

NVIDIA-BASED MOTHERBOARD  
LINECARD

## QUICK GUIDE FOR NVIDIA-BASED MOTHERBOARDS FOR INTEL PCs

### Why NVIDIA nForce MCPs?

#### NVIDIA® SLI® TECHNOLOGY

- > The combination of NVIDIA nForce® MCPs and GeForce® GPUs deliver the ultimate PC gaming experience
- > Revolutionary platform innovation that allows users to intelligently scale graphics performance by combining multiple NVIDIA graphics solutions
- > SLI-certified components deliver unmatched performance and compatibility with NVIDIA nForce based motherboards

#### ADVANCED NETWORKING

- > Native Gigabit Ethernet solution with low CPU utilization
- > NVIDIA DualNet® technology includes teaming and TCP/IP acceleration for greater bandwidth and better system performance
- > Prioritize important network traffic with NVIDIA FirstPacket™ technology

#### PERFORMANCE

- > ESA-certified components and applications bring you unprecedented control to monitor and tune your PC performance
- > NVIDIA Control Panel utility gives you access to BIOS level settings directly from Microsoft Windows to quickly optimize PC performance
- > SLI-Ready memory with EPP increases the bandwidth of memory buses with select third party components with one click implementation

#### STORAGE

- > Confidently store and protect priceless digital media files with NVIDIA MediaShield™ technology
- > Support for multiple SATA 3Gb/s drives
- > Reliable, accessible, scalable, and easy to manage storage

### Why NVIDIA GeForce Motherboard GPUs?

#### AWARD-WINNING GEFORCE® GPUS

- > Best-in-class graphics and parallel processing performance with support for DirectX 10 and NVIDIA CUDA™ technology
- > NVIDIA GeForce Boost technology turbocharges the performance of select discrete GeForce GPUs
- > Experience cutting-edge effects and incredible realism with NVIDIA PhysX™ technology

#### FLEXIBLE PLATFORM DESIGN INCLUDING SFF PCs

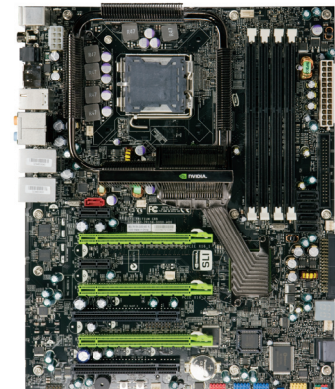
- > Build sleek, compact small form factor (SFF) PCs
- > Optimized to run cool with whisper-quiet acoustics without compromising performance
- > Perfect for building a wide variety of systems including media PCs, home PCs, and business PCs

#### HOME THEATRE QUALITY HD VIDEOS

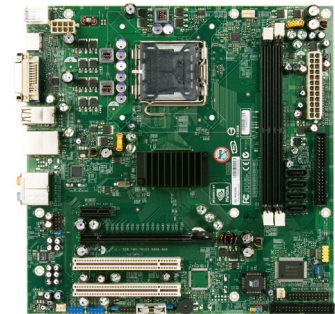
- > Stunning Blu-Ray video playback and superb picture clarity with NVIDIA® PureVideo® HD technology
- > Offloads video decoding from the CPU, resulting in smooth, stutter-free, high-definition video playback
- > Supports H.264, VC-1, and MPEG-2 HD-Video playback formats

#### AWARD-WINNING CORE LOGIC

- > Uncompromised features and system performance
- > Confidently store and protect priceless digital assets with NVIDIA MediaShield™ technology
- > Native networking support including Gigabit Ethernet
- > SATA drive compatibility and PCIe expandability



