PFP-KX7+

VERSATILE FPGA PLATFORM

TECHWAY
SIGNAL VISION SYSTEM

Easy-access to FPGA technology

APPLICATIONS
- RADAR
- Co-processing
- Prototyping
- Medical imaging
- Data-recording
- High-speed data-switching

BENEFITS
- PCIe Gen2 compliant
- Based on AXI4 interface
- Stand-alone use
- Cost-effective
- Modularity : FMC+ site, User I/Os
- High-speed protocol capable :
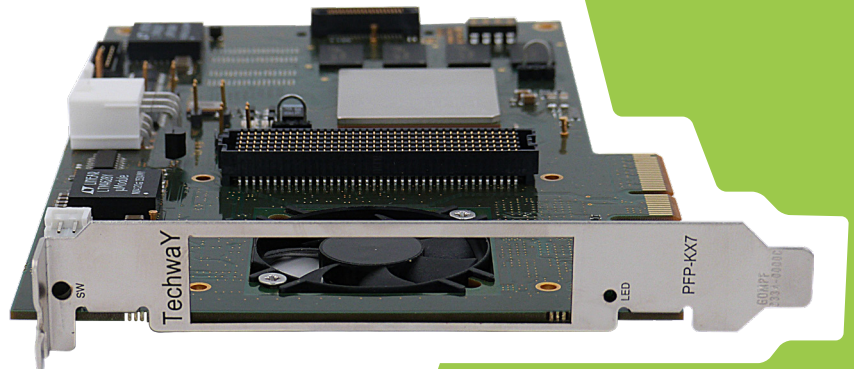 Up to 12 HSS @ 10 Gb/s

KEY FEATURES
- PCIe x4 Gen2 (16 Gb/s)
- HPC FMC or HSPC FMC+ connector
- User I/Os connector
- FPGA Kintex-7 (KX 325 or KX 410)
- Two 512MB DDR3 memory banks
- 1600 Mb/s rate for DDR3
- Up to 10 Gb/s rate per HSS link
- Low power (<15W without FMC board)
- Programmable oscillators or clock generator
- Power supply, temperature, fan monitoring

DEFENCE

INDUSTRY

::FMC+™

Since 15+ years, TECHWAY offers cost-effective solutions to simplify FPGA technology integration onto the Industrial market.

In 2012, TECHWAY pioneered the PFP-KX7 boards: Xilinx Kintex-7 FPGA platforms including FMC site for modularity. Five years later, PFP-KX7 series are widely adopted by Industry key players.

Capitalizing on this success, TECHWAY goes beyond the state-of-the-art FMC+ technology with the new PFP-KX7+ series.

PFP-KX7+ are highly-versatile thanks to their perfect technology mix: Kintex-7 FPGA, FMC+ site, DDR3 memories, management system, 12 HSS on FMC+, programmable clock generator, etc.

Fully compliant with VITA 57.4 standard, PFP-KX7+ boards were designed to easily fit into existing system or brand-new architecture.

Not only development boards, the PFPs are deployable platforms in use by several OEM with field proven 24/7 operations.

The PFP boards can be integrated in standard PCs environment (drivers available for both Windows and Linux) or in stand-alone mode in your own enclosure.

Information and photos subject to change without notice

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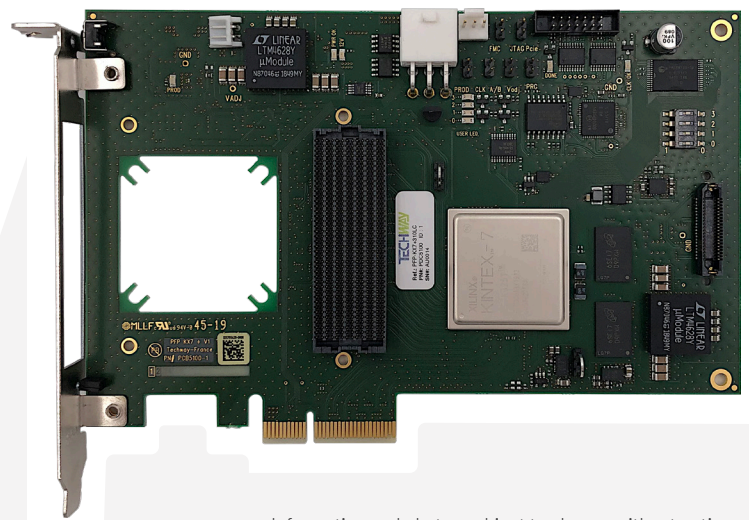
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SOFTWARE

