

VITA 57

COST-EFFECTIVE TECHNOLOGIES TO
BROADEN THE FPGA USE

EMBEDDED TECH. TRENDS 2024



VITA 57 ON PCIe – FRONT DOOR TO INDUSTRIAL APPS

VITA 57

- Increasing # of I/O
- High-speed I/O interface
- Flexible

PCIe

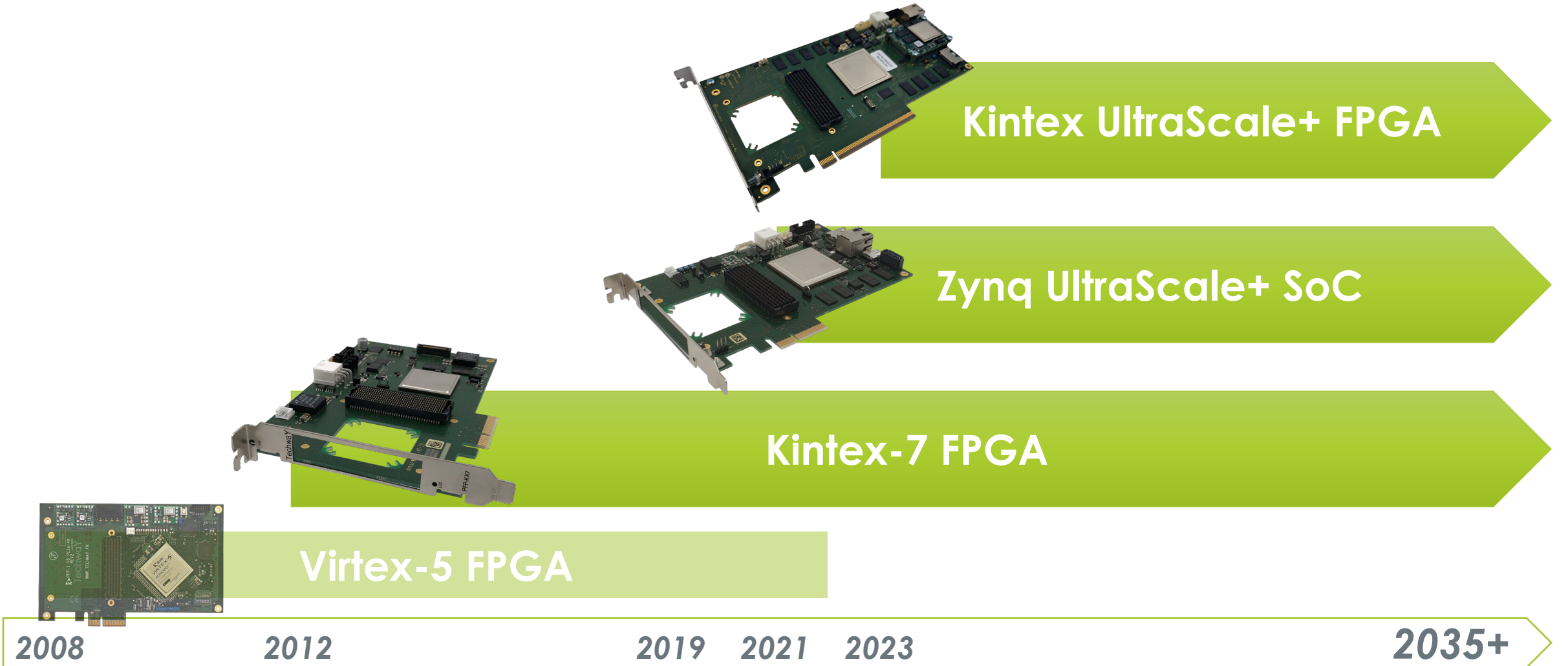
- Widely-deployed
- Performing

VITA 57 on PCIe

- Open FPGA technology to Industry
- Cost-effective for Ground apps
- High-performance system
 - Massive CPU, GPU
 - Massive storage
 - Unlimited networking capabilities

