



NVIDIA® NVS
Gráficos Profissionais

Marcio Aguiar



NVIDIA Business Graphics Matrix - 2011



**NVIDIA Quadro
NVS 450**
(ATX profile PCIe x16)



(4) Quad DisplayPort
(4) Quad DVI-D (Single/Dual-Link)
(4) Quad VGA

**NVIDIA Quadro
NVS 420**
(Low Profile PCIe x16 & x1)



(4) Quad DisplayPort
(4) Quad DVI-D (Single-Link)

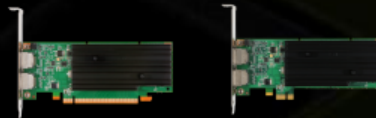


**NVIDIA
NVS 300**
Low Profile (PCIe x16 and x1)



(2) Dual DVI-I(Single Link)
(2) Dual VGA
(2) Dual Display Port

**NVIDIA Quadro
NVS 295**
Low Profile (PCIe x16 and x1)

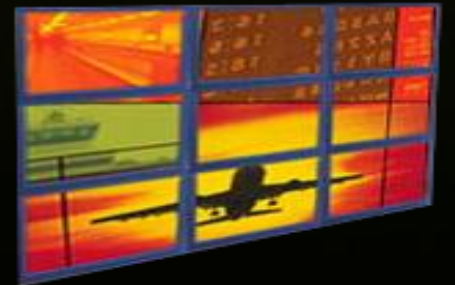


(2) Dual DisplayPort
(2) Dual DVI-D (Single/Dual Link)
(2) Dual VGA

NVIDIA NVS



- **Aumento de produtividade em ambientes de múltiplas projeções**
- **Características de interações avançadas**
- **Baixo consumo e alta produtividade**
- **Excelente qualidade – Placas fabricadas pela NVIDIA**
- **Suporte direto da Nvidia**





NVIDIA® NVS™

O padrão para gráficos profissionais

Suporte para aplicações profissionais



Mosaic Technology

nVIEW
Desktop Management

Installer 2.0

nvEnterprise 2.0

UDA Drivers



Linha de placas gráficas NVS

Mais dados a serem visualizados = maior produtividade



Desktop com múltiplos monitores



Image courtesy of Barco

Mercados em foco



Mercados tradicionais

- Financeiro
- Operação – Corretoras de valores
- Desktops corporativos
- Call centers



NOVOS MERCADOS

Além dos tradicionais :

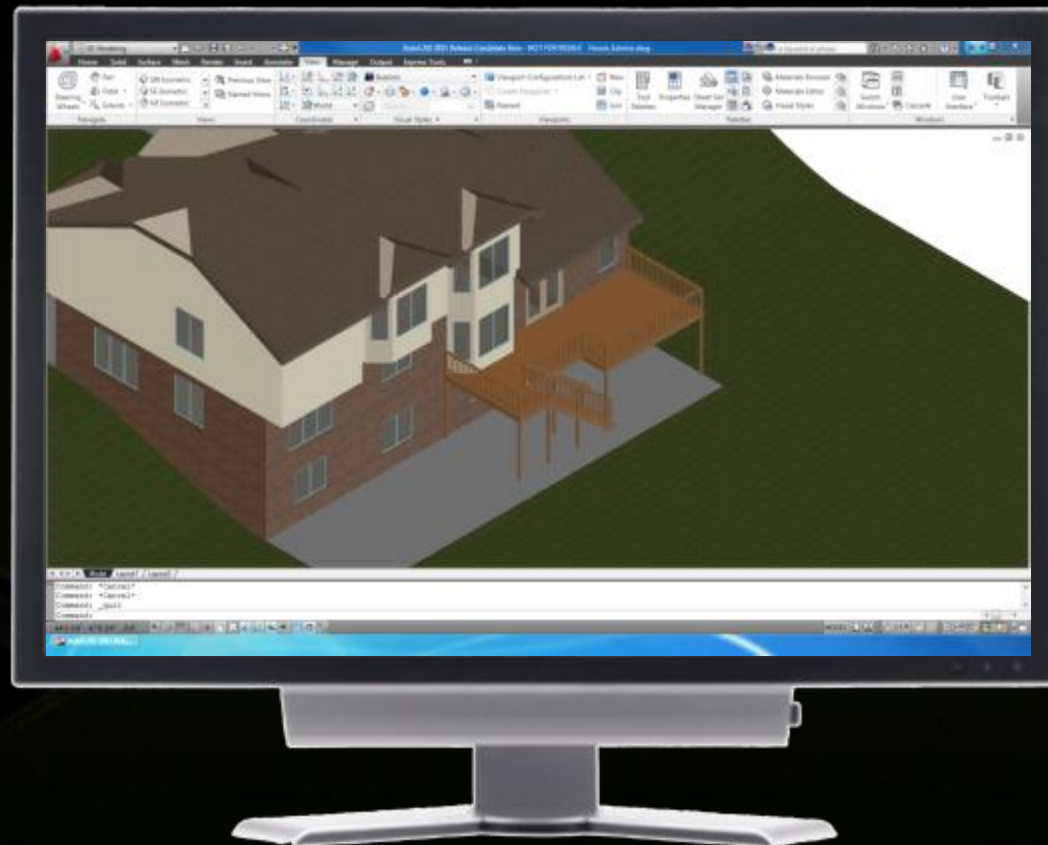
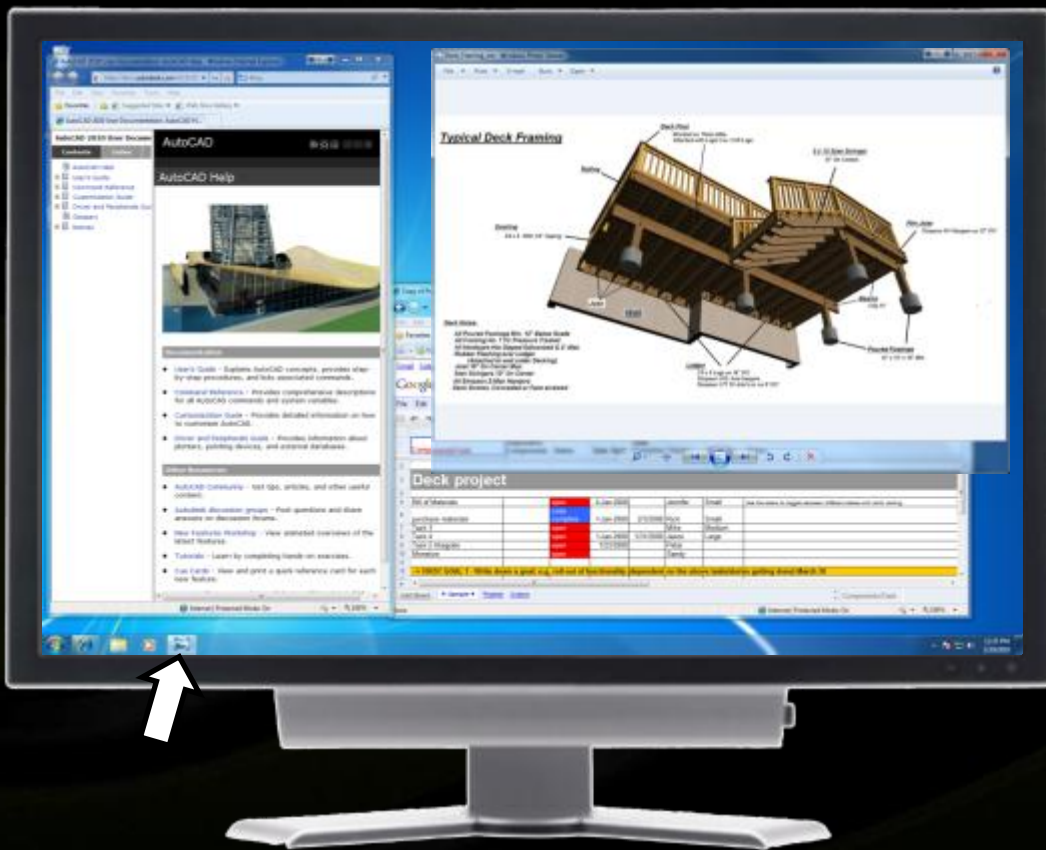
- Digital Signage
- Bancos
- Educacional
- Hospitais
- Centros de Emergências
- Agências do Governo
- Centros de controle/ processo



