

## Bundles

AMD Kintex UltraScale+™ FPGA  
with TigerFMC-4\_2 - [view our demo](#)



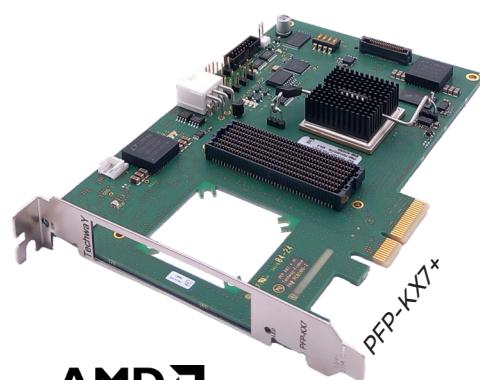
AMD Zynq™ UltraScale+™ FPGA  
with TigerFMC-12\_1



## COTS FPGA Platforms

### Kintex-7 FPGA

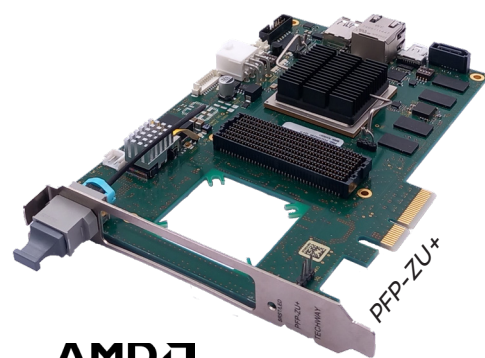
Best performance-price ratio



**AMD**  
**KINTEX** 7

### Zynq UltraScale+ MPSoC

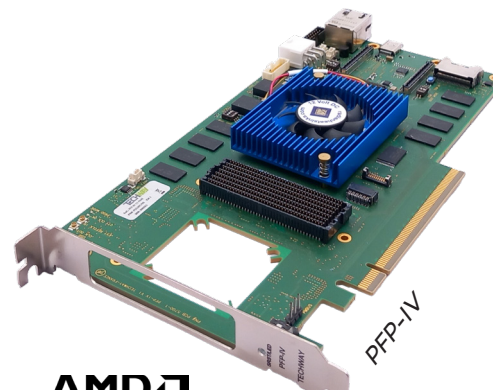
All-in-one CPU + FPGA



**AMD**  
**ZYNQ**  
UltraScale+

### Kintex UltraScale+ FPGA

High-speed ⇨ 25Gbit/s and more



**AMD**  
**KINTEX**  
UltraScale+

## Ordering information

TigerFMC-#\_#  
or  
TigerFMC-#\_#\_X

#\_#  
12\_1 = 12 full duplex @14Gbps  
12\_2 = 12 full duplex @25Gbps  
4\_2 = 4 full duplex

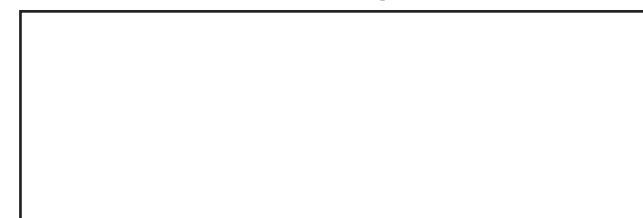
Configuration subject to validation

For example:

TigerFMC-12\_1  
or  
TigerFMC-4\_2\_I

X  
I = Extended temperature  
STD = only for 12\_1

Contact our expert team

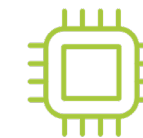


Development Kit included

100% in house design

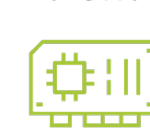


Firmware



Ready-to-use IPs  
Examples

Hardware



User manuals  
Reliable 24/7  
Long-life cycle

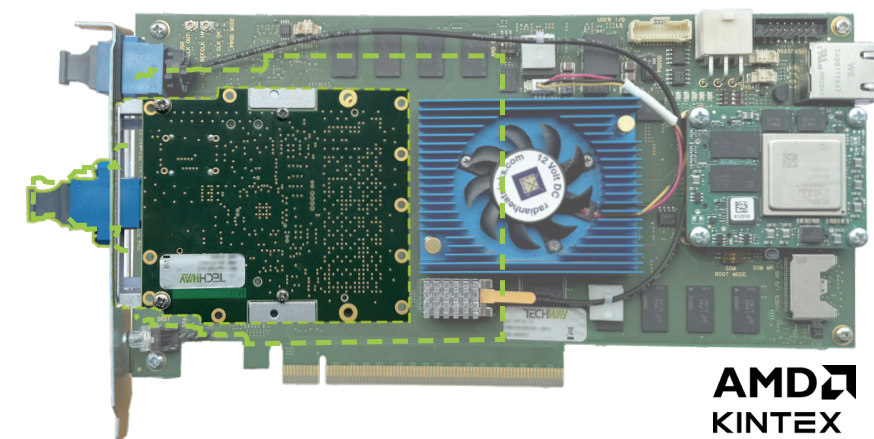
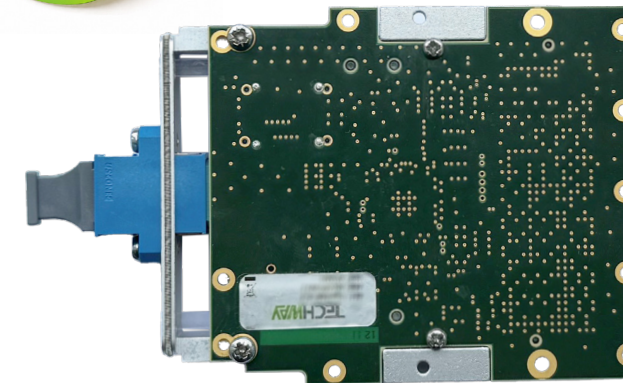


