



Project EPOS

The **EPOS Project** (*Embedded Parallel Operating System*) aims at automating the development of dedicated computing systems, so that developers can concentrate on what really matters: their applications. EPOS relies on the [Application-Driven Embedded System Design Method \(ADESD\)](#) proposed by Fröhlich to design and implement both software and hardware components that can be automatically adapted to fulfill the requirements of particular applications. Additionally, EPOS features a set of tools to select, adapt and plug components into an application-specific framework, thus enabling the automatic generation of an application-oriented system instance. Such an instance consists of a hardware platform implemented in terms of programmable logic, and the corresponding run-time support system implemented in terms of abstractions, hardware mediators, scenario adapters and aspect programs.

The deployment of [ADESD](#) in EPOS is helping to produce components that are highly reusable, adaptable and maintainable. Low overhead and high performance are achieved by a careful implementation that makes use of *generative programming* techniques, including *static metaprogramming*. Furthermore, the fact that EPOS components are exported to users by means of coherent interfaces defined in the context of the application domain largely improves usability. All these technological advantages are directly reflected in the development process, reducing NRE costs and the time-to-market of software/hardware integrated projects.

For more information, go to the [EPOS Web Site](#).