Melhor maneira de se trabalhar: NVIDIA® nView™



Elimine várias janelas sobrepostas utilizando múltiplos monitores

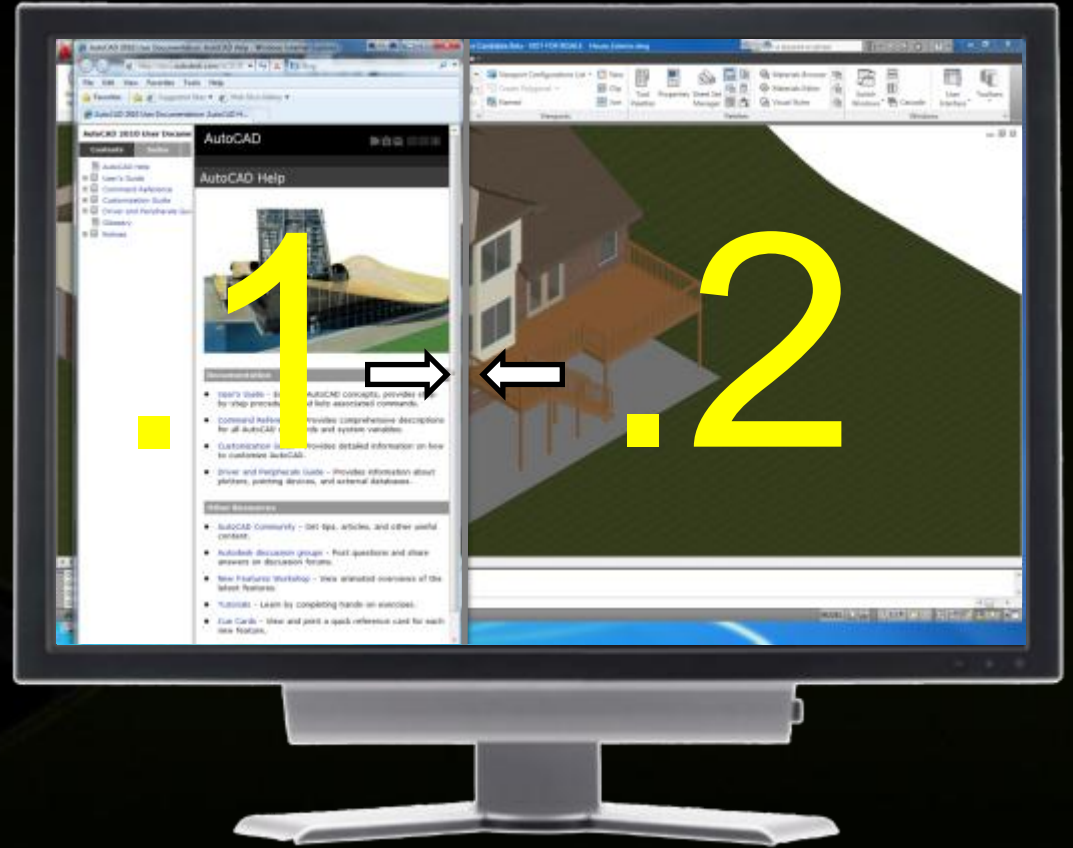
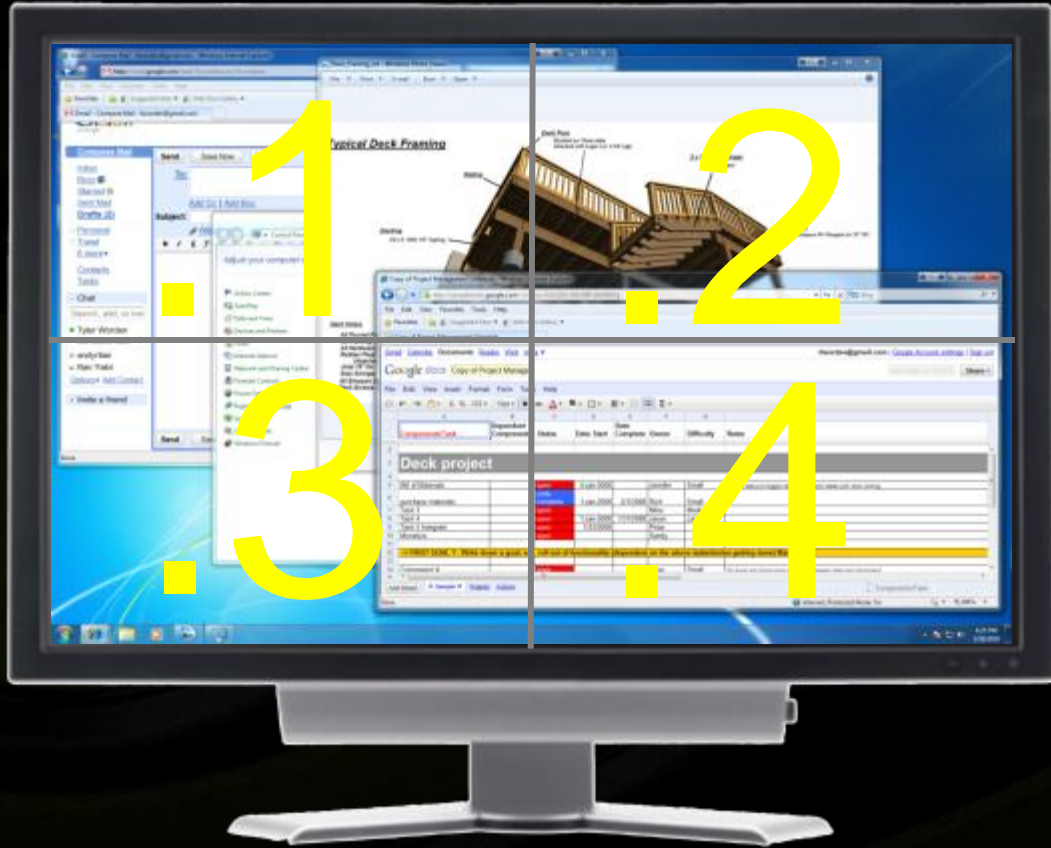


