

# March 2012 Gaming PC Builds:

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You can also download the PDF for later: [March 2012 Gaming PC Builds Download](#) (coming soon..just creating it!)



## Gaming PC Builds of the Month Introduction:

It is that time again when I get to post the beginning of the month gaming PC builds of the month article. I know that this past month at Newb Computer Build I have not done much in terms of adding new content, but I always try to at the very least post the Gaming PC Builds of the month as soon as a new month arrives, so here start the builds for March.

And as an FYI, I have not posted much more new information because I have been trying to work on a more dynamic PC building page to make it easier for Newbies trying to build a pc. Hopefully this new page allows you to easily choose each piece of compatible hardware simply by clicking through a linear selection of hardware (selected personally by me of course).

Moving past February there have not really been any major hardware releases, so that being said it is hard to digress much of the hardware from the previous instalment. The builds this month have been shuffled around mostly in terms of price changes and extra finds (other hardware that I have concluded to be suitable based on recent readings of articles and reviews).

This way you can be sure that the hardware you are viewing is as current as the latest month in terms of any prices and reviews. For the past couple months I have started posting videos to the [NewbComputerBuild YouTube channel](#) to act as a faster visual of the hardware and to help the succession of these articles. So far it has proven to be well on my part, but any feedback would be welcomed. Feel free to take a gander and subscribe!

I have also just tried compiling the Monthly Gaming PC Build articles into an easily downloadable PDF for whatever use you may have for it such as reading it later, printing, sharing etc.

**And last, one more note:** If anyone is ever interested in sharing their builds via whatever way you like such as article form, pictures, or video then I would be more than willing to compile yours and post it to the site.



## Monthly Gaming PC Build ( \$498 ): March 2012

### Gaming PC Build Recipe:

<b>Processor:</b> <a href="#"><u>Intel Core i3-2120 Processor 3.3 GHz 3MB Cache Socket LGA1155</u></a>	<b>Motherboard:</b> <a href="#"><u>ASRock H61M/U3S3 Intel H61 Micro ATX DDR3 1333 Motherboard</u></a>
<b>Graphics Card:</b> <a href="#"><u>HIS Radeon HD 6790 1 GB GDDR5 Eyefinity DisplayPort DVI (HDCP) HDMI PCIe X16 2.1 Video Card (H679F1GD)</u></a>	<b>RAM:</b> <a href="#"><u>Crucial CT2CP25664BA1339 4GB 2GBx2 240-pin PC3-10600 DIMM DDR3 Memory KIT</u></a>
<b>Hard Drive:</b> <a href="#"><u>Western Digital 250 GB Caviar Blue SATA 6 Gb/s 7200 RPM 16 MB Cache Bulk/OEM Desktop Hard Drive - WD2500AAKX</u></a>	<b>Power Supply:</b> <a href="#"><u>Corsair Builder Series CX V2 500-Watt 80 Plus Certified Power Supply Compatible with Intel and AMD Platforms - CMPSU-500CXV2</u></a>
<b>Computer Case:</b> <a href="#"><u>AeroCool 10-Bay ATX Mid Tower Computer Case - No PSU (Black/Red)</u></a>	<b>Optical Drive:</b> <a href="#"><u>Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive (Black)</u></a>
<b>Estimated Price: \$ 498.59</b> (Made it within budget this time!)	

## Overview: Gaming PC Build ( < \$500 )

The past few months I have frivolously had the less than \$500 build at over \$500. This was -and is because I told myself I would not accept less than the Intel Core i3 2120 processor, because this processor performs solidly for gaming purposes and is an as is processor wonder.

I debated this month on whether or not to include the newer AMD Fx 4100 processor since it has had some notice in this category for gaming and AMD usually would fill the more budgeted of gaming builds, however after taking a look at Toms Hardware's comparison of the these two processors, it seemed the Intel i3 2120 processor was always a tiny bit better in the gaming benchmarks.

