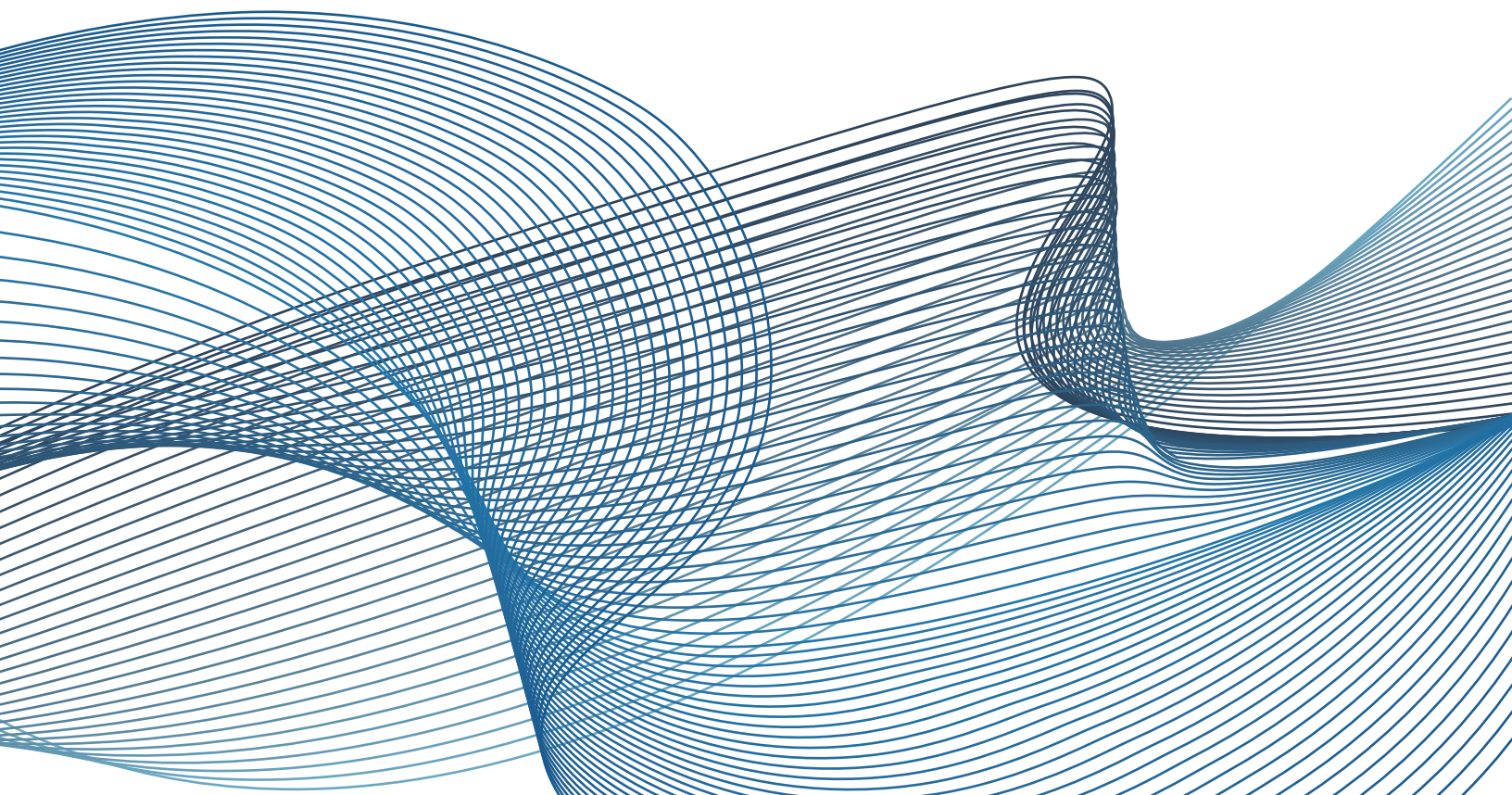


2016

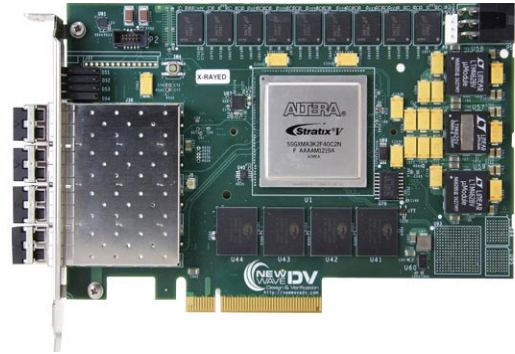
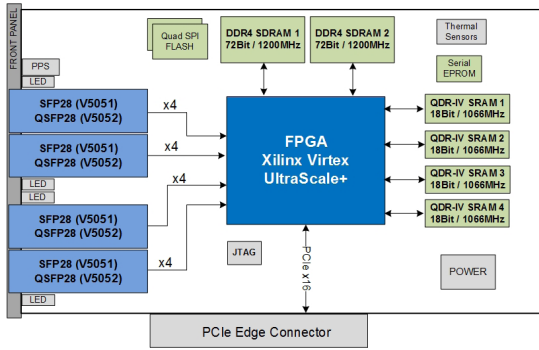


