



Solution Includes:

- **Memory Controller Cores**
 - Supports HBM, MRAM, DDR4/3/2/1, LPDDR4/3/2/1 and RDRAM 3/II
 - 64 banks and 16 deep command queue support
 - Supports all memory configurations including multi-rank, DIMM, RDIMM, LRDIMM etc.
 - Supports Full Rate, Half Rate and Quarter Rate operation
 - Provided with Memory Controller testbench
- **Add-On Cores**
 - Supports AXI, AHB Interfaces
 - Multi-port, QOS-based arbitration support
 - Efficiency-based reordering maximizes memory utilization
 - Read-Modify-Write and ECC support
 - Comprehensive Memory Test Package enables easy chip and board bring-up
- **DDR PHY**
 - Fully integrated with a broad variety of third-party PHYs
 - Silicon-proven Northwest Logic soft PHY

Key Features:

- **Complete Solution**
 - Full featured and modular solution enables IP to be configured to exact customer requirements
 - Flexible PHY interface supports all DFI compatible PHYs
 - Delivered fully integrated and verified with target DDR PHY
 - Minimal size relative to competition
 - JEDEC standard compliant
 - Silicon proven
- **High Performance**
 - Supports maximum data rates specified by the JEDEC standards
 - Supports high-efficiency, multi-port operation
 - Minimal latency
- **Easy-To-Use**
 - Simple interface, easy to configure, well-documented
- **Comprehensive Support**
 - ASIC, Structured ASIC and FPGA support
 - Expert technical support provided directly by designers
 - Integration and customization services available
 - Optionally integrated with Northwest Logic PCI Express Solution