In order to firmly fit the \$500 budget this month, I have also changed out the motherboard to an ASRock H61M motherboard that comes an an attractively low cost for what it offers - like memory support up to 16GB - 4 SATA2 ports -2 SATA 3 ports - 8 USB 2.0 ports -and 2 USB 3.0 ports etc. Which with a build like this is plenty! Plus both Amazon and Newegg have really good customer reviews on this one.

I have swapped the 500 Watt Corsair Builder Series power supply to a lower 430 Watt one based on the actual power consumption need for the hardware here. This allowed me to squeeze the build properly into the budget we need (at the \$500 cap). This does not at all effect computing performance and it suitable even if you had more RAM or Hard Drives.

Lastly, I have only swapped out the optical drive for a Sony one as the price on this one is lower. As I have said before I usually only base optical drives (DVD) on prices since they are becoming increasingly useless and really all act, for the most part, the same. As for the rest of the hard there is the inclusion of a Radeon HD 6790 graphics card (will have good 1920x1200 resolution performance in most games), a 250GB western digital hard drive (you can get larger if your budget allows), and 4GB of DDR3 Crucial RAM.

## Overview: The Gaming PC Hardware

### [Intel Core i3-2120 Processor 3.3 GHz 3MB Cache Socket LGA1155](#)



Intel i3 2120 Processor

The Intel Core i3 2120 processor in this build paired with the Radeon HD 6790 graphics card (as seen below) will and should be able to play most games at decent settings (high graphics depending on the intensity of the game), and get decent fram rates at resolutions of 1920X1080.

Keep in mind that more demanding games like Battlefield 3 may call for lower settings, but this setup should be able to play games like Skyrim at frame rates of 40-45.

<b>Intel Core i3-2120</b>	2 cores	3.3GHz clock speed	4 threads
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#### Technical Details:

- ⦿ Process Type: Intel Core i3 Processor i3-2120 Frequency: 3.3 GHz DMI: 5 GT/s
- ⦿ Intel Smart Cache: 3 MB Process: 32 nm Socket: LGA1155
- ⦿ Power Consumption: 65 W Max Memory Bandwidth: 21 GB/s Graphics Base Frequency: 850 MHz
- ⦿ Graphics Max Dynamic Frequency: 1.1 GHz This processor is a Dual Core Processor
- ⦿ This processor supports Hyper-Threading Technology This processor supports Intel Virtualization Technology (VT-x)
- ⦿ This processor supports Enhanced Intel Speedstep Technology This processor supports Thermal Monitoring Technologies
- ⦿ This processor supports Intel 64 This processor supports Idle States
- ⦿ This processor supports Intel Fast Memory Access This processor supports Intel Flex Memory Access

### [ASRock H61M/U3S3 Intel H61 Micro ATX DDR3 1333 Motherboard](#)



ASRock H61M:U3S3 Intel H61 Micro ATX DDR3 1333 Motherboard

AsRock has been growing in their reputation in terms of building quality motherboards. This AsRock H61M/U3S3 motherboard is a perfect fit for this <\$500 build this month as it includes everything you need; nothing too fancy or surprising about it and a great price tag to go with it. You will be able to get up to 16GB or memory (which is plenty right now and you probably will never get this much in this build anyways), a couple USB 3.0 ports and 4 USB 2.0 ports. Not to shabby for a \$69.99 motherboard!

