NVIDIA® VGX™ GPUs
DELIVER TRUE PC PERFORMANCE, VIRTUALIZED TO ANY DEVICE.

NVIDIA VGX offloads VDI graphics processing from the CPU to the GPU, allowing the data center manager to deliver true PC graphics-rich experiences to more users for the first time.

IT managers can now:

> Leverage industry-leading VDI solutions, including Citrix, Microsoft, and VMware
> Add the most graphics-intensive users to their VDI solution
> Improve the productivity of all VDI users

Users can now:

> Enjoy highly responsive windows and rich multimedia experiences
> Access all critical applications, even the most 3D-intensive
> Work from anywhere, on any device

To enable the VGX solution, the NVIDIA K1 and K2 boards provide:

GPU Virtualization[1]

VGX boards feature NVIDIA Kepler™ architecture-based GPUs that, for the first time, allow hardware virtualization of the GPU. This means multiple users can share a single GPU, improving user density while providing true PC performance and compatibility.

Low-Latency Remote Display[2]

NVIDIA's patented remote display technology greatly improves the user experience by reducing the lag they feel when interacting with their virtual machine. With this technology, the virtual desktop screen is pushed directly to the remoting protocol.

H.264 Encoding[3]

The Kepler GPU includes a high-performance H.264 encoding engine capable of encoding simultaneous streams with superior quality. This provides a giant leap forward in cloud server efficiency by offloading the CPU from encoding functions and allowing the encode function to scale with the number of GPUs in a server.

Maximum User Density

VGX boards have an optimized multi-GPU design that helps to maximize user density. The VGX K1 board features four GPUs and 16 GB of graphics memory, supporting up to 100 users on a single board.

Power Efficiency

VGX boards provide data center-class power efficiency, including the

revolutionary new "SMX" streaming multiprocessor. The result is an innovative, proven solution that delivers revolutionary performance per-watt for the enterprise data center.

24/7 Reliability

VGX boards are designed, built, and tested by NVIDIA for 24/7 operation. Working closely with leading server vendors such as Cisco, Dell, HP, IBM, and SuperMicro ensures optimum VGX card performance and reliability for the life of the system.

Widest Range of Virtualization Solutions

VGX cards enable GPU-capable virtualization solutions from Citrix, Microsoft, and VMware, delivering the flexibility to choose from a wide range of proven solutions.

[1] Only available with GPU-VDI (Citrix)
[2] Available with GPU-VDI (Citrix), HDX 3D Pro (Citrix)
[3] Consult your Hypervisor provider to see if this is supported

COMPATIBLE SOLUTIONS

	NVIDIA GPU Experience			Scaling	
	NVIDIA Driver	Application Certification	API	VGX K1	VGX K2
Virtual Remote Workstation Solutions					
Citrix XenDesktop with HDX 3D Pro XenServer	✓	✓	NVIDIA CUDA® DirectX 9, 10, 11 OpenGL 4.3		2 users
Virtual Desktop Solutions					
Citrix (Coming Soon) XenDesktop with HDX XenServer with NVIDIA VGX Hypervisor	✓	✓	NVIDIA CUDA Direct X 9,10,11 OpenGL 4.3	✓	✓
Microsoft RemoteFX Windows Server 2012			DirectX 9,10,11 OpenGL 1.1	✓	✓
VMware (Coming Soon) View with vSGA ESX			Direct X 9 OpenGL 2.1	✓	✓

BOARD SPECIFICATIONS
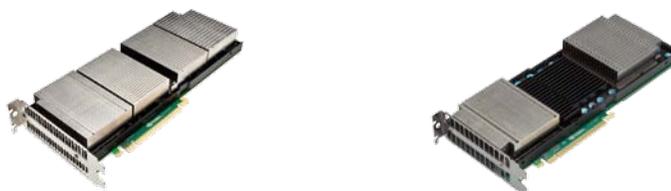
Feature	VGX K1	VGX K2
Number of GPUs	4 x entry Kepler GPUs	2 x high-end Kepler GPUs
Total NVIDIA CUDA cores	768	3072
Total memory size	16 GB DDR3	8 GB GDDR5
Max power	130 W	225 W
Board length	10.5"	10.5"
Board height	4.4"	4.4"
Board width	Dual slot	Dual slot
Display IO	None	None
Aux power	6-pin connector	8-pin connector
PCIe	x16	x16
PCIe generation	Gen3 (Gen2 compatible)	Gen3 (Gen2 compatible)
Cooling solution	Passive	Passive

For information about how to implement a complete GPU-enabled VDI environment, visit
www.nvidia.com/vgx