPI CSI-2 RX, HDMI 1.4 TX, HDMI2.0, DSI, and HD/3G SDI.

Open. Lowest Power. Programmable RISC-V Solutions

The Mi-V RISC-V ecosystem is a continuously expanding, comprehensive suite of tools and design resources developed by Microsemi and numerous third parties to fully support RISC-V designs. The Mi-V ecosystem aims to increase adoption of RISC-V ISA and Microchip's soft CPU product family.

Industry leading security features for IoT-applications

Crypto coprocessor, key storage using physically unclonable functions (PUF), Licensed DPA-Protection, Hardened Security for ECC, AES, True RNG, SHA and MAC