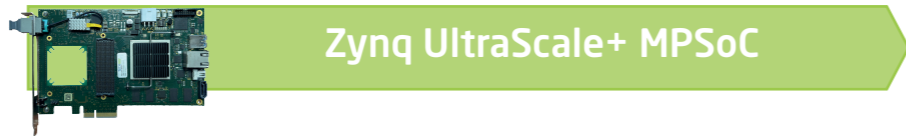


Long-life cycle product lines

Our RAVEN range are based on AMD FPGA module. The long-life cycle for Kintex UltraScale+ and Zynq UltraScale+ is until 2045. Our obsolescence management process allows to anticipate EOL and support you.



Kintex UltraScale+ FPGA



Zynq UltraScale+ MPSoC



Available stock
Fast delivery

Made for
industrialization

Reduce time
to market

Customization
on demand

Integrate solutions

Recorder



Integrated recording solution from 1 to 8 channels VITA 17.1 or VITA 17.3 and storage up to 240 TB.

Playback System



Receive or transmit solution customized following your needs. Form factor 1U to 4U with integrated other third party board like GPU.

Ordering information

Board:

RAVEN_I
or
RAVEN_II

Configuration subject to validation

SFP Pack:

RAVEN_850_SFP_Pack
or
RAVEN_1310_SFP_Pack

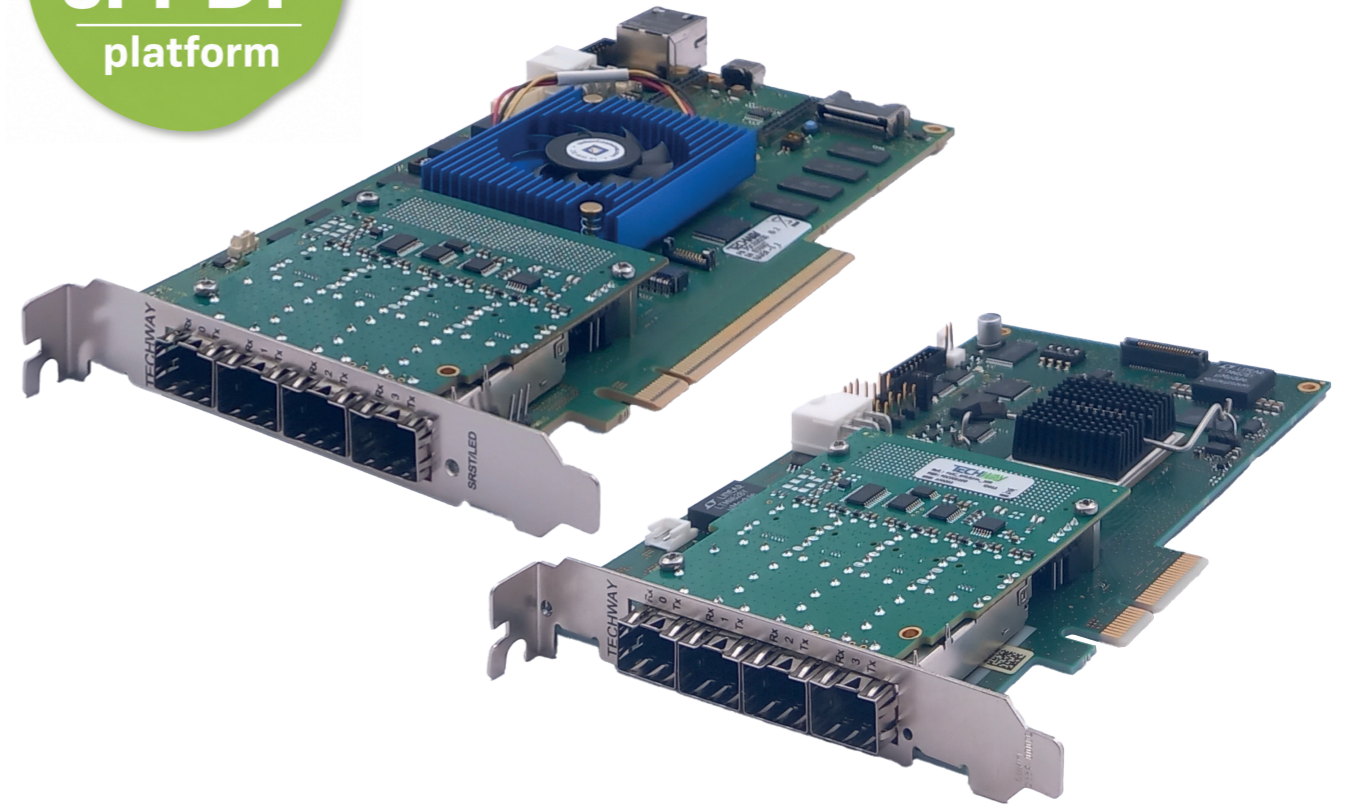
Contact our expert team



sFPDP PCIe board

High-speed & Flexible ⇨ up to 10Gbps

COTS
sFPDP
platform



RAVEN

VITA 17.1

Legacy flexible | Switchable

- Mixed VITA 17.1 & 17.3 deployments
- Without requiring system redesign
- Legacy radar and telemetry systems
- Lab integration & system validation
- Incremental modernization programs
- Controlled-throughput applications
- Low power
- Multi-board application support

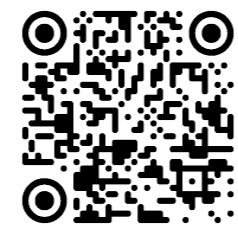
VITA 17.3

High-speed | High-density

- VITA 17.3 deployment
- Wideband radar capture
- Electronic warfare (EW)
- High-rate telemetry aggregation
- Next-generation sensor systems
- SIGINT platforms
- Low power
- Multi-board application support



RAVEN board can be operate as a **sFPDP transmitter** or a **sFPDP receiver** multichannel. RAVEN have full duplex links. All the features assure you sFPDP to be a realtime systems without lost of data. RAVEN PCIe board are capture and playback solutions for sFPDP applications like RADAR, Imaging, Electronic Warfare (EW), Medical, Digital Signal Processing and avionics. RAVEN are ready to use solutions thanks to its software development kit. The SDK allows user to manage Flow control, Copy mode, frame type (Data, Sync, Data + Sync), configure the link speed rate and loopback capabilities.