- Linux supported (up to 4.19.1)
- Windows supported (7 & 10)
- Simplified & Open API
- Multi-board management
- Concurrent access supported
- Design examples
- Binary download manager :
  - Download to Flash
  - Download directly to FPGA

FIRMWARE

- VHDL PCIe core (x4 Gen2)
- AXI4 Lite and AXI4 full interfaces both supported
- Continuous DMA
- Legacy or MSI interrupt supported
- VHDL DDR3 memory controller
- VHDL Flash controller
- VHDL System monitoring
- VHDL Clock programmer or generator

ENVIRONMENTAL INFORMATION

- Operating temperature range : 0°C to 50°C
- Storage temperature range : -55°C to 125°C
- Maximum shock range : 10g during 20ms
- Maximum vibration range : 0.03 g2/Hz
- Compliant with ROHS process

ADD-ON PRODUCTS

- PFP_FPGA_Active_Heatsink
  - Active heatsink (fan) for FPGA
- PFP_Passive_Heatsink_10
  - Passive heatsink for FPGA (10mm)
- PFP_Passive_Heatsink_25
  - Passive heatsink for FPGA (25mm)
- PFP_FMC-FAN
  - Fan kit for FMC slot
- DK_PFP-KX7
  - Development Kit for PFP-KX7 series

APPLICATION DESIGN ARCHITECTURE
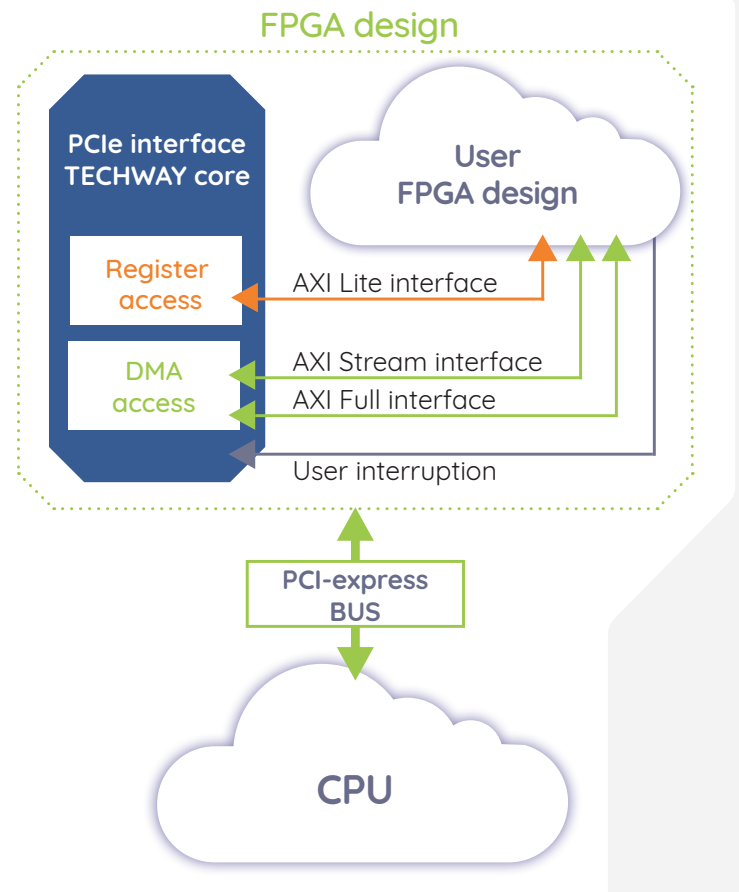
ORDERING INFORMATION

Reference	FPGA	FMC / FMC+	Clock generator
PFP-KX7-310LC*	Kintex-7 325T-2	FMC slot	
PFP-KX7-410LC*	Kintex-7 410T-2	FMC slot	
PFP-KX7_Plus-310LC	Kintex-7 325T-2	FMC+ slot	✓
PFP-KX7_Plus-410LC	Kintex-7 410T-2	FMC+ slot	✓

*Not recommended for new designs

XILINX
Certified Partner

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