EXTENDED TASKBAR

Mais produtividade: NVIDIA® nView™



Gridlines: Divide os monitores em várias janelas para uso eficiente da aplicação

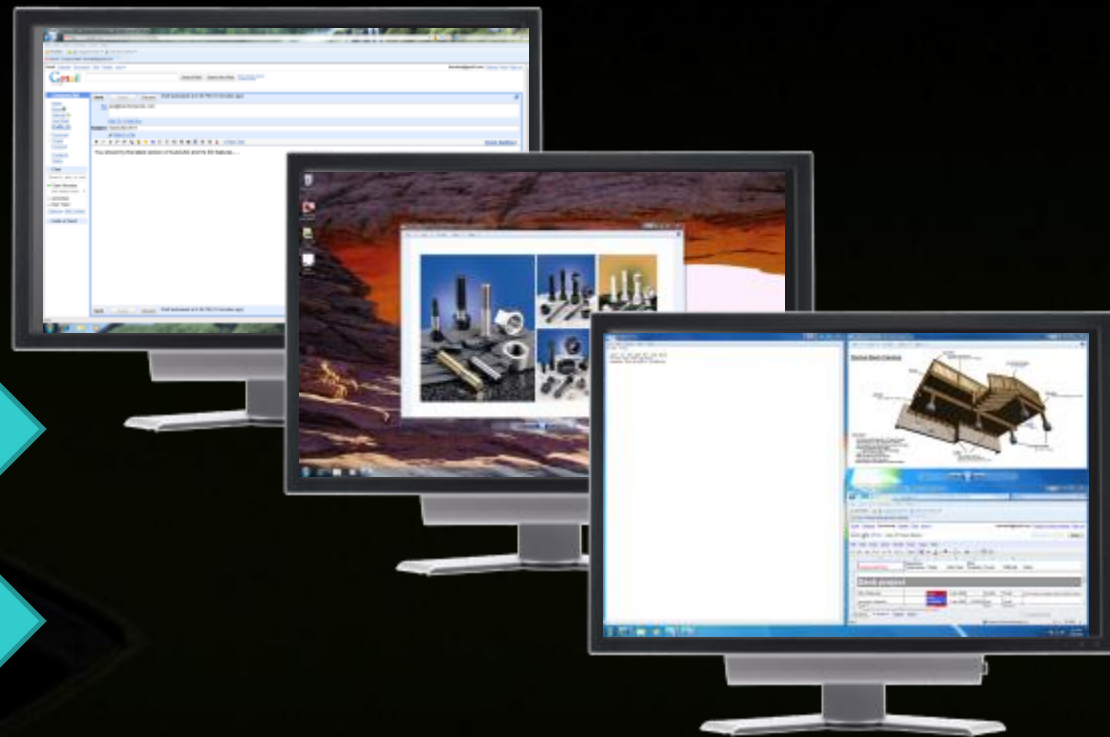
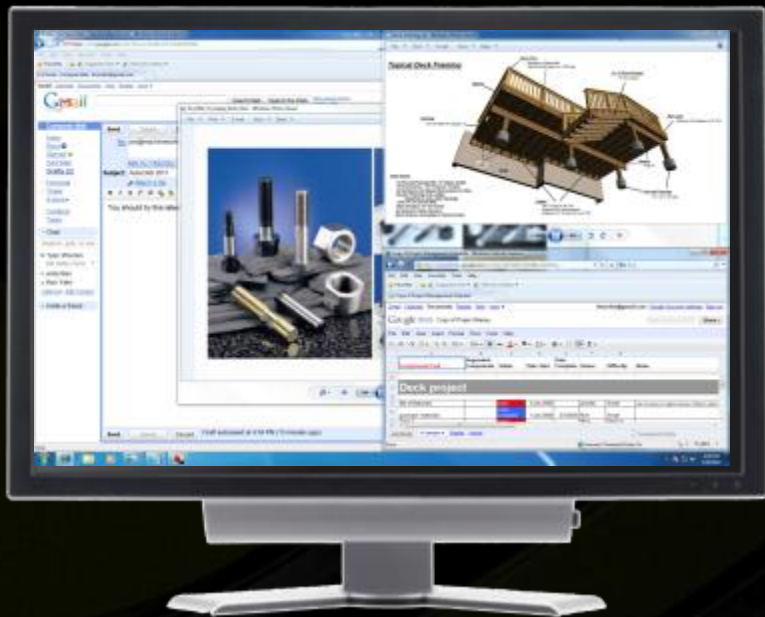


GRIDLINES

nView™ Característica principal: Desktops Virtuais



Crie, ajuste e interaja entre várias janelas virtuais



VÁRIOS DESKTOPS

'n' VIRTUAL
DESKTOPS

NVIDIA® NVS™



A solução correta para o seu negócio

	Segmento alvo	Venda corporativa	Suporte profissional	Suporte NVIEW	Testado em programas profissionais	Tecnologia múltiplos monitores	Certificação Profissional	Vida útil	OEM Disponível	NVIDIA Grantia
NVIDIA Quadro	Workstation Profissional	Sim	Sim	Sim	Sim	Mosaic	Sim	36 meses	Direta	3-yr
NVIDIA NVS	Business Profissional & Comercial	Sim	Sim	Sim	Sim	Mosaic	Não	36 meses	Direta	3-yr
NVIDIA GeForce	Consumidor Final	Não	Não	Não	Não	Surround	Não	9-12 meses	Virtual	1-yr

NVIDIA NVS 300 (PCIe x16 & x1)



- 16-core Processador de computação paralela baseada em CUDA
 - *Permite-se trabalhar na internet, aplicações de A/V e fotos utilizando os recursos de aceleração da GPU*
- **Modelos:**
 - *Low profile; 2.731 (H)” x 5.700 (L) ”*
 - *Single Slot – PCIe Gen 2*
- **Frame Buffer:**
 - *Memória 512 MB DDR3 ultra rápida (64M x16 DDR3)*
- **Conectores: Nativo DMS-59**
 - *Dois DVI-I & VGA através de um conector DMS-59*
 - *Novo Dual Display Port Suporte através” **passivo**” DMS-59 (com suporte a áudio)*
- **Consumo & Refrigeração:**
 - *Ventilação Passiva (~18 Watts). Compatível com todos os SFF*
 - *Gerenciamento inteligente de consumo Intelligent Power Management*

NVS 300 Conector de vídeo

Porque criamos o conector DMS 59 ?