Click on the QR code to access RAVEN

VIDEO Application examples **SIGNAL**

Use camera with sFPDP protocol instead of Ethernet for less consumption and more realtime. RAVEN capture up to 4 video stream per board based on sFPDP protocol.

Update your legacy radar with RAVEN-I VITA 17.1 PCIe solution. TECHWAY provides integrated capture and playback PC solution for lab or rugged environment.

You develop a new radar? Use RAVEN-II PCIe card for high speed, high bandwidth up to 10Gbps. RAVEN-II support VITA 17.3.

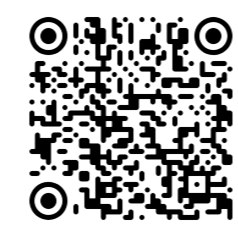
sFPDP protocol

Originally defined by the VITA 17 standard, the Front Panel Data Port (FPDP) was designed for high-speed, low-latency data transfer between VMEbus boards (up to 160 MB/s) over short distances via an 80-conductor ribbon cable. Its lightweight protocol prioritized efficiency over functionality. In the early 2000s, the shift from parallel to serial communication led to the VITA 17.1 serial FPDP (sFPDP) standard, released in 2015 and supporting data rates up to 10 Gbaud. Like its predecessor, sFPDP is straightforward to implement within an FPGA or ASIC. sFPDP is a well-established protocol across defense, research, and medical markets, with major players offering ready-to-use solutions through rugged XMC modules and lab equipment requiring no additional FPGA development. This widespread adoption has made sFPDP a standard for real-time sensor/computer links, particularly in demanding applications such as RADAR, SONAR, and ERM.

sFPDP vs 10Gb Ethernet

Ethernet is omnipresent, so hardware choices are limitless. An attractive advantage of Ethernet is the abundance of low-cost, high performance equipment driven by the IT industry. Ethernet has key advantages for embedded applications and real-time. One more thing, Ethernet and its IP, TCP or UDP protocols do not required special hardware or firmware design skills or specific hardware. At first glance, sFPDP and Ethernet appear to be remarkably similar. Yet, if we look deeper, we will see differences in their concepts. These differences will impact the system performance of your project.

- Topology
- Data Rate
- Determinism
- Offload
- Latency



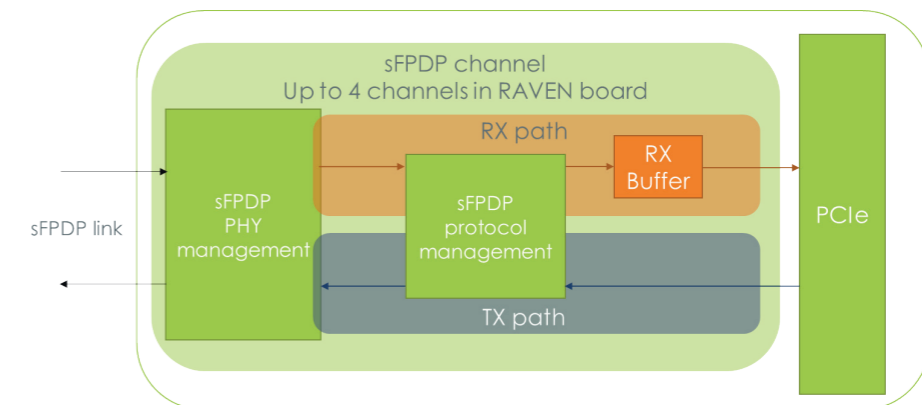
Click on the QR code to read the article

	RAVEN-I	RAVEN-II
FPGA	AMD Kintex-7	AMD Kintex™ UltraScale+™ KU11P
Standard	VITA 17.1 or 17.3	VITA 17.1 (soon) or 17.3
PCIe	PCIe x4 Gen 2	PCIe x16 Gen 3
Form factor	Half length	Between half and three-quarter length
Grade	Commercial	
Interfaces		
sFPDP lanes speed	4 independant channels @ 6 Gbps	4 independant channels @ 10 Gbps
Memory banks	2x DDR3 512MB	2x DDR4 4GB
User GPIO connectors	8x I/O LVDS (1xclock-capable) or 18 single-ended	16x low-speed 17x high-speed 2x HSS
Cooling	Passive cooling system	Active cooling system
Temperature ranges	<ul style="list-style-type: none"> ■ Operating : 0°C to 50°C ■ Storage : -55°C to 125°C 	
RoHS/REACH	Compliant	
Optional	Copper or fiber transceivers	
Software		
Development Kit (DK)	Same API	

User manuals available on demand

Block diagram

100% in house design



Development Kit



Full Development Kit

Software

API C++
BSP
Examples Design

Hardware

User manuals
Reliable 24/7
Long-life cycle