# Product Overview

- Programmable Network Cards
- Network Appliances
- FPGA IP Cores



# PCI Express Cards

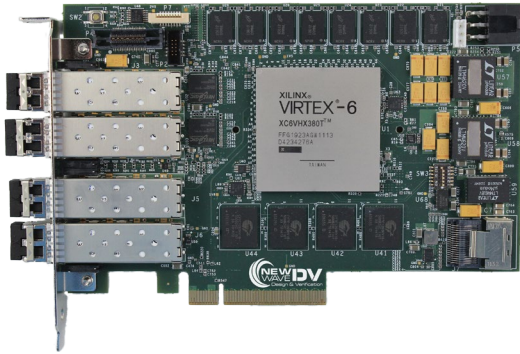


## V5051/V5052 (Coming Soon)

Four QSFP28 or Four SFP28 ports for 10/25/40/100G Ethernet  
 Xilinx UltraScale+ FPGA (scalable from VU5p to VU11P)  
 Two Independent banks of up to 16GB DDR4 SDRAM each  
 Two banks of up to 144Mb QDR-IV SRAM each  
 16-lane PCI Express Gen 3 host interface  
 On-board FLASH for dual boot support

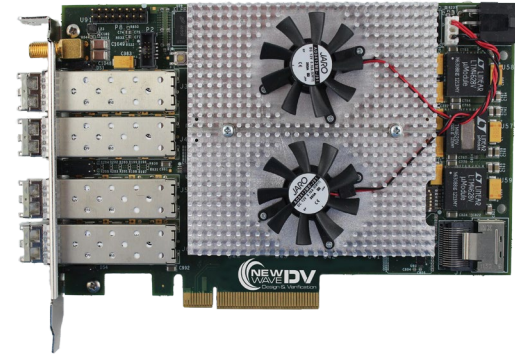
## V5031

Quad 10 Gigabit Ethernet SFP/SFP+ ports  
 Altera Stratix V FPGA (scalable from A3 to AB)  
 Two independent banks of up to 8GB DDR3 SDRAM each  
 Four independent banks of up to 144Mbit QDRII+ SRAM each  
 8-lane PCI Express Gen 3 host interface  
 On-board FLASH for dual boot support



## V5022

Quad 10 Gigabit Ethernet SFP+ ports  
 Xilinx Virtex-6 XC6VHX380T or XC6VHX565T FPGA  
 Two independent banks of up to 4GB DDR3 SDRAM  
 Four independent banks of up to 144Mbit QDRII+ SRAM  
 PCI Express x8 host interface (Gen 1 and Gen 2)



## CaptureXG™ 1000

Quad 10 Gigabit Ethernet SFP+ ports  
 IRIG-A, B and C time synchronization  
 PCAP Next Generation file format  
 Programmable 5-tuple filters  
 Low latency, multi-threaded DMA host interface  
 8-lane PCI Express Gen 3

# Appliances



## RapXG™

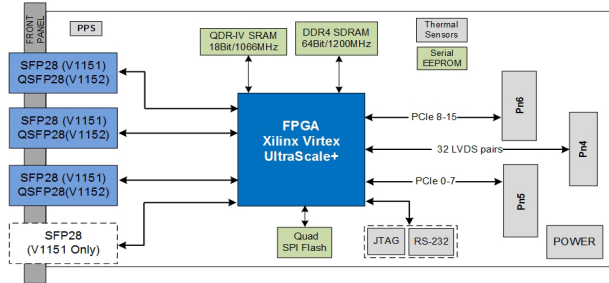
Quad SFP+ ports supporting optical and copper connectors  
 IRIG-A, B, and C time synchronization  
 PCAP Next Generation file format  
 Programmable capture size and hardware filters  
 Low latency, multi-threaded DMA host interface



## CaptureEPON

Packet Capture & Recorder System  
 Unique Upstream & Downstream Traffic Capture  
 PCAP File Format with Wireshark Integration  
 Accurate, Efficient, Programmable, Feature-rich API, and User-friendly GUI

