CPS4EU Pre-Integrated Architectures





Using specific integration for specific application



Innovation brought by CPS4EU: pre-integrated multi-purpose CPS architecture

Industrial integration context abstraction to ease the link between technology providers and use case providers.

Separate common module integration work from final applications and systems engineering.

Top-down and bottom-up approachs: from use cases and industrial needs to new generations of modules, and vice versa

5 Pre-Integrated Architectures in CPS4EU

CPS4EU Connectivity PIARCH



Example: CPS4EU Secure Connectivity PIARCH

From common, reference high-level design patterns and good practices...





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...to a physical instance...



Physical architecture derived from the logical PIARCH

Constrainted technical choices



Tool-assisted integration of the physical architecture

Configurable platform



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CPS4EU Secure Connectivity PIARCH

...thanks to a workflow and set of tools.

Secure Connectivity PIARCH tools:

- modelling tool
 - e.g. Capella
- configuration files generator
- image builder (custom Linux + apps)
 - e.g. Yocto
- hardware emulator (virtual integration)
 - e.g. UniSim VP





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