## High-speed FPGA Mezzanine Card

I/O Optical communication

12 lanes  
25 Gbps

TigerFMC



**AMD**  
**KINTEX**  
UltraScale+

**Plug into your existing system** - no redesign needed  
Compatible with all FMC+ carrier boards and VPX architectures. VITA 57.4 compliant. You integrate, you run.  
**Choose your protocol** - Aurora, Ethernet, InfiniBand, ARINC818, sFPDP... TigerFMC is fully protocol-agnostic.

**Optical Data Interconnect friendly** - TigerFMC meets ODI requirements for 5G and mil/aero systems and pairs natively with TECHWAY's PFP-IV FPGA carrier board for a complete ODI platform.

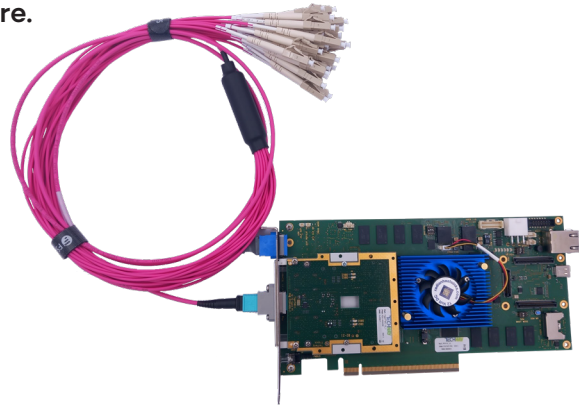
**From lab bench to airborne platform** - Available in 4 lanes up to 25 Gbps or 12 lanes at 10, 14 or 25 Gbps — front or rear connection. Commercial and industrial grade, air or conduction cooled, with rugged FireFly™ modules for flyable applications.

VIDEO

Application examples

SIGNAL

- Embedded image processing**  
Capture multiple video stream from various cameras, thanks to the 4 or 12 lanes of TigerFMC. Implement your video protocol since the TigerFMC is agnostic protocol.
- 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: 3SG-SDI, HDMI CoaXPress, Camera Link, 10Gige and more.

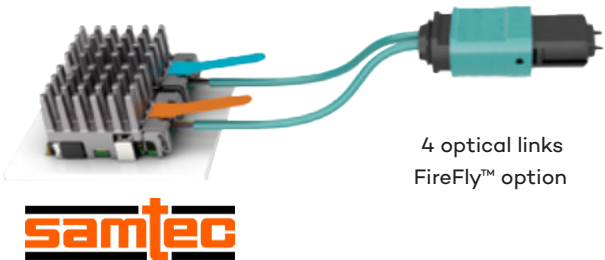


FireFly™ technology

The SAMTEC's FireFly™ Micro Flyover System™ is the first interconnect system that gives a designer the flexibility of using micro footprint optical and copper interconnects interchangeably with the same connector system.  
The FireFly™ system enables chip-to-chip, board-to-board, on-board and system-to-system connectivity at data rates up to 25 Gbps. FireFly™ is based on a high-performance interconnect system which allows the use of low-cost copper cables or high-performance active optical engines. SAMTEC copper, equalized copper, and optical cable systems provide the flexibility to achieve higher data rates and/or greater distance needs while simplifying board design and enhancing performance.

- Data transfer**  
Transfer data to other system after processing on FPGA when PCIe bandwidth is not enough. You increase your processing capabilities.
- Long distance communication**  
Connect your system over a long distance via optical fibre to the processing system thanks to the optical FireFly™ module. In addition optical link are less sensitive to radiation.
- ODI application**  
Thanks to its features: 12-channel multimode, 14.1Gbps data rates, Interlaken protocol. TigerFMC allows high-speed, high data over longer distances and use challenging application like in 5G communications, mil/aero systems.  
More information on ODI.

