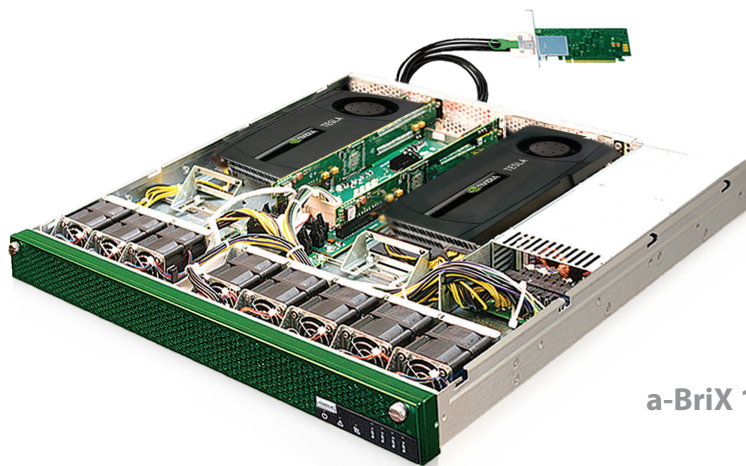# a-BriX

XTREME COMPUTE
TECHNOLOGIES

Based on the NVIDIA CUDA™ GPU architecture code named "FERMI," the Xtreme Compute Technologies (XCT) XS1-2050 & 2070 1u Computing Systems are designed from the ground up for High Performance.

The XCT-XS1-2050 & 2070 Compute Systems deliver "must have" features for the technical and enterprise computing space including ECC memory for uncompromised accuracy and scalability, and 7x the double precision performance compared to Tesla 10-series GPU computing products. Compared to typical quad-core CPU's, Tesla 20-series based compute systems deliver equivalent performance at 1/10th the cost and 1/20th the power consumption. Designed with TWO Fermi based processors in a standard 1u chassis, the XCT-XS1-2050 & 2070 computing systems scale to solve the worlds most important computing challenges - more quickly and accurately. OIL & GAS, SCIENCE, FINANCE AND MORE!

Tesla C2050
Tesla C2070

a-BriX 1U

Technical Specifications

Form Factor	1U
# of Tesla GPUs	2
Memory Speed	1.55 GHz GPU
Memory Interface	384-bit GPU
Memory Bandwidth	148 GB/sec
DP Floating Point	1 Tflops (Peak)
SP Floating Point	2 Tflops (Peak)
Total Dedicated Memory	
6 GB GDDRS: A-BriX XS1-2050	
12 GB GDDRS: A-BriX XS1-2070	
System Interface	PCIe x16 Gen2
Software Development Tools	
CUDA C/C++	
Fortran, OpenCL, DirectCompute Toolkits	

a-BriX Benefits

a-BriX Benefits	XCT	NVIDIA/ NextIO Tesla S
Flexibility Mix Tesla or Quadro for optimum application and budget requirements	✓	✗
Serviceability Field Serviceable Reduce downtime Peace of mind	✓	✗
Upgradability Stay current with future Fermi architecture advances	✓	✗
3 year Standard On-Site Warranty INCLUDED!	✓	✗
Made in USA	✓	✗
Data Center Certified	✓	✓

XTREME COMPUTE
TECHNOLOGIES

sales@xtremecompute.com
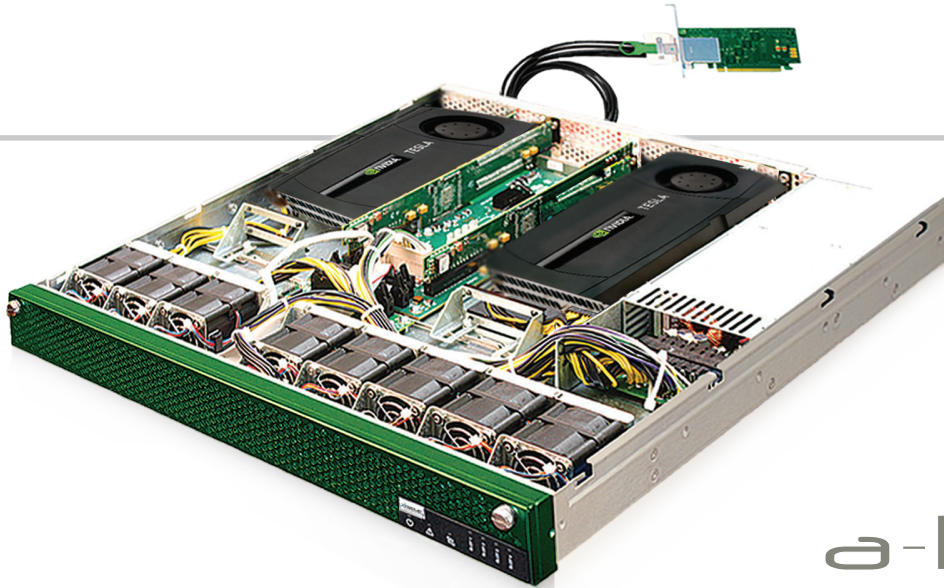
a-BriX

XTREME COMPUTE
TECHNOLOGIES

Tesla - 1U Specifications

Enclosure
Dimensions: 19"w x 1.75"h x 21"d
Removable front bezel with air filter
Front panel LEDs: Power, Fail, Link status
One rear panel PCIe x16 cable connector
Rack ears and rack slides included

PCIe Expansion Slots
PCIe 2.0-compliant
Two or Four PCIe x16 slots (electrical and mechanical)

Power
850W power supply
Each slot provides 3.3V & 12V plus a 6-pin 12V connector

System Monitoring
Monitors 8 temp sensors
Monitors 8 fan tachometers
Monitors 3 voltages +12V, +5V, +3.3V

Operating Environment
Temperature Range: Operating: 0˚Cto 50˚ C
Storage: -40˚ C to +85˚ C
Humidity:
　　　　Operating: 10% to 90% relative humidity (non-condensing)
　　　　Non-operating: 5% to 95% relative humidity (non-condensing)
Altitude: Operating 0 to 10,000 feet
Storage: 0 to 50,000 feet

Agency Compliance
FCC Class A, CE Mark, UL

Host cable adapter
One PCIe x16 Gen 2 cable adapter
PCIe half-card
Standard and low profile brackets provided

PCIe x16 cable
Standard PCIe x16 shielded differential pairs with side band signals
PCIe External Cabling Specification, Rev. 1.0
Cables can be ordered in 1m, 3m, lengths

Brackets for I/O cards provided upon request

PCIe Over Cable
The 1U expansion enclosure cables to the host system with a single PCIe x16 cable. The high-speed cable allows data transfers to and from the host simultaneously at 80Gb/s each way.

Installation
The PCIe x16 Gen 2 cable adapter easily installs in the PCIe x16 slot of the host system. No additional software is required for the expansion enclosure to be fully operational.

System Monitoring
An internal system monitor surveys system parameters of temperature, fan speed, and power voltages. System status can be easily accessed through an Ethernet port on the rear of the enclosure.

Power
The 850 watt power supply provides ample power for high-end GPU boards. Additional 12V power is provided by 6-pin cables for each slot.

Cooling
Eight individually removable fans provide superior cooling across the boards. A power modulator controls the speed of the fans based on temperature within the chassis.