### Technical Details:

- ⊙ Processor: Socket 1155 Support Intel Core i7/ i5/ i3 Processor; Supports Intel Turbo Boost Technology; Supports Intel K-Series unlocked CPU; Supports Hyper-Threading Technology
- ⊙ Memory: 2x 240pin DDR3-1333/1066 DIMMs, Dual Channel, Non-ECC/Un-buffered, Max Capacity upto 16GB
- ⊙ Slots: 1x PCI-Express 2.0 x16 Slot; 1x PCI Express 2.0 x1 Slot; 2x PCI Slots
- ⊙ SATA: 4x SATA2 Ports; 2x SATA3 Ports
- ⊙ Ports: 8x USB 2.0 Ports(4 rear, 4 by headers); 2x USB 3.0 ports; 2x PS/2 Ports; 1x HDMI Port; 1x DVI Port; 1x VGA Port; 1x RJ45 LAN Port; Audio I/O Jacks
- ⊙ Audio: Realtek ALC662 5.1-Channel HD Audio CODEC
- ⊙ Chipset: Intel H61; LAN: Atheros AR8151 PCI-Express x1 Gigabit Ethernet Controller, Supports Wake-On-LAN; Form Factor: Micro ATX, 9.6 x 8.6 inch / 24.4 x 21.8 cm
- ⊙ Memory: 2x 240pin DDR3-1333/1066 DIMMs, Dual Channel, Non-ECC/Un-buffered, Max Capacity up to 16GB
- ⊙ Power Connector: 1x 24pin main power, 1x 8pin CPU power
- ⊙ Processor: Socket 1155 Support Intel Core i7/ i5/ i3 Processor; Supports Intel Turbo Boost Technology; Supports Intel K-Series unlocked CPU; Supports Hyper-Threading Technology

### [HIS Radeon HD 6790 1 GB GDDR5 Eyefinity DisplayPort DVI \(HDCP\) HDMI PCIe X16 2.1 Video Card \(H679F1GD\)\)](#)



HIS Radeon HD 6790 1 GB GDDR5

The Radeon HD 6790 graphics card is a solid pick for a budgeted gaming PC build. The performance you should be able to expect to push out of this card is (as mentioned in the Intel i3 2120 write up) is goods performance at high settings in most games at resolutions of 1920X1080. High demanding games will most likely need to be turned down a little or else you may have a cost in gaming frame rates.

**The HIS brand of Radeon HD 6790 comes with the following contents:**

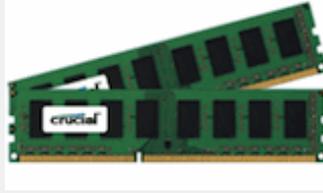
- ⊙ HIS Graphics Card
- ⊙ CrossFireX™ Bridge
- ⊙ 2x Power Cable 2x 4pin in, 6 pin out
- ⊙ DVI-VGA Adapter
- ⊙ Install CD with Multilingual User Guide
- ⊙ Quick Installation Guide
- ⊙ HIS Power Up Label
- ⊙ DiRT® 3™ Redemption Coupon

Cooler	IceQ X
GPU	6790
Core Clock	900 MHz
Memory Clock	4400 MHz
Memory Size	1024 MB
Memory Type	GDDR5
Memory Interface	256 bit
Interface	PCI Express x16 (PCI Express 2.1)

**Other Technical Details:**

- ⊙ Eyefinity technology - an immersive experience that expands your game across multiple displays.  
Welcome to surround sight.
- ⊙ Play the latest games in true "Eye-Definition" with the AMD Radeon HD 6800 Series graphics DirectX 11-capable architecture
- ⊙ Also enabling ultra-realistic effects for the ultimate HD gaming experience with AMD HD3D technology.
- ⊙ Enhanced Unified Video Decoder (UVD) 3 - Watch the hottest Blu-ray movies, online video
- ⊙ And other HD content beyond 1080p with low power and low noise with GPU acceleration and enhanced Unified Video Decoder (UVD) 3 features
- ⊙ DirectX 11-capable architecture enabling ultra-realistic effects for the ultimate HD gaming experience with AMD HD3D technology.
- ⊙ EyeDefinition Graphics - Play the latest games in true "Eye-Definition" with the AMD Radeon HD 6800 Series graphics
- ⊙ EyeSpeed Technology - Experience enhanced application performance and incredible video quality online or with your favorite Blu-ray movie

[Crucial CT2CP25664BA1339 4GB 2GBx2 240-pin PC3-10600 DIMM DDR3 Memory KIT](#)



Crucial 4GB kit (2GBx2), 240-pin DIMM, DDR3 PC3-10600 memory module

4GB of RAM is the perfect sweet spot starting point for a gaming PC. These two sticks of Crucial DDR3 RAM are dirt cheap and will do the job better than any. Not only is this set of RAM cheap, the reputation of Crucial quality RAM has been around for years so you can be sure this RAM is a solid pick.

