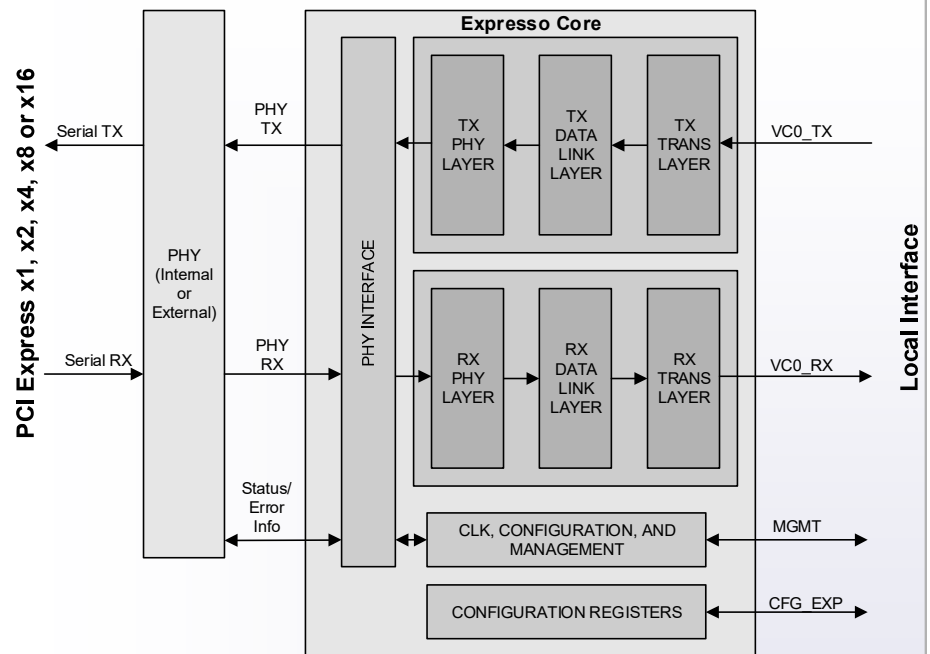


## Product Highlights

- High-performance, easy-to-use core
- PCI Express™ 4.0 specification compliant - backward compatible with PCIe 3.0/2.1/1.1
- x16, x8, x4, x2, x1 lane support
- 16, 8, 5 & 2.5 Gbit/s SERDES support
- 1-8 Physical Function support
- SR-IOV support with up to 255 Virtual Functions
- Endpoint, Root Port, Upstream Switch Port, Downstream Switch Port, Bifurcation support
- 32, 64, 128, and 256 bit Core width support
- Transaction Layer(TL), Partial TL interface bypass options
- AER, ECRC, MSI-X, MSI, Lane Reversal support , L1 PM substates, SRIS, ECC/Parity Protection
- Delivered integrated and verified with target PCIe PHY
- Fully validated
- Source code available
- Customization and Integration services available

## Block Diagram



## Product Overview

The Expresso 4.0 Core is part of Northwest Logic's PCI Express Solution. This solution is designed to achieve maximum PCI Express throughput while being easy to use.

The Expresso 4.0 Core separately, or in combination with Northwest Logic family of DMA Cores and DMA Drivers, provide the maximum system throughput on a PCI Express link.

The core is specifically designed for ease of use including full receive packet decoding, complete error handling, automatic handling of PCI Express message packets and comprehensive system-debug and link monitoring support.

The core is delivered integrated and verified with the user's Target PHY. Contact Northwest Logic for a complete list of supported PHYs. To accelerate simulations, the core is also delivered integrated with a fast-simulating behavioral PHY.

The core is provided with the Expresso Testbench which provides a PCI Express Bus Functional Model.

The core is compliant with the current version of the PCI Express Base Specification 4.0.

The core has been extensively validated with the Avery Logic PCI-Xactor PCI Express Compliance Suite and Northwest Logic Expresso Testbench.

Northwest Logic also provides IP Core customization services. Contact Northwest Logic for a quote.

### Product Deliverables:

- Core (Netlist or Source Code)
- Testbench (Source Code)
- Complete Documentation
- Expert Technical Support & Maintenance Updates