NVIDIA NFORCE® 790i ULTRA SLI® MCP



NVIDIA GEFORCE® 9400 MGPU

# QUICK GUIDE TO NVIDIA-BASED MOTHERBOARDS FOR INTEL PLATFORMS

	Product	Ideal For	Graphics										CPU			Performance Tuning			Memory		Storage		OS	Audio	Networking			
			Form Factor	Core Clock / Shader Clock (Mhz)	GPU Cores	NVIDIA® SLI® Technology	PCI Express® x16 Slots	NVIDIA GeForce® Boost	NVIDIA CUDA™ Technology	NVIDIA PhysX™ Technology	NVIDIA PureVideo®	PCI Express 2.0	DirectX Support	Display Outputs	Processor Supported	Socket Supported	FSB speed	ESA-Certified	NVIDIA Control Panel	NVIDIA System Monitor	DDR Support	SLI-Ready Memory	SATA/PATA Drive Support	NVIDIA MediaShield™ RAID	Microsoft® Windows® Vista™ Capable	Audio Specification	Gigabit Ethernet Connections	NVIDIA FirstPacket™ technology
NVIDIA nForce MCPs	nForce 790i Ultra SLI	ENTHUSIAST Overclocker, Extreme Gamer, Power User, Multimedia Enthusiast	ATX			3-way SLI (3x16)	3						Core 2 Family (incl. full 45nm support)	LGA775	1600 MHz	✓	✓	✓	Dual DDR3 1333	Dual DDR3 2000	6/2	0, 1, 0+1, 5	✓	HDA	2	✓		
	nForce 790i SLI		ATX			3-way SLI (3x16)	3						Core 2 Family (incl. full 45nm support)	LGA775	1600 MHz	✓	✓	✓	Dual DDR3 1333	Dual DDR3 1333	6/2	0, 1, 0+1, 5	✓	HDA	2	✓		
	nForce 780i SLI		ATX			3-way SLI (3x16)	3						Core 2 Family (incl. full 45nm support)	LGA775	1333 MHz	✓	✓	✓	Dual DDR2 800	Dual DDR2 1200	6/2	0, 1, 0+1, 5	✓	HDA	2	✓		
	nForce 680 SLI		ATX			3-way SLI (2x16)	3						Core 2 Family	LGA775	1333 MHz	✓	✓	✓	Dual DDR2 800	Dual DDR2 1200	6/2	0, 1, 0+1, 5	✓	HDA	2	✓		
	nForce 750i SLI	PERFORMANCE Gamer, Multimedia User	ATX			2-way SLI (2x8)	2						Core 2 Family (incl. full 45nm support)	LGA775	1333 MHz		✓	✓	Dual DDR2 800		4/4	0, 1, 0+1, 5	✓	HDA	1	✓		
	nForce 730i SLI		ATX				1	✓	✓	✓	HD	✓	10	DP HDMI DVI VGA	Core 2 Family (incl. full 45nm support) Pentium Family	LGA775	1333 MHz			Dual DDR3 1300 Dual DDR2 800		6/2	0, 1, 0+1, 5	✓	HDA	1	✓	
	nForce 650i SLI		ATX				2-way SLI (2x8)	2						Core 2 Family	LGA775	1333 MHz		✓	✓	Dual DDR2 800		4/4	0, 1, 0+1, 5	✓	HDA	1	✓	
	nForce 650i Ultra SLI		ATX					1						Core 2 Family	LGA775	1333 MHz				Dual DDR2 800		4/4	0, 1, 0+1, 5	✓	HDA	1	✓	
	nForce 630i	MAINSTREAM Business User, Casual Gamer, Home PC User	ATX				1						Core 2 Family (incl. full 45nm support) Pentium Family	LGA775	1333 MHz				DDR2 800		4/2	0, 1, 0+1, 5	✓	HDA	1			
NVIDIA GeForce mGPU	GeForce 9400	PERFORMANCE Gamer, Multimedia User	uATX	580 / 1400	16		1	✓	✓	✓	HD	✓	10	DP HDMI DVI VGA	Core 2 Family (incl. full 45nm support) Pentium Family Celeron Family	LGA775	1333 MHz			Dual Channel DDR3 1333 DDR2 800		6/2	0, 1, 0+1, 5	✓	HDA	1	✓	
	GeForce 9300		uATX	450 / 1200	16		1	✓	✓	✓	HD	✓	10	DP HDMI DVI VGA	Core 2 Family (incl. full 45nm support) Pentium Family Celeron Family	LGA775	1333 MHz			Dual Channel DDR3 1333 DDR2 800		6/2	0, 1, 0+1, 5	✓	HDA	1	✓	
	GeForce 7150 nForce 630i	MAINSTREAM Business User, Casual Gamer, Home PC User	uATX	600			1						9	HDMI DVI VGA	Core 2 Family (incl. full 45nm support) Pentium Family Celeron Family	LGA775	1333 MHz			DDR2 800		4/2	0, 1, 0+1, 5	✓	HDA	1		
	GeForce 7100 nForce 630i		uATX	500			1							9	HDMI DVI VGA	Core 2 Family (incl. full 45nm support) Pentium Family Celeron Family	LGA775	1333 MHz			DDR2 800		4/2	0, 1, 0+1, 5	✓	HDA	1	
	GeForce 7050 nForce 630i		uATX	500				1						9	DVI VGA	Core 2 Family (incl. full 45nm support) Pentium Family Celeron Family	LGA775	1333 MHz			DDR2 667		4/2	0, 1, 0+1, 5	✓	HDA	1	
	GeForce 6100 nForce 430	VALUE Business User, Value PC Buyer	uATX	500				1						9	VGA	Core 2 Family (incl. full 45nm support) Pentium Family Celeron Family	LGA775	1333 MHz			DDR2 667		4/2	0, 1	✓	HDA	1*	