### Technical Details:

**Part Number:** CT2KIT25664BA1339

- ⊙ **Module Size:** 4GB kit (2GBx2)
- ⊙ **Package:** 240-pin DIMM
- ⊙ **Feature:** DDR3 PC3-10600
- ⊙ **Specs:** DDR3 PC3-10600 • CL=9 • Unbuffered • NON-ECC • DDR3-1333 • 1.5V • 256Meg x 64 •
- ⊙ To use DDR3 memory, your system motherboard must have 240-pin DIMM slots and a DDR3-enabled chipset.
- ⊙ This is because a DDR3 SDRAM DIMM will not fit into a standard DDR2 DIMM socket or a DDR DIMM socket.
- ⊙ **Company Program:** Crucial
- ⊙ **Configuration:** 256Meg x 64
- ⊙ **DDR Timings:** CL=9
- ⊙ **DIMM Type:** Unbuffered
- ⊙ **Density:** 4GB kit (2GBx2)
- ⊙ **Error Checking:** NON-ECC
- ⊙ **Megabytes:** 4096
- ⊙ **Memory Type:** DDR3 PC3-10600
- ⊙ **Package:** 240-pin DIMM
- ⊙ **Replenishment Flag:** Y
- ⊙ **Speed:** DDR3-1333
- ⊙ **Voltage:** 1.5V

[Western Digital 250 GB Caviar Blue SATA 6 Gb/s 7200 RPM 16 MB Cache Bulk/OEM Desktop Hard Drive - WD2500AAKX](#)



Western Digital 250 GB Caviar Blue

250GB for the entry level \$500 build this month seems feasible for about \$76. The Western Digital 2Caviar Blue series is always a good choice with a solid background. Even though this hard drive is only 250GB it

should be plenty of space for quite a few games and some media. My opinion on any hard drive purchase is to buy when the prices are right and when the sales go on. So far the inflation of hard drive prices has been high and seem to now be subsiding, so keep in mind that you can always just add another harddrive to the mix when you need the extra digital space.

**Technical Details from Western Digitals' Website:**

Performance Specifications		▲
	Rotational Speed	7,200 RPM (nominal)
	Buffer Size	16 MB
	Load/unload Cycles	300,000 minimum
<b>Transfer Rates</b>		
	Transfer Rate (Buffer To Disk)	126 MB/s (Max)
Physical Specifications		▲
	Formatted Capacity	250,059 MB
	Capacity	250 GB
	Interface	SATA 6 Gb/s
	User Sectors Per Drive	488,397,168
<b>Temperature</b>		
	Operating	32° F to 140° F
	Non-operating	-40° F to 158° F
<b>Temperature (Metric)</b>		

	Operating	-0° C to 60° C
	Non-operating	-40° C to 70° C
Electrical Specifications		▲
<b>Current Requirements</b>		
Power Dissipation		
	Read/Write	6.80 Watts
	Idle	6.10 Watts
	Standby	0.70 Watts
	Sleep	0.70 Watts

## [Corsair Builder Series CX V2 430-Watt 80 Plus Certified Power Supply Compatible with Intel and AMD Platforms - CMPSU-430CXV2](#)



Corsair 430 Watt Builder Series CX430 V2 80 PLUS Certified Power Supply

The 430 Watt Corsair Builder series will be able to perfectly power all of the hardware included in this build and then some. Such as, if you want to add more RAM or Hard Drives in the future this PSU will still be up for the task. It is always a good idea to keep in mind that when building a PC, choosing a quality power supply is very important as it is responsible for powering everything! So it makes sense you do not want it malfunctioning in any way. This is why I chose the Corsair Builder Series branded PSUs many times as the price is great and the quality is as well.

