

The Flexor/OnyxFX Family

The Flexor® line of FMC analog modules and OnyxFX™ FMC carrier boards combines the high performance of the Virtex-7 FPGA with the flexibility of the FMC data converter thereby creating a complete radar and software radio solution.

FlexorSet

As a FlexorSet® integrated solution, the analog I/O FMC is factory-installed on the FMC carrier. The required FPGA IP is installed and the board set is delivered ready for immediate use.

The delivered FlexorSet is a multichannel, high-speed data converter and is suitable for connection to the HF or IF ports of a communications or radar system. The built-in data capture and generator features a Gen. 3 x8 PCIe interface to make them turnkey solutions.

Carrier Boards

As stand-alone processors, carrier boards provide an ideal development and deployment platform for demanding signal-processing applications.

The carrier board architecture includes an optional built-in gigabit serial optical interface. Up to 12 high-speed duplex optical lanes are available on an MTP connector. With the installation of a serial protocol in the FPGA, this interface enables a high-bandwidth connection between boards mounted in the same chassis or even over extended distances between them.

Development Tools and Software Support



While many applications can be satisfied with the board's built-in functions, the OnyxFX carrier boards are an ideal development and deployment platform for custom IP. Supported by the Pentek GateFlow® FPGA Design Kit, users have access to the complete factory-installed IP at the source level, allowing them to extend or even replace the built in functions.



The Pentek GateXpress® PCIe Configuration Manager supports dynamic FPGA re-configuration through software commands as part of the runtime application. This provides an efficient way to quickly reload the FPGA, which occurs many times during development. For deployed environments, GateXpress enables reloading the FPGA without the need to reset the host system, ideal for applications that require dynamic access to multiple processing IP algorithms.



The Pentek ReadyFlow® Board Support Package is available for Windows or Linux operating systems. To accelerate application development, ReadyFlow is provided as a C-callable library, the complete suite of initialization, control and status functions, as well as a rich set of precompiled, ready-to-run-examples.

FMC Interface

Analog modules comply with the VITA 57 FMC specification. The interface provides all data, clocking, synchronization, control, and status signals between the module and the FMC carrier.

Ruggedization

Except for the PCIe Carrier board, all other boards are available in various ruggedized formats up to and including conduction cooling.

Flexor



Model 3312 Multichannel
A/D & D/A FMC module

Flexor



Model 3316 Multichannel
A/D FMC module

OnyxFX



Model 5973 3U VPX
FMC Carrier board

OnyxFX



FlexorSet
Model 7070-312
PCIe Carrier board shown with
the Model 3312 Multichannel
A/D & D/A FMC module