

PFP-IV

KINTEX ULTRASCALE+ FPGA PCIe PLATFORM



High-speed 25 Gbps | Analog or Digital applications

APPLICATIONS

- RADAR
- Telecom
- Electronic Warfare
- Embedded tool
- Co-processing
- Test bench

BENEFITS

- High-speed communication
- High capacity processing
- SoM : FPGA + Processing capability
- Cost-effective
- PCIe or Stand-alone mode
- VITA 57.4 FMC+ compliance
- Advanced kit (Windows & Linux)

KEY FEATURES

- Kintex UltraScale+ FPGA
- Zynq UltraScale+ MPSoC SoM (option)
- AXI4 interface
- FPGA interfaces :
 - PCIe Gen3 x16
 - FMC+ site
 - x16 HSS up to 28 Gbps with KUP11
 - x20 HSS up to 28 Gbps with KUP15
 - FireFly™ site (x4 HSS up to 28 Gbps)
 - User I/O (x16 low-speed, x7 high-speed, x2 HSS)
- MPSoC SoM interfaces :
 - microSD
 - Ethernet
 - USB3.0
- x2 DDR4 4GB memory banks
- MPSoC SoM boot options :
 - microSD
 - e.MMC
 - QSPI



DEFENCE

INDUSTRY



MPSoC SoM option

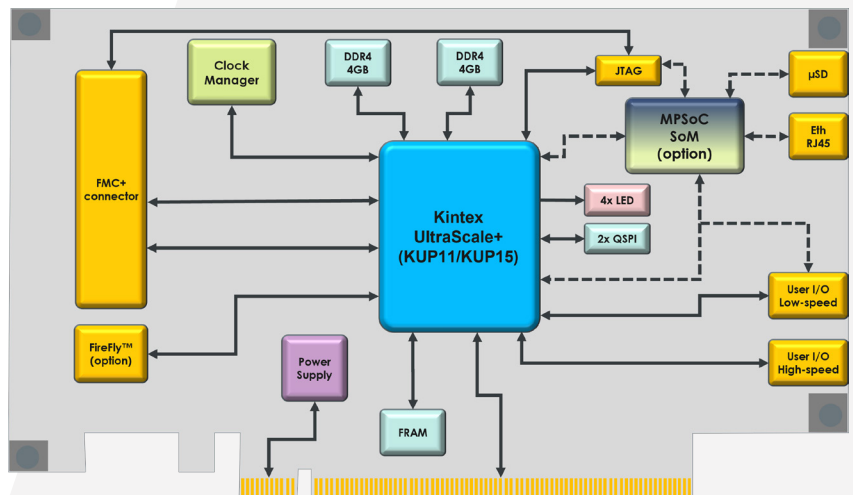
AMD
KINTEX
UltraScale+

The new PFP-IV is a multi-purpose PCIe platform with FMC+ site based on the powerful AMD (Xilinx) Kintex UltraScale+ FPGA. This board is dedicated for **extreme high-speed applications** such as 100 GbEth communications, 4/6 GHz ADC/DAC, ARINC 818, AURORA, JESD, sFPDP, etc.

Kintex UltraScale+ devices provide the best price/performance/watt balance, delivering a cost-effective solution for applications that require high-end capabilities.

PFP-IV are highly versatile thanks to their perfect technology mix: Kintex UltraScale+ FPGA, FMC+ site, DDR4 memories, SoM based on Zynq UltraScale+ MPSoC, management system, 28 Gbps optical links, etc.

The optional System-on-Module (SoM) with Zynq UltraScale+ ZU02CG MPSoC and 4GB DDR4, offers powerful CPU capabilities, allowing offloading of complete application (processing + management).



Information and photos subject to change without notice



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FIRMWARE

- AXI4 interface
- VHDL PCIe Gen3 core
- VHDL DDR4 controller
- VHDL Flash controller
- VHDL system monitor
- VHDL clock monitor

SOFTWARE

- Development kit for Windows & Linux
- Multiboard driver
- BSP SoM
- Reference design
- Support & documentation
- Design examples: C++ API

ENVIRONMENTAL INFORMATION

- Temperature ranges :**
 - Operating : 0°C to 70°C
 - Storage : -55°C to 125°C
- Maximum shock/vibration ranges :**
 - Shock : 10g during 20ms
 - Vibration : 0.03 g2/Hz
- Compliant with ROHS process & REACH process**

PFP-IV BOARDS

TECHWAY provides a full software package (drivers, Board Support Package, firmware development kit) for both Windows and Linux. This package allows an easy hands-one and saves development costs and time.

Fully compliant with common standards (VITA 57.4, PCIe, AXI4, etc.), PFP-IV boards were designed to easily fit into existing system or brand-new architecture. PFP-IV can be integrated in standard PCs environment or in stand-alone mode in your own enclosure.

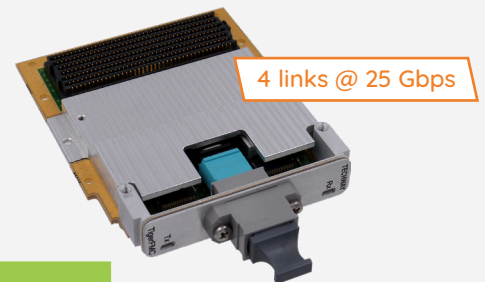
PFP-IV are deployable platforms in use by several OEM with field proven 24/7 operations.

FMC INTERFACES

TECHWAY has 20+ years development experience in Xilinx FPGA PCIe platforms with FMC interfaces. Thanks to our know-how, we offer cost-effective solutions to bring the latest FPGA technologies into industrial applications.

TECHWAY offers VITA 57.4 FMCs based on optical fiber and copper technologies like our TigerFMC.

The PFP-IV is compliant with third-party FMCs on the market. TECHWAY can support its customers in the integration of these FMCs on PFP-IV.



ORDERING INFORMATION

# (P/N)	Reference	Description
PDC005700	PFP-IV_11	PCIe FPGA Platform with KintexUltraScale+ 11 FPGA, PCIe x16 Gen3, FMC+ site (@25Gbps)
PDC005710	PFP-IV_15	PCIe FPGA Platform with KintexUltraScale+ 15 FPGA, PCIe x16 Gen3, FMC+ site (@25Gbps)
CONF005700	PFP-IV_11_Opt	PFP-IV_11 (PDC005700) with optical FireFly™ module 4 links @25G
CONF005701	PFP-IV_11_SoM	PFP-IV_11 (PDC005700) with Zynq UltraScale+ ZU02CG, 4GB DDR4 System-on-Module (SoM)
CONF005702	PFP-IV_11_Opt_SoM	PFP-IV_11 (PDC005700) with Zynq UltraScale+ ZU02CG, 4GB DDR4 System-on-Module and optical FireFly™ module 4 links @25G
CONF005710	PFP-IV_15_Opt	PFP-IV_15 (PDC005710) with optical FireFly™ module 4 links @25G
CONF005711	PFP-IV_15_SoM	PFP-IV_15 (PDC005710) with Zynq UltraScale+ ZU02CG, 4GB DDR4 System-on-Module (SoM)
CONF005712	PFP-IV_15_Opt_SoM	PFP-IV_15 (PDC005710) with Zynq UltraScale+ ZU02CG, 4GB DDR4 System-on-Module and optical FireFly™ module 4 links @25G
<i>Accessories</i>		
ACC00007	PFP_FMC-FAN	Fan kit (FMC slot) for PFP platforms (KX7, KX7+, ZU+, IV)



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