

IBX400

6U OpenVPX InfiniBand Switch Fabric Module

Features

- **6U OpenVPX VITA65 Switch Profile:**
 - SLT6-SWH-16U20F-10.4.2
 - MOD6-SWH-16U20F-12.4.2-10
- **DDR InfiniBand Data Plane:**
 - 20 x Fat Pipes
 - High throughput, low latency
 - In-band subnet management
- **Gigabit Ethernet Control Plane:**
 - 16 x Ultra Thin Pipes
 - Fully managed layer 2/3
 - Ethernet Switch Fabric
- **Management Plane:**
 - I²C / BMM Controller
- **OpenWare™ Control Plane Switch Management**
 - Layer 2 and layer 3 packet switching
 - QoS Priority (IEEE802.1D)
 - IPv6 & IPv4 Switching
- **End to end RDMA solutions:**
 - 6U OpenVPX SBCs, Multiprocessors, GPGPU blades and I/O
- **Application Ready Platforms:**
 - Fully integrated & tested Linux clusters for radar, image, signal & data processing

IBX400 is the world's first, fully rugged, 6U OpenVPX InfiniBand switch fabric module (SFM) bringing data center connectivity and performance to deployed defense and aerospace applications.

GE Intelligent Platforms has harnessed the performance and flexibility of Mellanox Technologies' sixth generation SwitchX® 2 VPI switch to create a COTS, wide temperature, high shock and vibration switch blade aimed at deployed intelligence, surveillance and reconnaissance (ISR) missions across a wide range of manned and un-manned, airborne, ground and naval platforms.

Best-in-class Performance

The dual fabric capability of the IBX400 delivers low latency, wire speed, Double Data Rate (DDR) InfiniBand data plane throughput at more than 3.7GBytes/s bidirectional, as well as fully managed layer 2 and 3 Ethernet control plane connectivity.

End to end OFED™ RDMA solutions

High performance embedded computing (HPEC) solutions from GE take advantage of software support from the HPC market. Our end-to-end solutions provide shorter time to solution, lower technical risk and lower cost of ownership.

System integrators and end users can deploy tried and tested software building blocks such as the OpenFabrics Enterprise Distribution (OFED) Remote Direct Memory Access (RDMA) and OpenMPI high performance interprocess communication (IPC) middlewares from the OpenFabrics Alliance as well as modules from other open source HPC community projects.

Modular Open Systems Architecture (MOSA)

IBX400 provides high speed data connectivity to our very latest Mellanox ConnectX™ RDMA enabled Intel Core i7 SBCs, Multiprocessors, NVIDIA® CUDA GPUs and PMC/XMC carrier cards. System integrators can move applications from Linux server or desk-top machines onto these deployable modules to provide greatly increased computing performance where it is needed most; in the theater of operations.

AXIS Advanced Multiprocessor Integrated Software

GE goes further by providing AXIS performance DSP and math libraries, IPC middleware, integrated GUI for task level programming and quick start application examples and training to achieve the highest levels of performance per watt for size, weight and power (SWaP) constrained platforms. Applications can quickly be scaled and ported across both 6U and 3U board sets enabling technology re-use and reduced development effort across a range of customer platforms.

HPEC Application Ready Platforms (HARP)

Our fully integrated and tested platform solutions provide deployable, state-of-the-art performance relevant to a wide range of processing tasks including video, signal, image and data processing. These very same system architectures can be found in many of the latest multi-media gaming and content delivery platforms found in mainstream professional and consumer markets.

