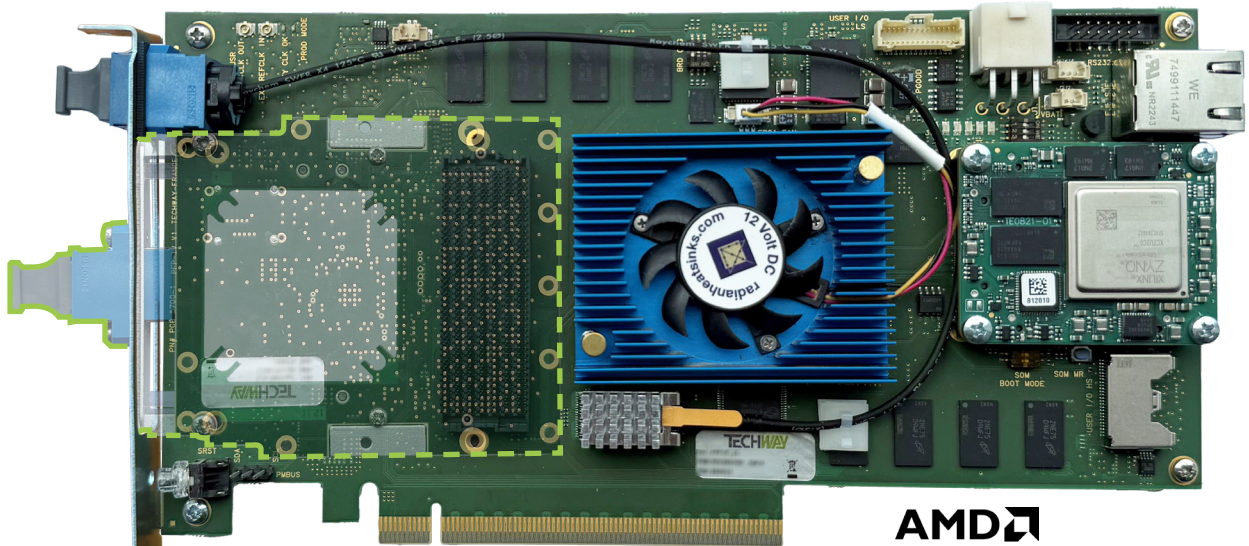


Kintex UltraScale+ FPGA

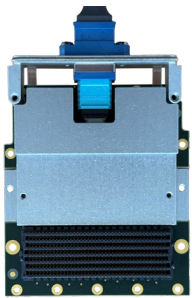
High-speed ⇨ 25 Gbps and beyond

GPU Direct[®]
RDMA

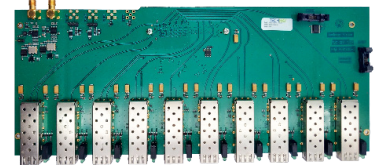
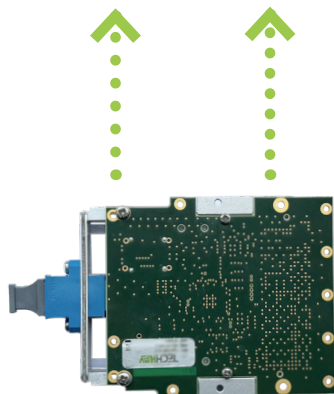
P
F
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V



AMD
KINTEX
UltraScale+



4 optical links
up to 25Gbps



10x SFP/SFP+
Custom design

COTS FMC

IN HOUSE FMC

Development Kit included

Integrate your own application

100% in house design

Windows and Linux drivers

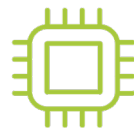


Software



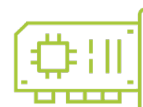
API C++
BSP
Examples
Design

Firmware



Ready-to-use IPs
(PCIe, Memories, System
management)
Examples

Hardware



User manuals
Reliable 24/7
Long-life cycle

AMD
XILINX
Certified Partner



Key advantages

Choose your I/O – Our versatile solutions design to your project, compatible with all I/O thanks to FMC+ site.

Manage your IP and reuse your design – Integrate your own firmware and software into our «open for development» solutions.

