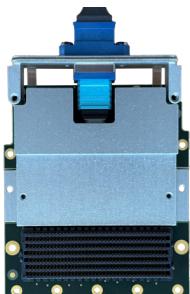
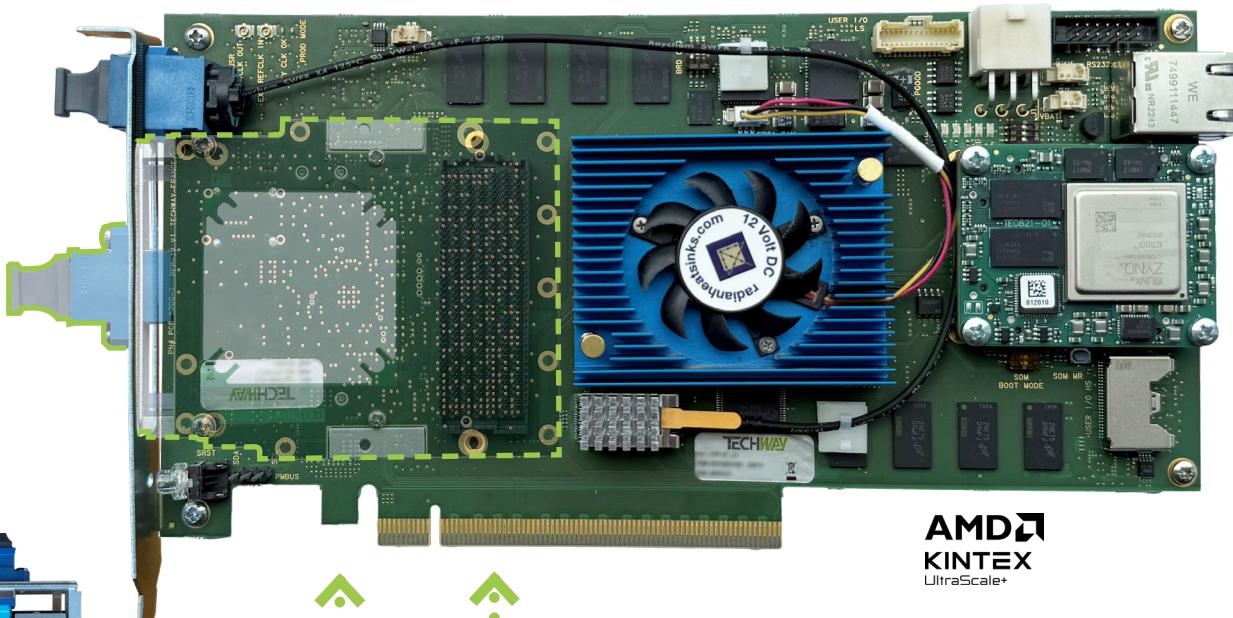
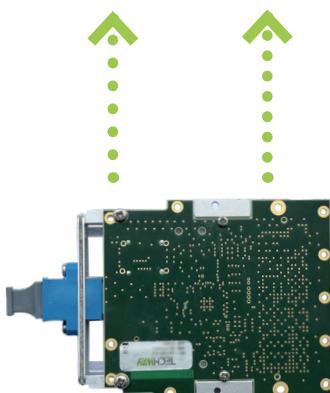
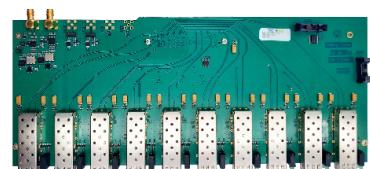


## Kintex UltraScale+ FPGA


  
GPU Direct®  
RDMA

Up to 25 Gbps application

Choose your I/O, reuse your IP

4 optical links  
up to 25GbpsAMD  
KINTEX  
UltraScale+10x SFP/SFP+  
Custom design

COTS FMC

Development Kit included

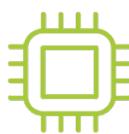
100% in house design



Software

API C++  
Examples  
Design

Firmware

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

Hardware

User manuals  
Reliable 24/7  
Long-life cycle


INTEGRATE YOUR OWN APPLICATION

Windows and Linux drivers

**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 for MPSoc solution 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 of the sensors.
- **Multi-protocoles** – capture data via optical link to easily integrate up to 4 different protocols on one unique platform. The best way to have a compact design for your embedded application.