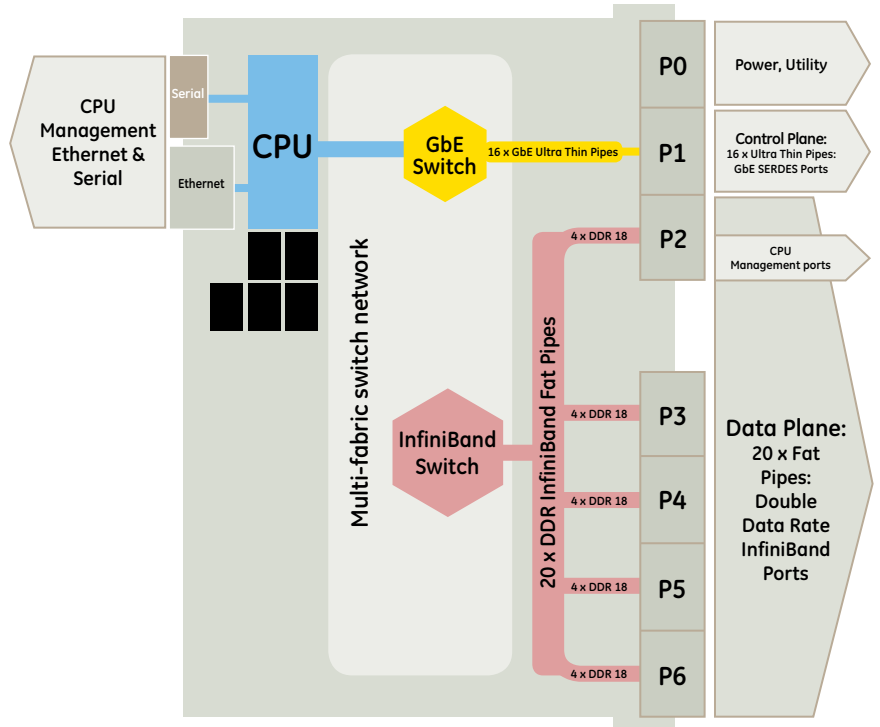


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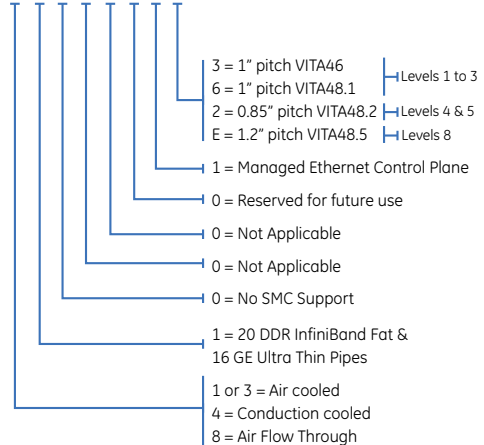
COTS Form factors:

- 6U OpenVPX VITA65 Switch Profile:
 - SLT6-SWH-16U20F-10.4.2
 - MOD6-SWH-16U20F-12.4.2-10
- Ruggedization Build Levels:
- Convection cooled assemblies:
 - Level 1 - VITA48.1-1" pitch
 - 0 to +55C operating temperature
 - 50 to +100C Storage temperature
 - Level 3 - VITA48.1-1" pitch
 - 40 to +75C operating temperature
 - 50 to +100C Storage temperature
- Conduction cooled assemblies:
 - Level 4 - VITA48.2-0.85" pitch
 - 40 to +75C operating temperature
 - 50 to +100C Storage temperature
- Air Flow Through (AFT) assemblies:
 - Level 8 - VITA48.5-1.2" Pitch
 - Consult product management for operating temperature information
 - 50 to +100C Storage temperature
- Please consult the GE Intelligent Platforms ruggedization data sheet for shock and vibration levels

Block Diagram



IBX400 - 1 1 0 0 0 1 6 (Build to stock variant)



About GE Intelligent Platforms

GE Intelligent Platforms is a division of GE that offers software, control systems, services, and expertise in automation and embedded computing. We offer a unique foundation of agile and reliable technology providing customers a sustainable competitive advantage in the industries they serve, including energy, water, consumer packaged goods, oil and gas, government and defense, and telecommunications. GE Intelligent Platforms is headquartered in Charlottesville, VA. For more information, visit www.ge-ip.com.

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