- Usa as capacidades de processamento de vídeo diretamente da placa grafica ao invés de utilizarmos periféricos externos.
- Compatível com VGA, Single Link DVI e Display Port
- Conector com custo-benefício ótimo para conectar monitores analógicos *(mais utilizados em monitores comerciais)*
- Suporte para Display Port via Passive (low cost) Dual DMS59- DP dongle para a próxima geração de monitores com Display-port

DMS59 – Display Port Dongle

- Passive Dongle – Low Cost
- Same Look and Feel as current DMS59 –DVI or DMS59-VGA dongles
- Image of Early Prototype shown below



Dual Display Port Connectors

DMS-59 Connector

NVIDIA Quadro NVS 450 (PCIe x16)



- 2x 8-core CUDA Parallel Computing Processors
- **Form Factor:**
 - Full ATX; 4.376 (H)" x 6.600 (L)"
 - Single Slot – PCIe Gen 2
- **Frame Buffer:**
 - 512MB (4pcs 32Mx32 GDDR3)
- **Connectors:**
 - 4x DisplayPort
- **Max Power:**
 - 35W
- **Cooling:**
 - Passive heatsink
- **Availability: Now**



NVIDIA Quadro NVS 420 (PCIe x16 & x1)



- 2x 8-core CUDA Parallel Computing Processors
- **Form Factor:**
 - Low profile; 2.731 (H)" x 6.600 (L)"
 - Single Slot - PCIe Gen 2
- **Frame Buffer:**
 - 512MB (4pcs 32Mx32 GDDR3)
- **Connectors:**
 - Single VHDCI with additional dongle options
 - Single VHDCI to Quad DisplayPort
 - Single VHDCI to Quad DVI-SL (digital)
- **Max Power:**
 - 40W
- **Cooling:**
 - Active fansink (4-pin control)
- **Availability: Now**



Quadro NVS 4xx Product Comparison



	Quadro NVS 450	Quadro NVS 420
GPU	Dual G98	Dual G98
Frame Buffer	512MB GDDR3	512MB GDDR3
Memory Bandwidth	11.2 GB/sec /gpu	11.2 GB/sec /gpu
PCI-Express	Gen2	Gen2
Displays	Display Port (4) Single Link DVI (4)	Display Port (4) Single Link DVI (4)
Max Dig. Resolution	2560 x 1600	2560 x 1600
Max Power	35W	40W
Shipping Status	Active	Active

NVIDIA Quadro NVS 295 (PCIe x16 & x1)



- 8-core CUDA Parallel Computing Processor
- **Form Factor:**
 - Low profile; 2.731 (H)" x 6.600 (L)"
 - Single Slot – PCIe Gen 2
- **Frame Buffer:**
 - 256MB (16Mx32 GDDR3)
- **Connectors:**
 - DisplayPort + DisplayPort
 - HDMI, DVI, VGA over DisplayPort
- **Power:**
 - 23W
- **Cooling:**
 - Passive heatsink
- **Availability: Now**



NVIDIA Quadro NVS 290 (PCIe x16 & x1)



- 16-core CUDA Parallel Computing Processor
- **Form Factor:**
 - Low profile; 2.731 (H)" x 6.600 (L)"
 - Single Slot – PCIe Gen 2
- **Frame Buffer:**
 - 256MB (32Mx16 DDR2)
- **Connectors:**
 - DMS-59
 - Dual DVI-I & Dual VGA via DMS-59 dongles
- **Power:**
 - 21W
- **Cooling:**
 - Passive heatsink
- **Availability: Now**



NVS 2xx Generation Comparison



	Quadro NVS 290	Quadro NVS 295	NVIDIA NVS 300
GPU	G86	G98	GT218
Form Factor	Passive LP	Passive LP	Passive LP
Frame Buffer	256MB DDR2	256MB GDDR3	512 MB DDR3
Memory Bandwidth	6.4 GB/sec	11.2 GB/sec	12.6 GB/s)
PCI-Express	Gen1	Gen2	Gen2
Halogen Free	No	No	Yes
Displays	Single Link DVI (2) VGA (2) <u>Via DMS 59 dongle</u>	Display Port (2) SL or DL DVI** (2) VGA**(2)	Single Link DVI (2) VGA (2) DisplayPort (2)
Max Dig. Resolution	1920 x 1200	2560 x 1600	2560x1600 (DP) 1920x1200 (DVI)
Max Power	21W	23W	~18W



**NVIDIA NVS Software
Technologies**

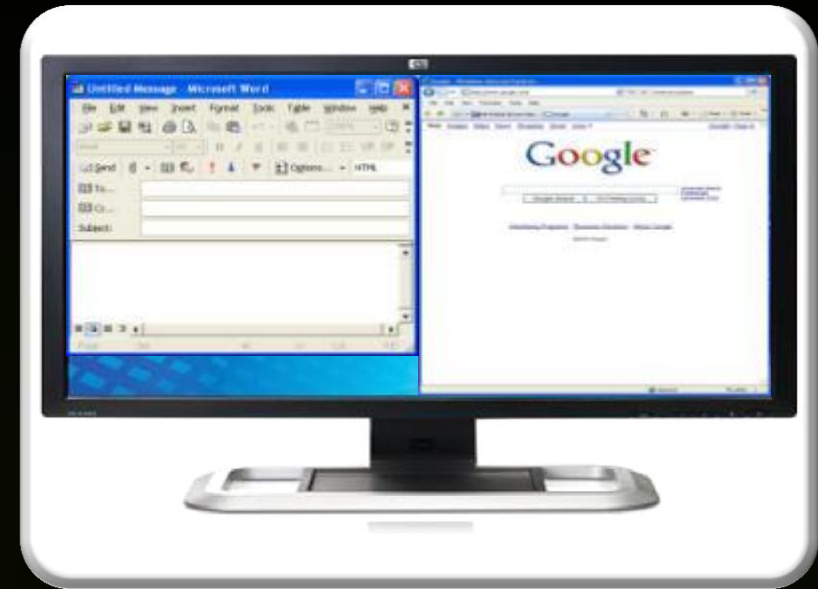


NVIEW Desktop Manager



.....a user-friendly way to multi-task, display and process information faster and more intuitively – *proven to increase productivity*

- Taskbar spanning across multiple displays
 - Application/Window/Dialog Box Repositioning
 - Virtual Desktops
 - Display Gridlines
 - nView Profiles
 - and many more...
-
- Win7, XP, and Vista for all Quadro & NVS products