Included Development kit – accelerate your design : drivers for Linux and Windows, memory controller, high-end PCIe IP and BSP provided.

Long-time products – Our long-lasting solutions ensure optimized production and lower obsolescence costs throughout the lifecycle.

Open for development

Focus on your application

VIDEO

12G-SDI

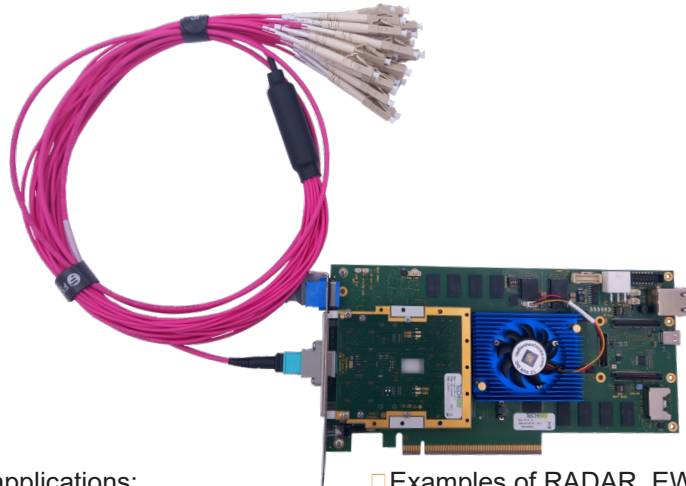
CXP-12 fiber

10GigeVision

CLHS

...

Application examples



SIGNAL

Ethernet

RF on fiber

sFPDP

ODI

...

□ Examples of image processing applications:

- **360° surveillance** – capture and process multiple video protocols and formats, up to 12 cameras, through one board using COTS or in-house FMC+. Thanks to this solution, your application can features any video protocols: 3G-SDI, HDMI CoaX Press, Camera Link, 10Gige and more.
- **GPU Direct® RDMA** – mix high-end FPGA and GPU processing to accelerate video data application and reduce your firmware development.
- **Video filtering** – process video data on the Kintex Ultrascale+ FPGA for high-performance, low-latency computation such as Sobel filter.

□ Examples of RADAR, EW or Ground applications:

- **Electronic Warfare** – acquire and preprocess analog data through ADC/DAC 4/6GHz interface and using a combination of high-end FMC+ card and our PFP-IV, Kintex UltraScale+ FPGA board to have the finest analog processing.
- **Inside PC/Outside PC** – inside PC : to develop high-performance server including the latest CPU, GPU and maximize storage capabilities / Outside PC : to use our platform in a stand-alone mode which allows to separate preprocessing from computer or be closer to the sensors.
- **Multi-protocoles** – capture data via optical link to easy-integrate up to 4 different protocols on one unique platform. The best way to have a compact design for your embedded application.

Optionnal capabilities

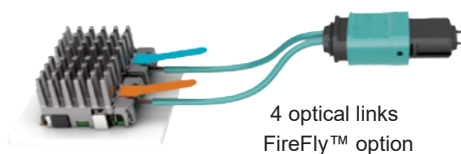
FireFly™ option

High-speed data transmission.

Is PCIe transfer rate sufficient?

The SAMTEC FireFly™ technology allows you to increase your capabilities of optical communication with 4 additionnal links up to 25Gbps = **100Gbps**.

This FireFly™ optical module option allows you to capture or send data through MTP interface without using PCIe and FMC.



SoM option

Use it outside a PC.

How this SoM option can turn the board into a stand-alone module?

The SoM option adds CPU capability with interface like storage, video output, USB and RJ45 interface directly connected to the board.

The SoM option allows you to use FPGA board in standalone mode like in a box or a module.