### **Technical Details and Description:**

"The ideal choice for value-conscious system builders and upgraders" - Corsair.com

The Corsair Builder Series of PSUs are designed for worry-free compatibility for your home desktop PC system build or upgrade. With features usually reserved for premium power supplies, it's a great choice for systems where continuous and reliable power delivery and low noise are essential.

### **Corsair Builder Series CX430 Features:**

- ⊙ Ultra-quiet 120mm fan delivers excellent airflow at an exceptionally low noise level by varying fan speed in response to temperature
- ⊙ 80 PLUS certified to deliver at least 80% efficiency at normal load conditions (20% to 100% load)
- ⊙ 0.99 Active Power Factor Correction provides clean and reliable power
- ⊙ Complies with ErP Lot 6 European Union standard for low standby power consumption
- ⊙ Universal AC input from 90~264V — No more hassle of flipping that tiny red switch to select the voltage input!
- ⊙ Extra long fully-sleeved cables support full tower chassis
- ⊙ Dedicated single +12V rail offers maximum compatibility with the latest components
- ⊙ Over-voltage and over-power protection, under-voltage protection, and short circuit protection provide maximum safety to your critical system components
- ⊙ Three year warranty and lifetime access to Corsair's legendary technical support and customer service
- ⊙ Supports the latest ATX12V v2.3 standard and is backward compatible with ATX12V 2.2 and ATX12V 2.01 systems
- ⊙ Safety Approvals: UL, CUL, CE, CB, FCC Class B, TÜV, CCC, C-tick
- ⊙ Dimensions: 5.9"(W) x 3.4"(H) X 5.5"(L); 150mm(W) x 86mm(H) x 140mm(L)
- ⊙ MTBF: 100,000 Hours

## [AeroCool 10-Bay ATX Mid Tower Computer Case - No PSU \(Black/Red\)](#)



Aero Cool 10-Bay ATX Mid Tower Computer Case

Basic, yet all you need. Used and quoted from last months builds,

*" This AeroCool case is as basic as it gets - A regular ATX Mid Tower computer case with Four (4) 5.25-inch external drive bays One (1) 3.5-inch external drive bay and Five (5) 3.5-inch internal drive bays. Even though the case is basic it has everything you need to get going and the case itself actually looks pretty good. The only recommendation I would have would be to also purchase a \$4-5 case fan to use as a case exhaust, but you should be fine either way. Used in last months build and this months for the lower end build since it fits perfectly well into the budget and it works since you do not need to worry so much about cooling in a build such as this one. You can always splurge for a more aesthetic case, however if this does not matter to you this one does the job. "*

**(\*Keep in mind that this case has no fans. If you are worried about too much heat then you may want to purchase one for about \$5 such as this [Cooler Master 80mm Dual Ball Bearing Case Fan Black - \(SAF-B82-E1\)](#))**

### **Technical Details:**

- ⊙ 10-Bay ATX Mid Tower Computer Case General Features: Black color with red accent Mid Tower design
- ⊙ ATX form factor No Power Supply Compatible with ATX and MicroATX motherboards
- ⊙ Compatible with standard ATX PSUs Case Thumbscrews included for easy removal of side panel

- ⊙ Case Features: Four (4) 5.25-inch external drive bays One (1) 3.5-inch external drive bay
- ⊙ Five (5) 3.5-inch internal drive bays

## [Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive \(Black\)](#)



Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive (Black)

This basic Sony DVD+/-RW optical drive has went down in price this month to about \$18.99 so not a bad price. As I have before mentioned optical drives are a dying piece of hardware as they are becoming less and less necessary and they all seem to be one of the same. So when choosing the right optical drive, I mostly look at the price tag and whether or not they include a basic SATA connection.

### Product Features

- ⊙ Drive Type: Internal DVD+/-RW Dual Layer Drive
- ⊙ Interface: SATA
- ⊙ Buffer Memory: 1 MB
- ⊙ Random Access Time: DVD - 160ms; CD - 140ms
- ⊙ O/S Compatibility: Windows 7 compatible
- ⊙ Write: DVD+R/-R: 24X; DVD+RW/-RW: 8X/6X; DVD+R/-R DL: 12X; DVD-RAM: 12X



## Monthly Gaming PC Build ( \$500 - \$1000 ): March 2012

### Gaming PC Build Recipe:

\*\*Everything you need to play most recent games at high settings with good frame rates at resolutions of 1920X1200.