nView Feature Spotlight : Win7 Taskbar Spanning



1200x1600

2560x1600

1200x1600

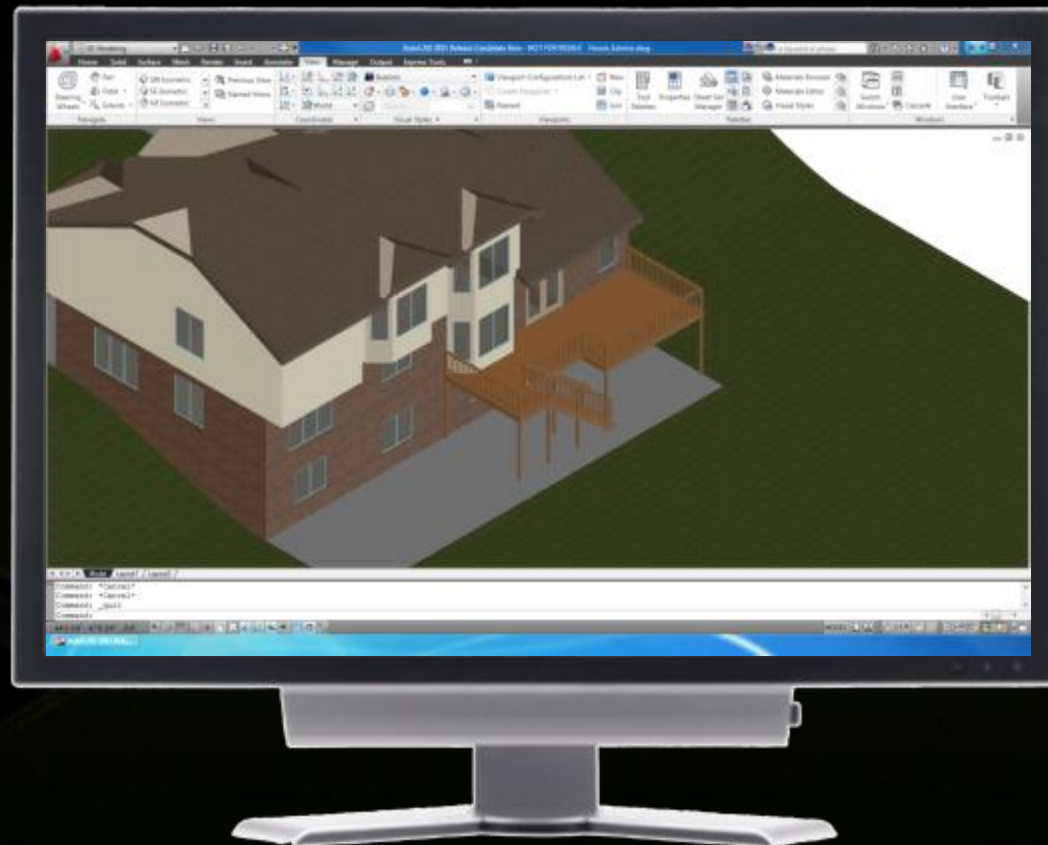
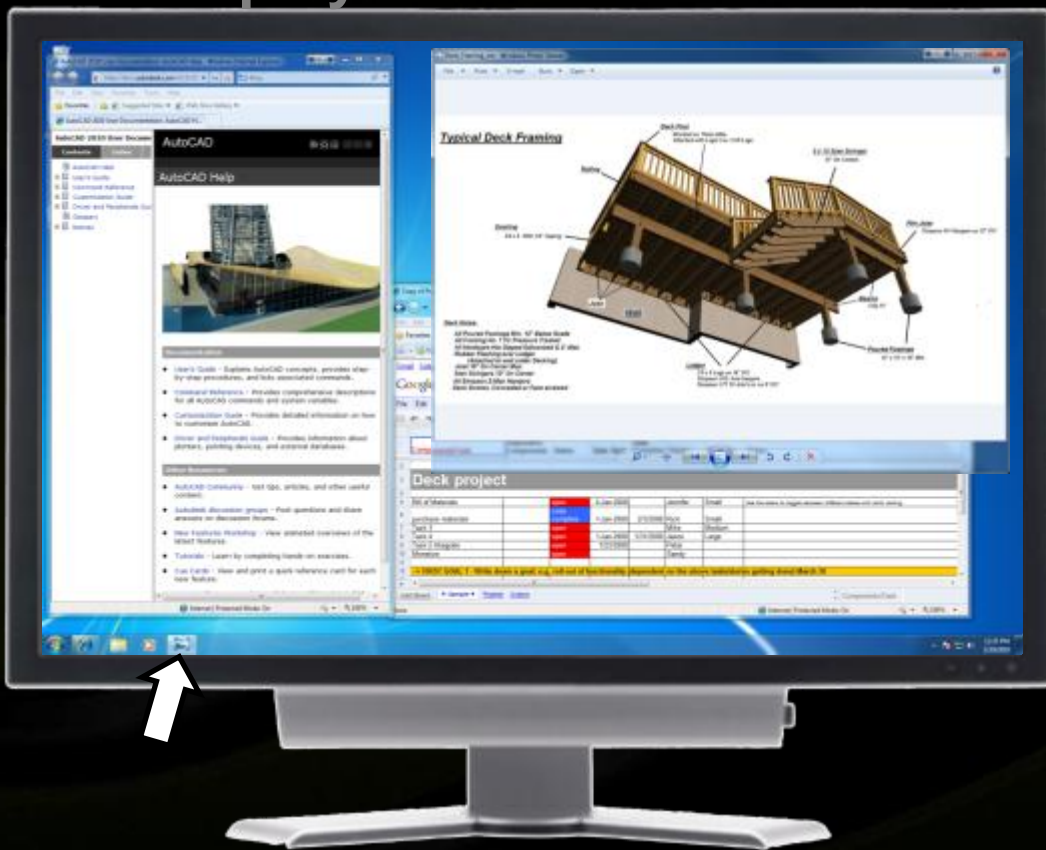


- Available on Win7 and Vista
- Supports any number of displays, mixed resolutions, non-rectangular desktops, and portrait displays