Example
VME legacy

LONG-LIFE CYCLE THANKS TO VITA 57



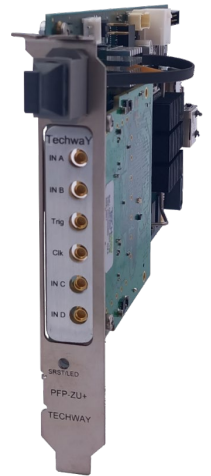
VITA 57 FOR VERSATILITY

Wide range of applications

- sFPDP VITA 17 platform
 - 1 to 4 links
 - Up to 10 Gbps
 - Recorder



- ADC/DAC
 - Board
 - Stand-alone box



- Optical Data Interface platform
 - 12 Optical links
 - 14 Gbps



SPACE – SATELLITE TEST BENCHES

■ Application needs we solved

- Real-time and determinism → Satellite comm. cycles
- Longevity → 20+ years
- Robustness → 24/7 use, 1 test bench for each new satellite
- Reuse of development → Support & Portability
- Cost-effective → Ground application



**6 AIRBUS D&S projects
using our VITA 57 solutions**

SPACE – SATELLITE TEST BENCHES

■ TECHWAY (TW) COTS

- FMC & PCIe board

■ In-house FMC + TW COTS

- Manage number of I/O
- Electrical safety for satellite connection

■ TW M-COTS

- Stand-alone
- LVDS to Eth.
- F/W on-spec.



Optical comm. for storage

SpaceWire

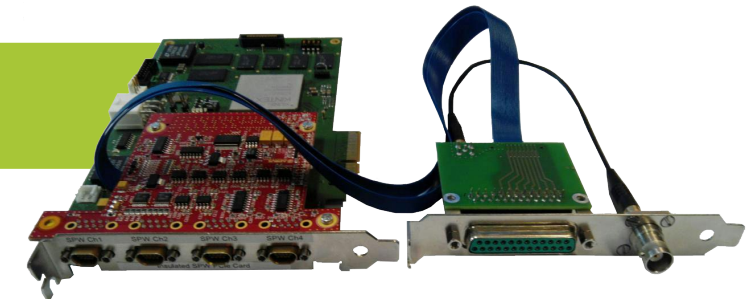
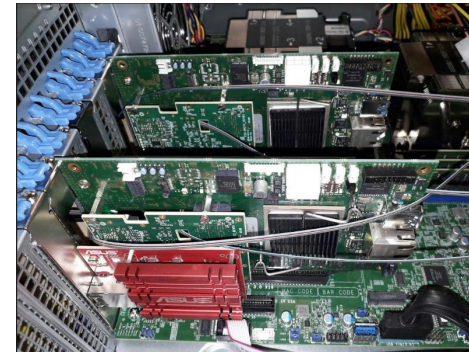


Image acquisition, processing, re-ordering, storage

Telemetry / Telecommand

CAN for Space

■ One-stop solutions for SiPM

Silicon PhotoMultiplier

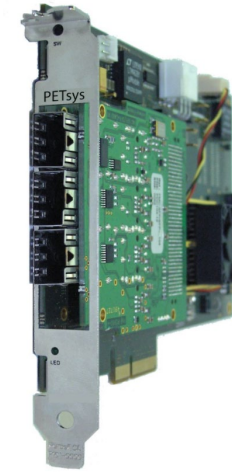
- Kintex-7 / Kintex Ultrascale+ boards
- VITA 57 FMC SFP/SFP+

■ Medical

- Positron Emission Tomography (PET)
 - Medical imaging technique → cancer detection
- Fully-integrated solutions for OEM

■ Particle accelerator

- Research Institutions & Universities worldwide
- Harvard, NASA, CERN, and more



→ FPGA PCIe boards with VITA 57
→ Perfect match for Ground apps

MIL-AERO
Industry



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