The FireFly™ Micro Flyover System™ is the first inside-the-box interconnect system that gives designers the choice of using either micro footprint highperformance active optical engines or low-cost copper interconnects. This allows the designer to upgrade from electrical to optical FireFly™ using the same connector system.



Compact, rugged

High-speed communication

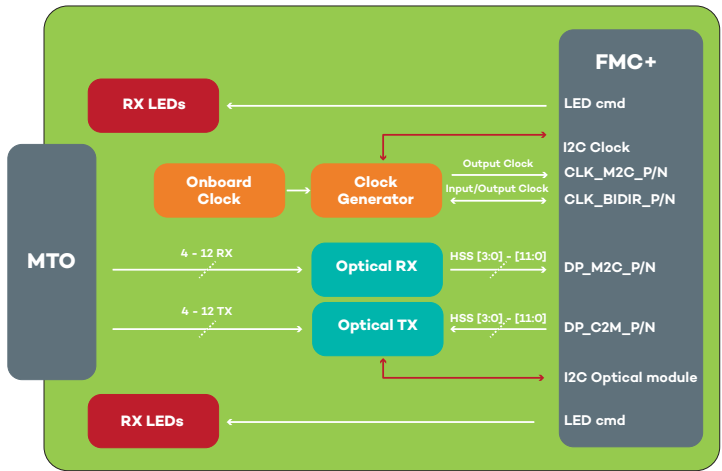
|                   | TigerFMC-12_1_I        | TigerFMC-12_2_STD            | TigerFMC-12_2          | TigerFMC-4_2          | TigerFMC-4_2_I         |
|-------------------|------------------------|------------------------------|------------------------|-----------------------|------------------------|
|                   |                        |                              | NEW                    |                       | NEW                    |
| Number of links   | 12 full duplex links   |                              |                        | 4 full duplex links   |                        |
| Speed             | 10 Gbit/s per link     | 14 Gbit/s per link           | 25 Gbit/s per link     | 25 Gbit/s per link    | 25 Gbit/s per link     |
| Interfaces        | FMC+ compliant         |                              |                        |                       |                        |
| Front connection  | MTP24-M connector      | MTP24-M connector (inverted) | MTP24-M connector      | MTP12-M connector     |                        |
| Rear connection   | MT ferules             |                              |                        |                       |                        |
| Standard          | VITA 57.4 compliant    |                              |                        |                       |                        |
| Temperature range | Extended: -40° to 85°C | Operating: 0° to 70°C        | Operating: 20° to 70°C | Operating: 0° to 70°C | Extended: -40° to 85°C |
| Grade             | Industrial             | Commercial                   | Commercial             | Commercial            | Industrial             |

Block diagram & IP

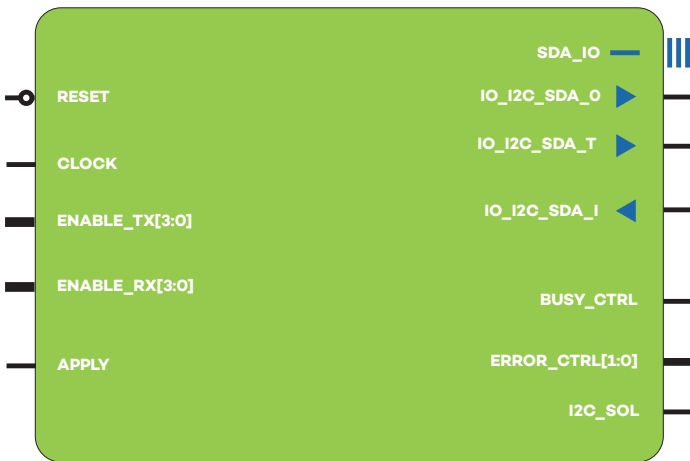
In house design

TECHWAY provides a FDK allowing developers to use quickly the TigerFMC. IP blocks and netlist are available in the FDK.

Block diagram



IP block for FireFly™ management



User manuals available on demand

Accessories

| #P/N     | Reference                                                   | Description                                                    |
|----------|-------------------------------------------------------------|----------------------------------------------------------------|
| ACC00004 | Optical Breakout Cable for TigerFMC-12_X_X                  | MTP24-F to 24xLC simplex harness, length 2m                    |
| ACC00048 | Optical Trunk Cable for TigerFMC-12_X_X                     | MTP/MPO Trunk MTP24-F to MTP24-F, Polarity Type A, length 1    |
| ACC00009 | Optical Breakout Cable for TigerFMC-4_X_X + FireFly™ option | MTP12-F to 8xLC simplex harness, length 1m                     |
| ACC00067 | Optical Trunk for TigerFMC-4_X_X & PFP + FireFly™ option    | Optical Trunk MTP12F to MP12F, Polarity Type B, length 1 meter |
| ACC00073 | Optical Loopback Cable for TigerFMC-12_X_X                  | MTP24F Optical Loopback Module, 24 CH, 850nm                   |