Better Way to Work: NVIDIA® nView™



Eliminate clutter by extending the taskbar across multiple displays

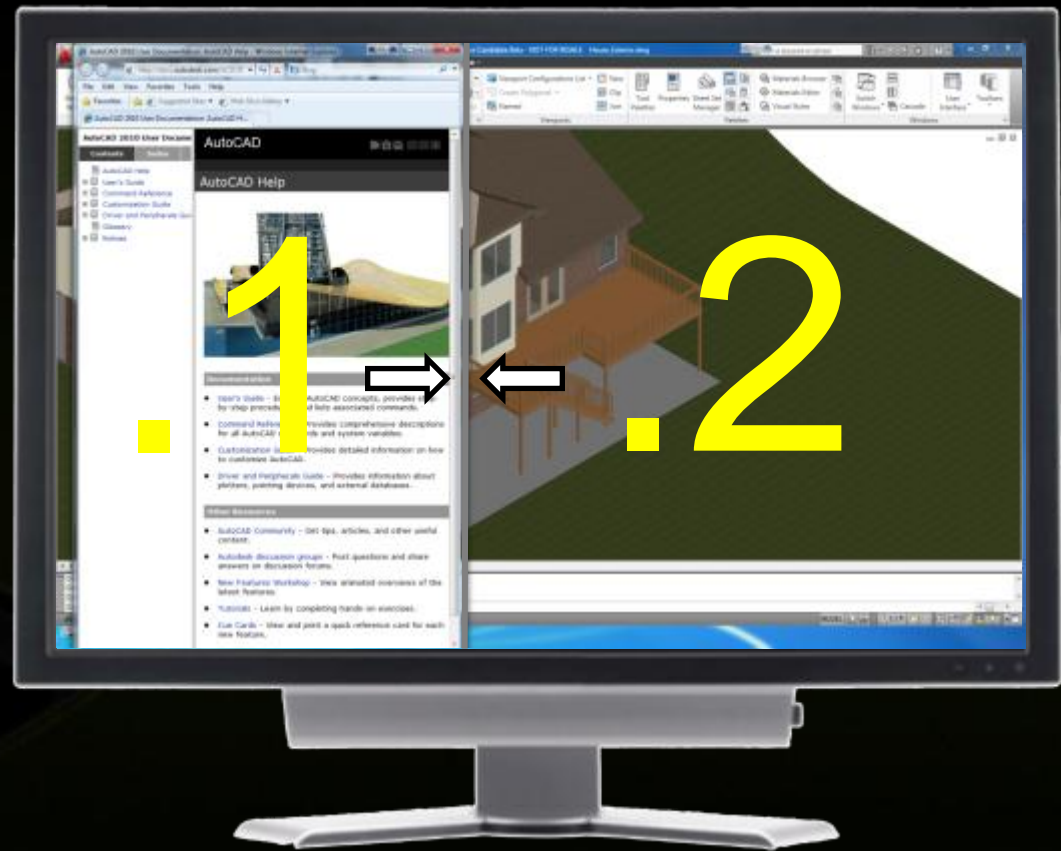
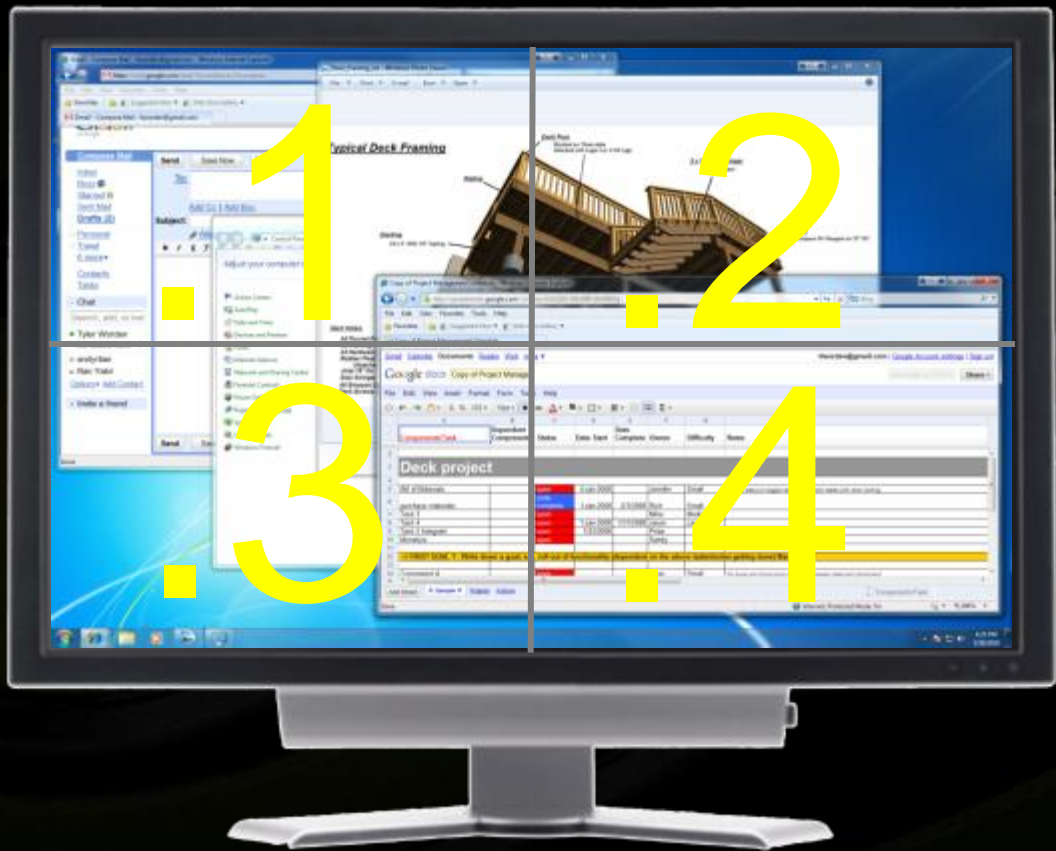


EXTENDED TASKBAR

Better Way to Work: NVIDIA® nView™



Gridlines: Divide monitors into sub-screen for efficient use of screen real estate

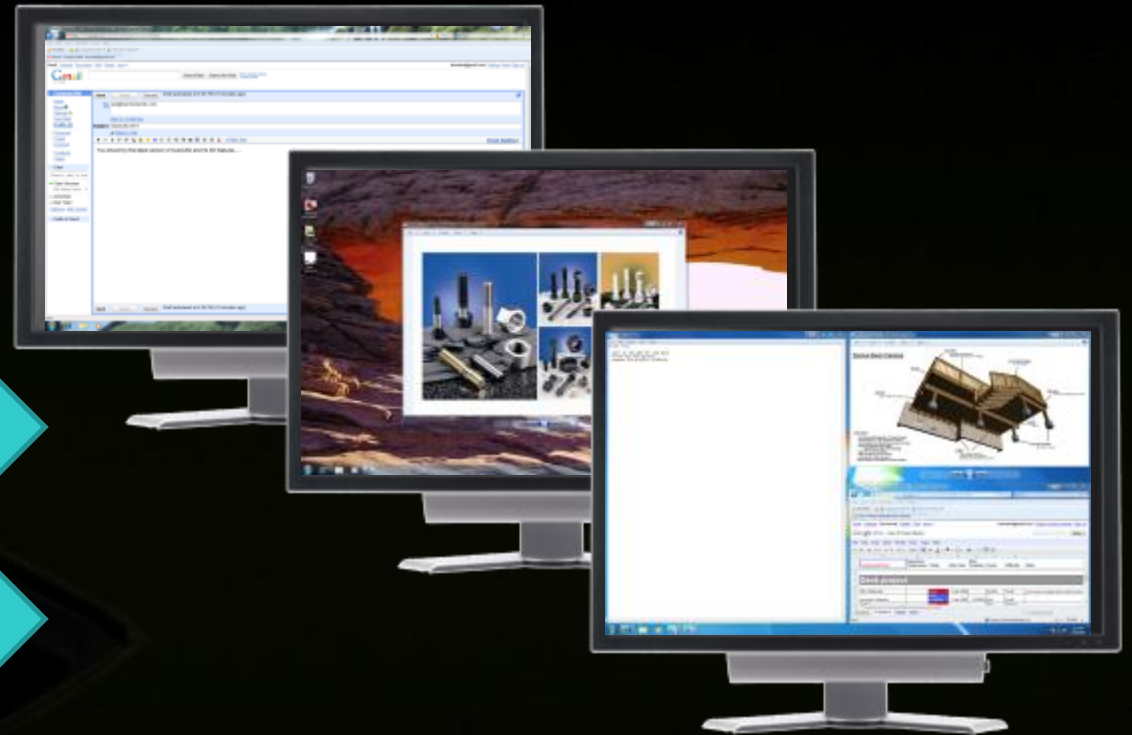
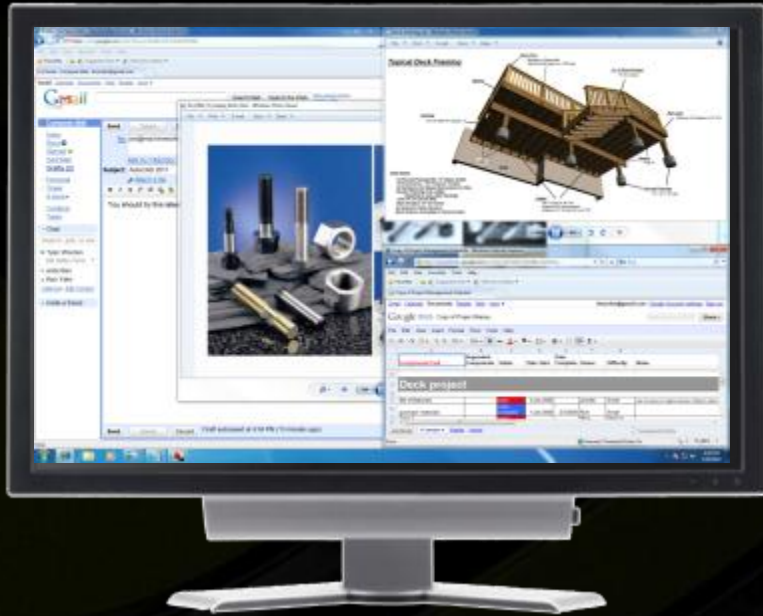