## FEATURES AND BENEFITS FOR NVIDIA-BASED MOTHERBOARDS FOR INTEL

	Features	Benefits
<b>GRAPHICS</b>	Form Factor	The design flexibility of NVIDIA nForce® MCP and NVIDIA® GeForce® mGPU based motherboards enable a wide range of systems including gaming, media, home, business, and small form factor PCs.
	GPU Cores	Select NVIDIA GeForce mGPUs include enhanced processing cores that provide incredible parallel processing and graphics horsepower for today's consumer applications.
	NVIDIA® SLI® Technology	NVIDIA SLI technology is a revolutionary platform innovation that allows users to intelligently scale graphics performance by combining multiple NVIDIA graphics solutions in a single system with an NVIDIA nForce® SLI MCP.
	PCI Express® x16 slots	Up to three full-bandwidth, 16-lane PCI Express slots ensure maximum performance for add in graphics cards. Offers twice the PCI Express bandwidth of x8 solutions.
	NVIDIA® GeForce Boost Technology	GeForce Boost turbocharges the performance of NVIDIA GeForce GPUs when combined with an NVIDIA motherboard. (On select products. Visit <a href="http://www.nvidia.com/hybridSLI">www.nvidia.com/hybridSLI</a> for more information).
	NVIDIA® CUDA™ Technology	Harness the massive compute power of the GeForce® GPU to rip movies and videos for your iPod, Zune or PSP faster on select media applications, join the fight against cancer with Folding@home, and more!
	NVIDIA® PhysX™ Technology	Experience incredible realism with a GeForce® GPU. Immerse yourself in destructible worlds with fire, smoke, explosions, dust and debris. See action so fluid and natural that you can almost feel every bone-crunching hit as if you were standing on the 50 yard line; GeForce brings it all to life.
	NVIDIA® PureVideo® Technology and PureVideo HD Technology	The combination of high-definition video decode acceleration and post-processing that delivers unprecedented picture clarity, smooth video, accurate color, and precise image scaling for movies and video. PureVideo HD includes required content protection circuitry (HDCP) for playing Blu-ray movies at the highest quality possible (please substantiate), and is directly integrated with the leading HD movie software players. PureVideo HD delivers the ultimate high-definition movie experience on a PC.
	PCI Express 2.0	Offers a future-proofing bridge to tomorrow's most bandwidth-hungry games and 3D applications by maximizing 5 GT/s of bandwidth (twice that of first generation PCI Express) and is fully backwards compatible with existing PCI Express products.
	Microsoft® DirectX® Support	Ensures top-notch compatibility and performance for all Microsoft DirectX applications, including support for DirectX 10 on select products.
	Display Outputs	HDMI with HDCP - On board HDMI connector designed to meet the output protection management (HDCP) and security specifications of the Blu-ray Disc and HD DVD formats, allowing the playback of encrypted movie content on PCs when connected to HDCP-compliant displays. DVI with HDCP - Able to drive any single-link digital flat-panel display.
<b>PERFORMANCE TUNING TOOLS AND SOFTWARE</b>	ESA Certified	ESA-certified components and applications provide real-time and complete PC performance management, bringing you unprecedented control to manage and tune thermal, electrical, acoustic and operating characteristics to maximize your PC's performance.
	NVIDIA Control Panel Utility	Access, monitor, and dynamically adjust crucial system components including CPU temperatures, voltages, bus speeds, and CPU core speed in real time with clear, user-friendly control panel.
	NVIDIA System Monitor	Allows you to seamlessly monitor PC characteristics in an intuitive and customizable 3D environment.
<b>MEMORY</b>	NVIDIA SLI-Ready Memory with EPP	SLI-Ready memory with EPP increases the bandwidth of memory buses with select third party components with one click implementation.
<b>STORAGE</b>	NVIDIA® MediaShield™ Storage Technology	Suite of features that safeguards your most important digital media assets, including: <ul style="list-style-type: none"> <li>• Multiple Disk Setup: Simple point and click wizard-based interface for RAID 0, 1, 0+1, or 5 across SATA devices</li> <li>• DiskAlert System: identifies the specific disk in the event of a failure</li> <li>• RAID Morphing: ability to change from one supported RAID configuration to another</li> <li>• Bootable RAID Array: supports the use of multi-disk configurations for loading the operating system at power-up</li> </ul>
	SATA 3Gb/sec. with NCQ	Blazingly fast disk performance with the latest SATA 3Gb/s. hard disk drives with full support for native and tagged command queuing and hot plug.
	Ultra ATA-133	Dual-channel ATA interface capable of a maximum data transfer rate of 133 Mbps per channel.
<b>OS SUPPORT</b>	Microsoft® Windows® Vista™ Capable	<ul style="list-style-type: none"> <li>• NVIDIA nForce MCPs are ready for Microsoft Windows Vista Premium when coupled with an NVIDIA GeForce GPU and 512MB of system memory</li> <li>• NVIDIA GeForce mGPUs are ready for Microsoft Windows Vista Premium when coupled with 1GB of system memory</li> </ul>
<b>AUDIO</b>	High Definition Audio (HDA)	Features 32-bit, 192kHz quality for eight channels.
<b>NETWORKING</b>	NVIDIA Native Gigabit Ethernet	The industry's fastest Gigabit Ethernet performance eliminates network bottlenecks and improves overall system efficiency and performance.
	NVIDIA FirstPacket™ Technology	Assures your game data, VoIP conversations, and large file transfers are delivered according to your set preferences. Lowers your ping time for improved online gaming.

\* Features vary by product and motherboard design. Please confirm actual specs with your motherboard manufacturer.

For more information on NVIDIA based Motherboards, visit [www.nvidia.com/motherboards](http://www.nvidia.com/motherboards)

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