# PMC/XMC Cards

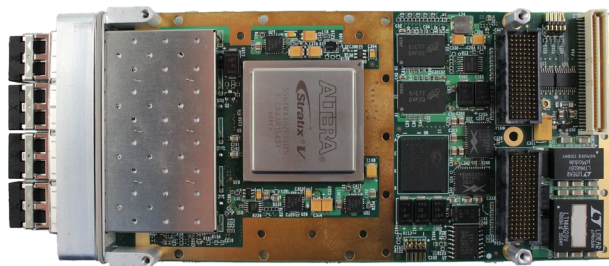


## V1151/V1152 (Coming Soon)

Three QSFP28 or Four SFP28 ports for 10/25/40/10G Ethernet  
 Xilinx UltraScale+ FPGA (scalable from VU5p to VU11P)  
 One bank of up to 16GB DDR4 SDRAM  
 One bank of up to 144Mb QDR-IV SRAM each  
 8-lane PCI Express Gen 3 host interface  
 Available with a suite of networking IP

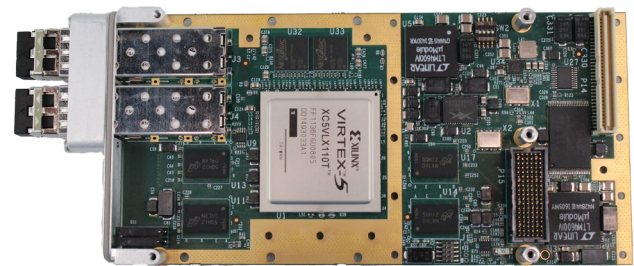
## V1141

Four SFP+ ports capable of Ethernet or Fibre Channel up to 5 Gb/s  
 Microsemi SmartFusion®2 M2S150 FPGA  
 Built-in UDP offload engine for real-time communication  
 Supports PCI Express, PCI, and XAUI host interfaces  
 Streaming front-end FPGA core for quick sensor integration



## V1131

Four 10 Gigabit Ethernet SFP+ ports  
 Altera Stratix V FPGA (scalable from A3 to A7)  
 Built-in UDP offload engine for real-time communication  
 Supports PCI Express and XAUI host interfaces  
 Streaming front-end FPGA core for quick sensor integration



## V1121

Two 10 Gigabit Ethernet SFP+ ports  
 Xilinx Virtex-5 LX110T or LX155T  
 Built-in UDP offload engine for real-time communication  
 Supports PCI Express and XAUI host interfaces  
 Streaming front-end FPGA core for quick sensor integration

# IP Cores

New Wave's FPGA cores can be provided pre-loaded on New Wave's boards to provide a turn-key solution. They are also available stand-alone for your custom hardware needs.

**ExpressXG** - Complete FPGA design providing network interface IP, external memory interfaces, DMA controllers, PCIe interface, and software drivers. This IP provides out-of-the-box operation of an FPGA based network interface. Easy to add custom features for specific applications.

**TCP/UDP Offload Engine** - Hardware based implementation of complete TCP/UDP network stack. Increases bandwidth and latency performance of network interface while decreasing host processor utilization.

**Fibre Channel Link Layer** - Complete layer 1 / layer 2 solution for Fibre Channel. Provides easy to integrate frame interface. Supports rates of 1/2/4/8/16G.

**Fibre Channel ASM** - Hardware based full-network stack implementation of FC-ASM. Provides hardware based label lookup, DMA controllers, and message chain engines. Provides F35 compatible interface implementation.

**Fibre Channel HSDN** - Hardware based full-network stack implementation of FC-HSDN. Provides hardware based buffer mapping, DMA controllers, and message chain engines. F18/F15 compatible interface implementation.

**Fibre Channel HSDN** - Hardware based full-network stack implementation of FC-HSDN. Provides hardware based buffer mapping, DMA controllers, and message chain engines. F18/F15 compatible interface implementation.

**1394 AS5643 PHY** - Complete AS5643 PHY layer hardware implementation. Includes standard PHY-Link interface.

**1394 AS5643 OHCI Link Layer** - Complete AS5643 OHCI Link layer hardware implementation. Includes standard PHY-Link interface and AXI bus for PCIe or embedded processor interface.

**1394 AS5643 GP2Lynx Link Layer** - Complete AS5643 GP2Lynx Link layer hardware implementation. Includes standard PHY-Link interface.

**High Speed Interconnect (HSI)** - Complete layer 2 hardware implementation for HSI. Provides easy to integrate frame interface. Supports full-rate, 1/2 rate, and 1/4 rate operation as specified by the standard. F18 compatible interface implementation.

**High Speed Data Bus (HSDB)** - Complete PHY and Mac layer hardware implementation for HSDB. Provides easy to integrate frame interface. F22 compatible interface implementation.

## Contact



[www.newwavedv.com](http://www.newwavedv.com)



[info@newwavedv.com](mailto:info@newwavedv.com)



+1 952-224-9201

# NEW WAVE DV

Design & Verification

## About Us

The New Wave Design and Verification team is made up of passionate engineers who have extensive experience designing, building, testing, and delivering electronic systems. We have combined our highly skilled engineers with our precision-made electronics products and unparalleled service to deliver products that meet your cost, schedule, and technical requirements.