GRIDLINES

nView™ Feature Spotlight: *Virtual Desktops*



Create, customize & switch between different virtual desktops

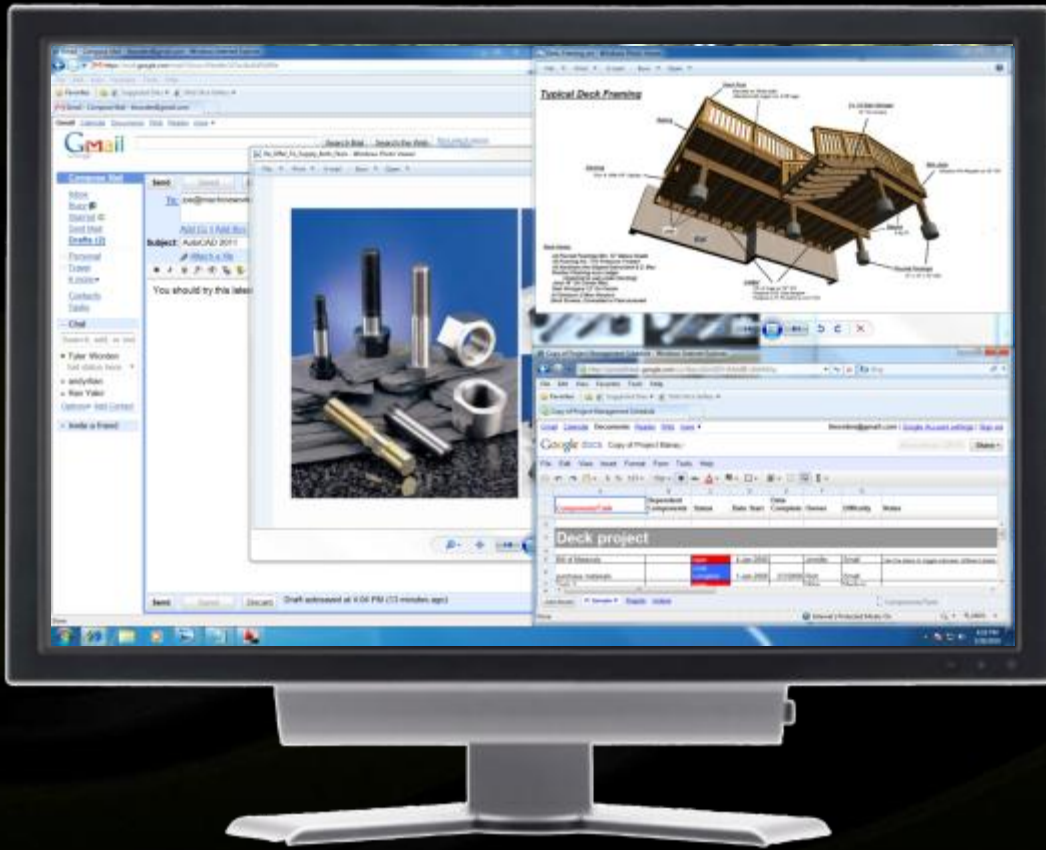


CLUTTERED DESKTOPS

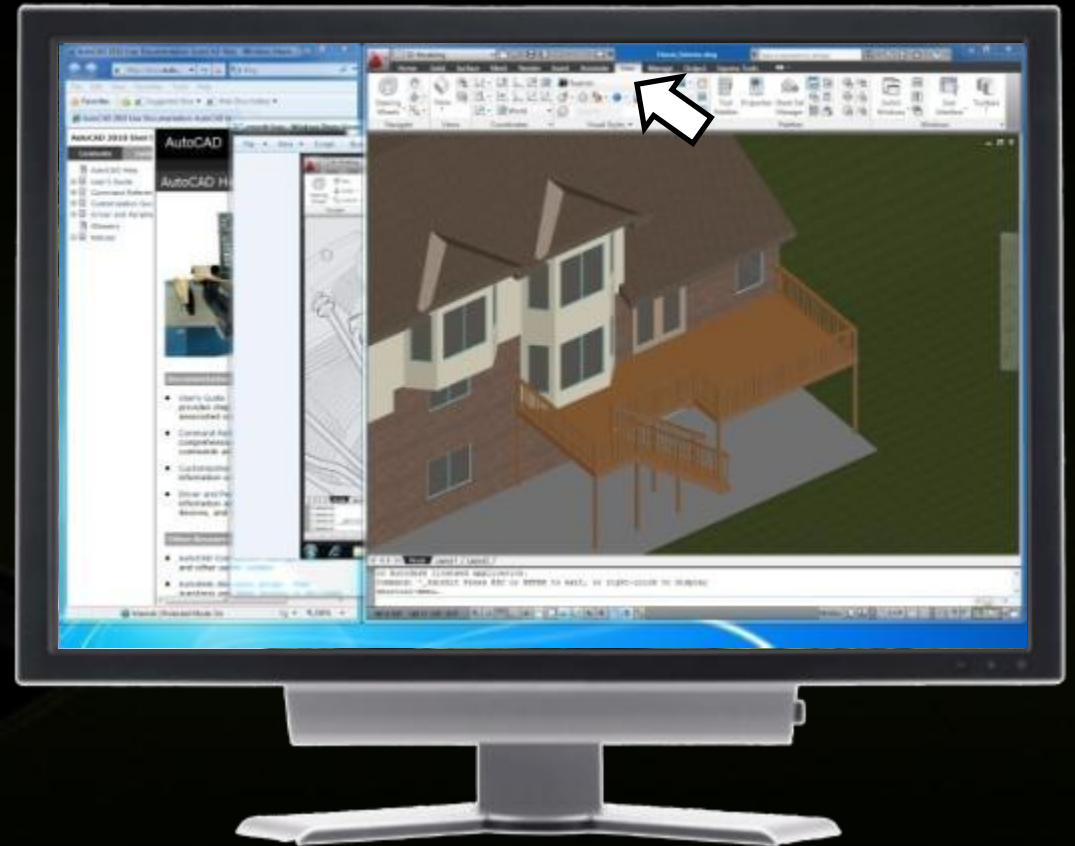
**'n' VIRTUAL
DESKTOPS**

Better Way to Work: NVIDIA® nView™

Create, customize, and switch between different desktops



1 CLUTTERED DESKTOP



3 VIRTUAL DESKTOPS

Mosaic Mode on NVIDIA NVS



Any application 'Just Works'



