CUDA 3U Starter Kit-2
19” Starter Cage with SBC and GPU

Features
• CUDA-capable NVIDIA Graphics Processor
• 16-lane PCI Express
• 2nd Generation Intel® Core i7 dual-core at 2.2 GHz
• 8 GB DDR3 SDRAM
• 120 GB rotary hard disk
• Dual DVI and VGA output
• 5-slot chassis (3 spare slots)
• External PCI Express cabling for flexible system configuration

The CUDA 3U Starter Kit is intended to allow engineers a quick and easy start up with a CUDA-based system, either for evaluation and benchmarking or to develop a specific application. Containing all the hardware that is needed to begin development, customers can immediately begin loading their chosen operating system on the delivered equipment.

NVIDIA drivers and CUDA SDK are delivered on CD for Wind River Real Time Linux®, Concurrent Red Hawk real time Linux, Red Hat, SuSE, Microsoft® Windows® XP, and Windows Vista.

In addition to NVIDIA’s CUDA C extensions, the platform supports other programming models including PhysX, OpenCL and Microsoft’s latest DirectX SDK.

The starter cage is 7U high and 84HP wide. The cage includes two fans for reliable airflow and is equipped with 6U rear I/O transition modules for each of the boards. A hard disk and a DVD are installed.

The power supply delivers 650W. Output voltages are +3.3V, ±5V and ±12V. The power supply units are protected against short circuit as well as against overload. EMC shielding and power supplies according to CE regulations are included. The housing is manufactured from anodized aluminum with chromate surfaces on all contact areas to allow for low impedance connections.

For more information on GE Intelligent Platforms’ CUDA-based products and resources, visit our web site at defense.ge-ip.com/products/family/gpgpu.

The boards included in the Starter Kit are:

GRA111  3U VPX GRAPHICS BOARD
Featuring a CUDA-capable NVIDIA graphics processing unit

SBC324  3U VPX SINGLE BOARD COMPUTER
Featuring 2nd Generation Intel Core i7 dual-core at 2.2 GHz

SBC330  3U VPX SINGLE BOARD COMPUTER
Featuring Freescale 8641D PowerPC

GBX410  3U VPX GIGABIT ETHERNET SWITCH
Featuring 16 port layer 2 / layer 3 line speed switching fabric

SDD911  SERIAL ATA DISK MODULE
Featuring 120 GB rotary hard disk, plus 4-lane PCIe dual Gigabit Ethernet controller

PEX430  3U VPX PCI EXPRESS SWITCH
PMC/XMC CARRIER
CUDA 3U Starter Kit-2

Specifications

GPU
- CUDA-capable NVIDIA graphics processor
- 16-lane PCI Express
- Two channels DVI-I output

Single Board Computer
- 2nd Generation Intel® Core i7
  - 17-2655LE (dual-core)
- 8 Gbytes DDR3 SDRAM
- 4x USB 2.0
- Gigabit Ethernet
- 2x RS-232 serial ports

Disk Storage
- 120 Gbytes rotary hard drive

Chassis
- Frame
  - Anodized and/or chromate coated aluminum
  - Fan plug-in unit
  - Dimensions corresponding to IEC 60297-3 and DIN 41494-Part 5

Form Factor
- 7U height
- 8UHP width

Backplanes
- 5-slot 3U VPX
- 1” pitch slot width

Rear I/O
- Each board has rear transition module to break out into standard commercial connectors

Temperature
- Operating Temperature: 0°C to +40°C
- Storage temperature: -20°C to +65°C
- Humidity (non-condensing): 5% - 95%

Block Diagram

Ordering Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC-S-CUDA3USK2</td>
<td>3U VPX graphics board</td>
</tr>
<tr>
<td>SC-784UN05VPXA3U</td>
<td>Starter Cage with 5-slot 3U VPX backplane</td>
</tr>
<tr>
<td>SBC324</td>
<td>3U VPX Single Board Computer; Intel Core i7 2.2 GHz, 8 GB DDR3 SDRAM, 1” pitch</td>
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<tr>
<td>SBC340RTM-13</td>
<td>Rear Transition Module</td>
</tr>
<tr>
<td>GRA111-10003</td>
<td>3U VPX Graphics Board with CUDA-capable NVIDIA Graphics Processor; 1” pitch</td>
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<tr>
<td>GRA110RTM-13</td>
<td>Rear Transition Module</td>
</tr>
<tr>
<td>CABLE-X8PCIES50CM</td>
<td>50CM PCI Express Cable</td>
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<tr>
<td>SATA Cable</td>
<td>SATA Data Cable</td>
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<tr>
<td>ARACC-3DVID2</td>
<td>Cable Assembly, DVI-D to DVI-D (2M)</td>
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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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