Zynq™ Ultrascale+™
SoM option

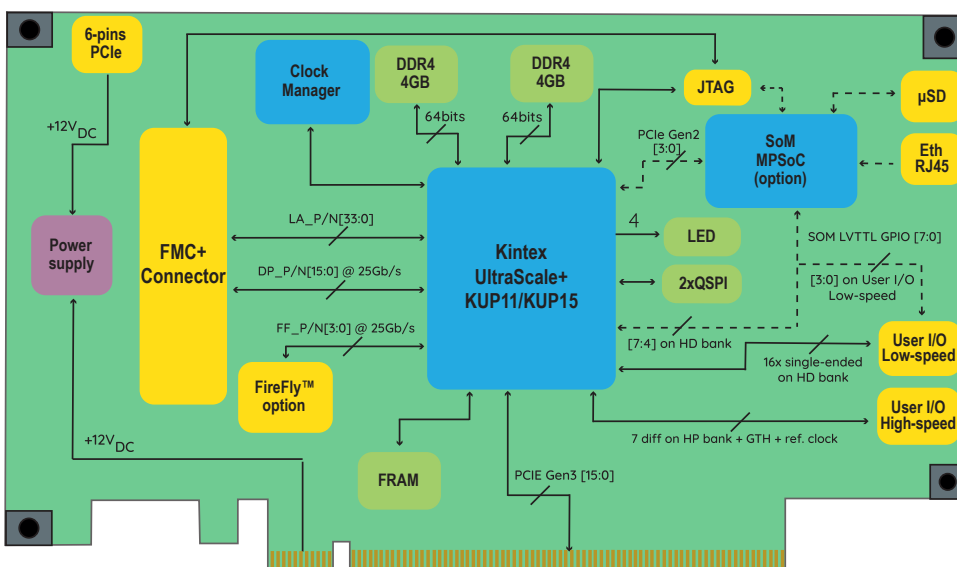
	PFP-IV_11	PFP-IV_15
FPGA	AMD Kintex™ UltraScale+™ KU11P XCKU11P-FFVE1517	AMD Kintex™ UltraScale+™ KU15P XCKU15P-FFVE1517
PCIe	PCIe x16 Gen 3	
PCIe communication	Full duplex : FPGA to CPU and CPU to FPGA DMA	
Form factor	Between half and three-quarter length	
Grade	Commercial	
Programmable Logic (PL) features		
Logic cell (k)	653	1.143
CLB Flip-Flop (K)	597	1.045
Total RAM (Mb)	52,7	80,4
UltraRAM (Mb)	22,5	36
DSP Slices	2,928	1,968
Interfaces		
FMC	1x FMC+ connector (partially VITA 57.4 compliant)	
DP lanes speed	25.78 Gbit/s	
FMC+ DP lanes	16	20
Memory banks	2x DDR4 4GB	
User GPIO connectors	16x low-speed (LVTTTL) 7x high-speed (LVDS) 2x HSS (GTH)	
User LED	4	
Cooling	Active cooling system	
Temperature ranges	<ul style="list-style-type: none"> Operating : 0°C to 70°C Storage : -55°C to 125°C 	
RoHS/REACH	Compliant	
Optional	Optical module (4RX/4TX), @25Gbps Zynq UltraScale+ SoM	

User manuals available on demand

Block diagram

In house design

Optional features



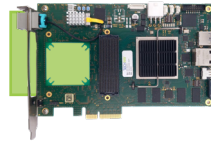
Need customization?
Consult us

Customer satisfaction is our DNA

Long-life cycle product lines



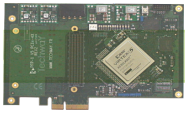
Kintex UltraScale+ FPGA



Zynq UltraScale+ MPSoC



Kintex-7 FPGA



Virtex-5 FPGA

2008 2012 2019 2021 2023 2045 +

Available stock
Fast delivery

Made for
industrialization

Reduce time
to market

Customization
on demand

COTS FMC

Optical FMC

High-speed / high density
up to @25Gbit/s

High-speed / high density
up to @10Gbit/s



Analog FMC

125 MSPS
4x channels



SFP/SPF+

3/4 cages / stackable



Ordering information

For example:

PFP-IV_11_SoM
or
PFP-IV_15_SoM_Opt

PFP-IV_##_XXX
or
PFP-IV_##_XXX_XXX

11 = KU11P
15 = KU15P

XXX
Opt = optical option
SoM = System on Module option

Configuration subject to validation

Contact our expert team