New NVS Features

- **Mosaic Mode on Windows 7**
 - Multi display support over multiple NVS (or Quadro) Graphics Cards
 - Multiple Monitors presented as a Single Display
 - Helps any 2D/3D Application over multiple monitors (*Video Walls, Signage*)
 - Supported via all Display Interfaces (*not limited to Display Port only*)
- **Mosaic Mode - design features**
 - Full acceleration of DX and OpenGL – 98% of performance of single screen (*negligible performance drop in Panoramic mode*)
 - Extends total horizontal width to 8K pixels
- **Available for Quadro & NVS Products only.**
 - Currently Shipping Quadro NVS 290 / 295 / 420 / 450 & NVIDIA NVS 300

NVIDIA NVS: Upcoming Enterprise Tools



NVenterprise 2.0

- **Configure graphics system through WMI and UI**
- **Save and restore a configuration**
- **Features in first delivery:**
 - GPU and driver state (version, vbios, temp, power ...)
 - Monitor topology (modes, layout, ...)
 - NVIEW profiles
- **Greatly reduces deployment time in large enterprises**
- **Windows 7 only**
- **Available on NVS & Quadro Professional Graphics Solutions only**

Driver updates and Installer 2.0

- **Update driver by keeping all state**
 - Monitor topology, profiles, ...
- **Improved User Experience & Enterprise Deployment**
 - Higher performance
 - Minimal reboots
 - Failure logging
 - Silent install
 - Customizable install options
- **Enhanced System Uptime**
- **Available on NVS & Quadro Professional Graphics Solutions**

NVIDIA NVS Vs GeForce



NVIDIA NVS

NVIEW for XP, Vista & Win7

Enterprise Sales & Support

Long Life Cycle

3yr Warranty

NVIDIA Built

Corporate Apps Testing

Panoramic Mode

Enterprise Tools

GeForce

NVIEW for XP

1-yr Warranty

NVIDIA NVS - Built from the ground up for the Commercial End Customer

CUDA & GPU Acceleration



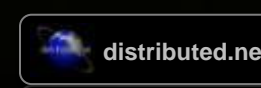
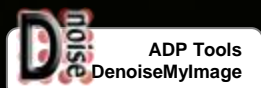
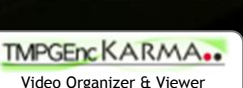
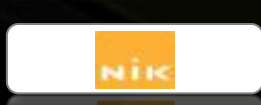
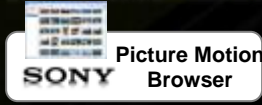
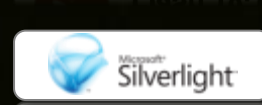
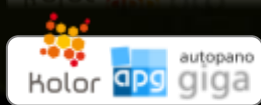
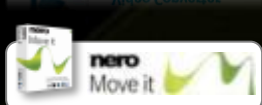
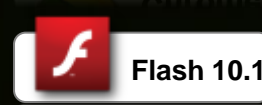
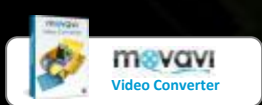
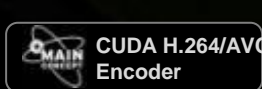
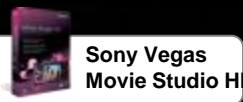
NVIDIA GPU Acceleration

Video

Photo

Web

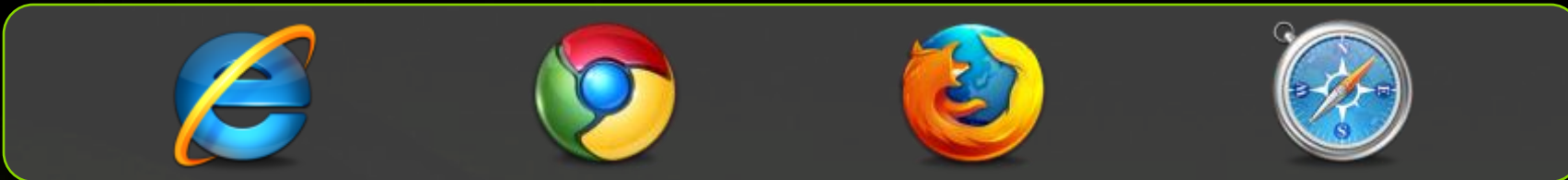
Productivity



GPU Accelerated Internet Technologies

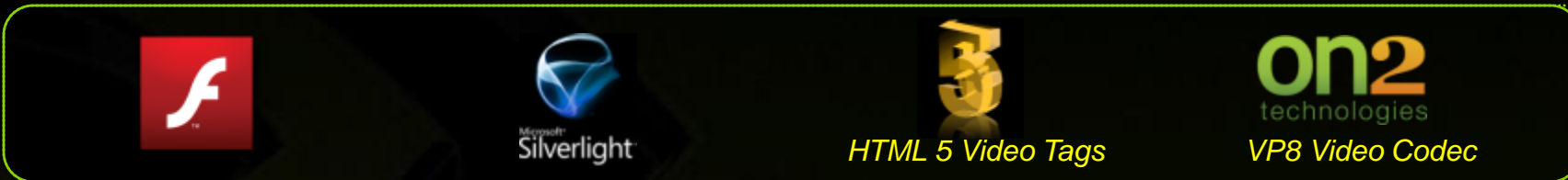


Browsers

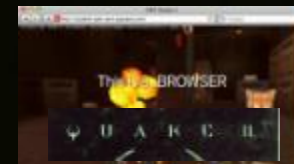


Apps

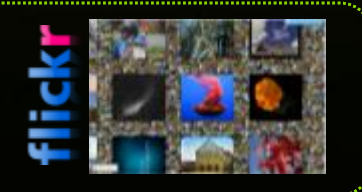
Video



3D Graphics



2D Graphics



A More Reliable Way to Work

Maximize System Uptime: NVS[®] Built By NVIDIA

**Engineered, Built,
and Tested by NVIDIA**



**Optimized GPU
architecture and Drivers**



High Reliability & Productivity



Extended Product Life Cycle



THANK YOU....

