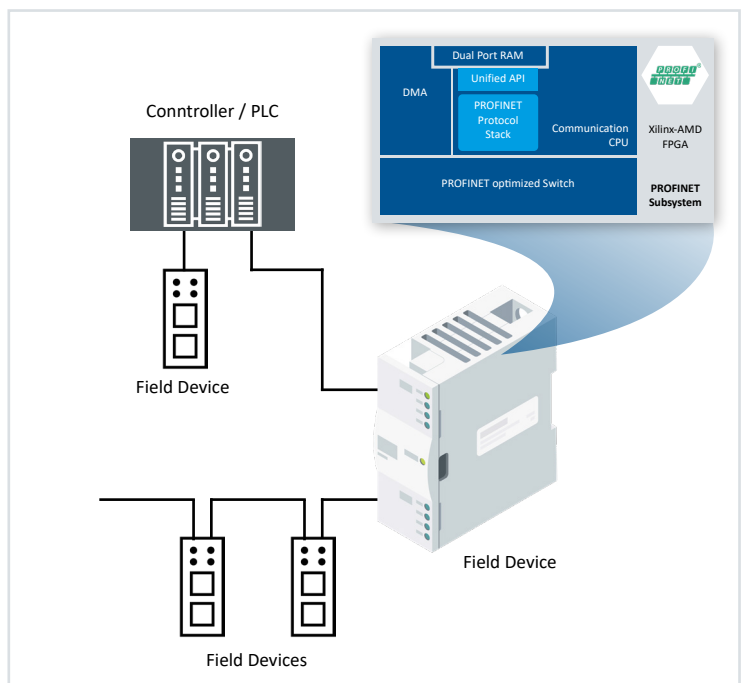
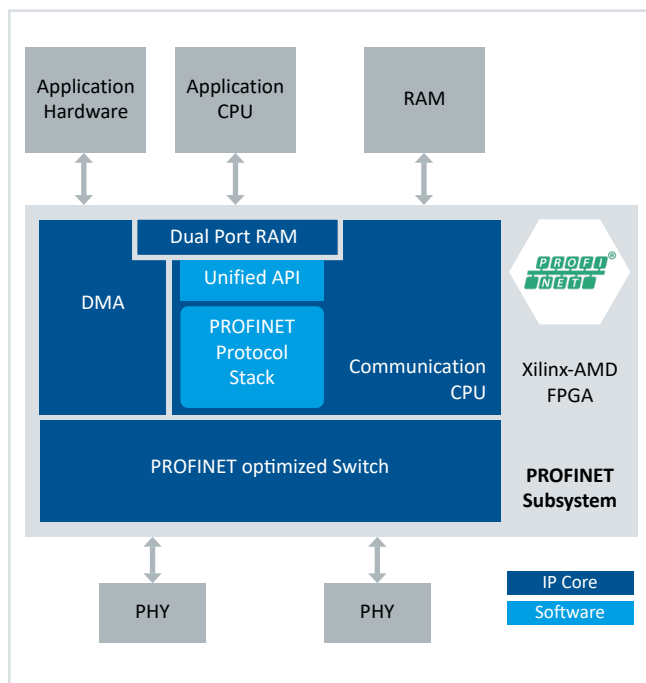


# PROFINET Device Subsystem for Xilinx-AMD FPGA

Switch IP Core and Communication Processor for the Integration of PROFINET on Xilinx-AMD FPGA

- Simplifies PROFINET connectivity for field devices with Xilinx-AMD FPGA
- Optimized switch IP core and pre-installed software handle the entire protocol
- PROFINET and other industrial networks are supported by the same API
- Fast and robust operation by hardware/logic support and redundancy features



## Easy-to-Integrate PROFINET Device Subsystem for FPGAs

- Entire protocol is handled by pre-installed software, no need for any porting
- Example project for fast hands-on experience
- Adaptation to the application requirements by extensive configuration options
- Large choice of supported FPGA families and sizes

## Low Total Cost of Ownership

- No dependency on special ASICs
- Risk-free implementation thanks to Softing's consulting, integration, and pre-certification services
- Re-configuration and extension possible even after production
- Simple addition of further protocols

## Pre-certified to Latest Standards

- Compliant to current PROFINET specifications
- PROFINET Conformance Class B (RT) and Class C (IRT)
- Can act as "black channel" for safety applications
- System and media redundancy supported

## Fast and Robust Operation

- Industrial switch IP core with cut-through forwarding and filtering (firewall)
- Data handling in software or hardware (DMA)
- Device application software is separated from protocol software
- Compliant to PROFINET Netload Class III

# PROFINET Device subsystem for Xilinx-AMD FPGA

## Technical Data

IP Core configuration	<ul style="list-style-type: none"><li>▪ Switch IP core with 2 external ports and 1 internal port</li><li>▪ Communication CPU IP core for processing the PROFINET protocol</li><li>▪ DPRAM interface to application processor (FPGA-internal or external)</li></ul>
Switch clock	125 MHz
Supported FPGA families	Zynq UltraScale+, Zynq-7000, Spartan 7 and other 7 series FPGAs
Functionality	<ul style="list-style-type: none"><li>▪ PROFINET Device according to specification V2.44, Conformance Class B or C</li><li>▪ Media Redundancy Client (MRP or MRPD)</li><li>▪ Support for PROFINET Security Class I</li><li>▪ Support for Fast Startup (FSU)</li><li>▪ Support for System redundancy (S2)</li><li>▪ Communication support for PROFI-safe</li><li>▪ Optional 2<sup>nd</sup> internal switch port for direct connection of the application CPU</li><li>▪ Optional hardware acceleration (DMA)</li></ul>
Cycle time	down to 250 µs
Number of controller connections	up to 4 (for shared device, S2 redundancy and supervisor connection)
Application Programming Interface	Simple Device Application Interface (SDAI)

## Scope of Delivery

IP / Logic	<ul style="list-style-type: none"><li>▪ Complete PROFINET Device subsystem</li><li>▪ Supplementary IP cores</li><li>▪ Sample application FPGA design</li></ul>
Software	<ul style="list-style-type: none"><li>▪ Ready-to-run protocol software (executable) for the PROFINET Device subsystem</li><li>▪ API library for the application processor (including source code)</li><li>▪ Sample application software (including source code)</li></ul>
Documentation	Download: PROFINET subsystem implementation guide and additional information

## Order Numbers

[Please contact us for details](#)

### PROFINET Device Subsystem for Xilinx-AMD FPGA

We are happy to discuss your particular requirements and adequate licensing options with you.

## Additional Products and Services

SIA-YY-012501	Integration workshop for implementing PROFINET device
SIA-YY-012503	Integration support provided by e-mail or phone
<a href="#">Please contact us for details</a>	Integration and pre-certification services

Your local Softing contact:

<https://industrial.softing.com>

optimize!  
**softing**