

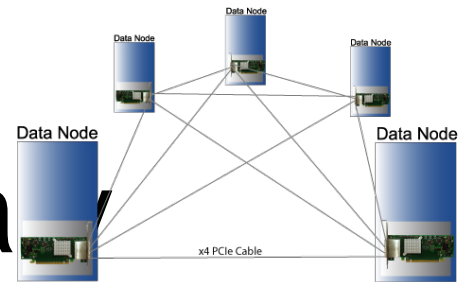
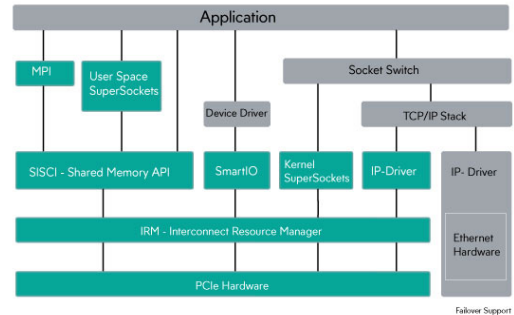
eXpressWare PCIe Software

The MXH830 supports Dolphin's eXpressWare software suite. eXpressWare software enables customer to easily migrate applications to PCIe Networks. A complete software infrastructure, eXpressWare enabling applications to network using standard PCI Express over cables. Several interfaces and APIs are supported including standard TCP/IP networking - IPoPCle driver, a low level direct remote memory access API - SISCI API and a sockets API - SuperSockets. Each API has its benefits and can be selected based on application requirements.

The SISCI API enables customers to fully exploit the PCIe programming model without having to spend months developing device drivers. The API offers a C programming API for shared / remote memory access, including reflective memory/multi-cast functionality, peer to peer memory transfers and RDMA capabilities. The SISCI API supports direct FPGA to FPGA, GPU to GPU, or any combination of communication with FPGA, CPUs, GPUs or memory over PCIe.

SuperSockets enabled networked applications to benefit from a low latency, high throughput PCIe network without any modifications. With SuperSockets, a PCIe network can replace local Ethernet networks.

Dolphin's performance optimized TCP IP driver for PCIe (IPoPCle) provides a fast and transparent way for any networked applications to dramatically improve network throughput.



Five node MXH830 cluster

Specifications

Link Speeds	128 Gbps
Application Performance	Less 500ns latency (application to application) Above 10 Gbytes/s throughput
Active Components	Microsemi Switchtec PCI Express Switch
PCI Express	Base Specification 3.1 PCI-SIG Cable specification 3.0 (preliminary)
Topologies	Two to five nodes point to point
Cut-Through Latency	132ns
Cable Connections	4-x4 MiniSAS HD/SFF8644 copper/fiber cables Supports 4 - x4/ 2 - x8 or 1 - x16 connections
Power Consumption	18 watts
Mechanical Dimensions	Low profile - 68.90 mm (2.731 inches) x 120 mm (6.600 inches)
Operating Environment	Operating Temperature: 0°C -55°C Relative Humidity: 5% -95% non-condensing

Dolphin Software	SuperSockets Berkley Sockets API Microsoft WinSock2/LSP support IPoPCle driver SISCI API PCIe transparent driver and monitoring utility
Usage Modes	Host/Target Non-transparent bridging
Regulatory	CE Mark FCC Class B UL94V-0 compliant RoHS Compliant
Configuration	Dip-switch configurable
Mounting Plates	Full height plate installed Half height plate included with board
Operating Systems supported	Windows, RTX, Linux, VxWorks
Product Codes	MXH830 Host NTB Adapter MXH832 Transparent Host/ Target Adapter