## Optionnal capabilities

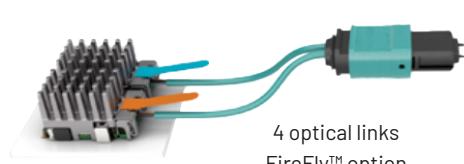
### FireFly™ option

#### High-speed data transmission.

Is PCIe transfer rate sufficient?

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

This FireFly™ option optical module 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.



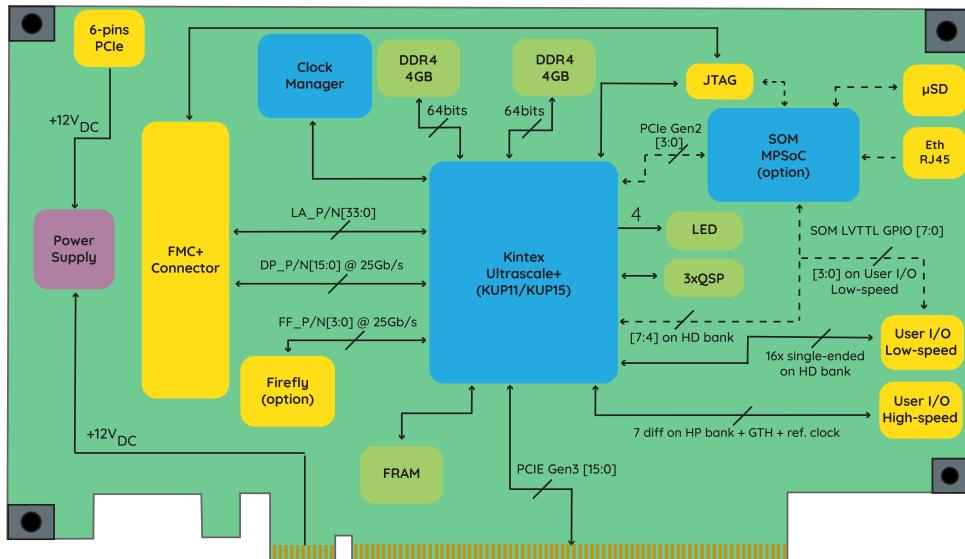
	PFP-IV_11	PFP-IV_15
FPGA	AMD Kintex™ UltraScale+™ KUP11 XCKU11P-FFVE1517	AMD Kintex™ UltraScale+™ KUP15 XCKU15P-FFVE1517
PCIe	PCIe x16 Gen 3	
PCIe communication	Full duplex : FPGA to CPU and CPU to FPGA DMA	
FMC	1x FMC+ slot (VITA 57.4)	
Speed link	25.78 Gbit/s	
FMC+ DP lanes	16	20
Multichannel	Up to 8 DMA channels (in each direction)	
Memory banks	2x DDR4 4GB	
Logic cell (K)	653	1.143
DSP Slice	2.928	1.968
CLB Flip-Flop (K)	597	1.045
Memory ultraRAM (Mbits)	22,5	36
User GPIO connectors	16x low-speed 17x high-speed 2x HSS	
User LED	4	
Cooling	Active cooling system	
Temperature ranges	Operating : 0°C to 70°C Storage : -55°C to 125°C	
RoHS/REACH	Compliant	
Optional	Optical module (4RX/4TX), @25Gbps, Zynq UltraScale+ SoM	

Usermanuals available on demand

## Block diagram

In house design

Optional features



Need customization?  
Consult us

## 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 @25Gbps



### Analog FMC

125 MSPS 4x channels



### SFP/SPF+

3/4 cages / stackable



## ORDERING INFORMATION

PFP-IV\_##\_XXX  
or  
PFP-IV\_##\_XXX\_XXX

**For example :**  
PFP-IV\_11\_SoM  
PFP-IV\_15\_SoM\_Opt

**##**  
11 = KUP 11  
15 = KUP 15

**XXX**  
Opt = optical option  
SoM = System on Module option

Contact our expert team

Configuration subject to validation