<b>Processor:</b> <a href="#">Intel Core i5-2500K Processor</a>	<b>Motherboard:</b> <a href="#">ASRock LGA1155/ Intel Z68/ DDR3/ Quad CrossFireX &amp; Quad SLI/ SATA3&amp;USB3.0/ A&amp;V&amp;GbE/ ATX Motherboard. Z68 EXTREME4</a>
<b>Graphics Card:</b> <a href="#">ASUS</a>	<b>RAM:</b> <a href="#">Corsair Vengeance 8 GB ( 2 x</a>

<a href="#"><u>ENGTX560 TI DCII TOP/2DI/1GD5 GeForce GTX 560 Ti</u></a>	<a href="#"><u>4 GB ) DDR3 1600 MHz (PC3 12800) 240-Pin DDR3 Memory Kit for Intel Core i3, i5, i7 and AMD Platforms SDRAM CMZ8GX3M2A1600C9</u></a>
<b>Hard Drive:</b> <a href="#"><u>Western Digital Caviar Blue 500 GB SATA III 7200 RPM 16 MB Cache Bulk/OEM Desktop Hard Drive - WD5000AAKX</u></a>	<b>Power Supply:</b> <a href="#"><u>Corsair Enthusiast Series 750-Watt 80 Plus Bronze Certified Power Supply Compatible with Intel Core i3, i5, i7 and AMD platforms - CMPSU-750TXV2</u></a>
<b>Computer Case:</b> <a href="#"><u>NZXT Phantom 410 Mid Tower USB 3.0 Gaming Case - Black</u></a>	<b>Optical Drive:</b> <a href="#"><u>Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive (Black)</u></a>
<b>Estimated Price: \$998.20</b> (oh just barely in budget!)	

## Overview: Gaming PC Build ( \$500 - \$1000 )

This month we have a no bells or whistles mid range \$500 - \$1000 gaming PC priced roughly at \$979.21. This build will play most recent games at their high settings with good FPS rates at resolutions of 1920X1080; generally what gamers seem to be aiming for in terms of resolutions nowadays.

By no bells and whistles I mean a build that has the bare essentials and power to play these games. With maybe the exception of the case (The fancy NZXT Phantom 410) in my opinion it is hard to skim on price with this build and get similar results.

Staying with the raw power of the Intel 2500K we have the inherit overclocking capabilities making the build that much stronger. The graphics card chosen this month has been upgraded from the regular GTX 560 to a GTX 560 Ti which has a higher 3D mark Vantage than the GTX 560 giving you better FPS in games.

The motherboard used has been swapped from the previous more expensive Asus P8Z68-V PRO/GEN3 for the AsRock Z68 EXTREME4 to give room for the more expensive graphics card. However you get everything you need plus more. There is room for plenty of memory expansion and even the option to add another GTX 560 Ti in SLI later on if you want to upgrade your build further extending its lifespan potential.

Another notable mention in this months mid range build is the inclusion of the NZXT Phantom Case (in either Black White or Red). This case has been well received for a while and looks fantastic in my opinion. As I have said before I always love choosing a new computer case as the selection is always vast and you can rarely screw up too much in doing so. This is really what gives your gaming pc its individualistic look and appeal.

## Overview: The Gaming PC Hardware

## Intel Core i5-2500K Processor



Intel Core i5 -2500K Processor

The **Intel 2500K** is the go to norm in mid to high end gaming PCs these days and there is good reason for this. I mean you could go for a cheaper Intel i5 2400 processor and get similar performance, however this one is clocked a few MHz higher and has an unlocked CPU multiplier! This enables you to overclock this processor easily which makes this processor a wonderful choice for gamers wanting to push as much as they can out of a quality processor.

<b>Intel Core i5-2500K</b>	4 cores	3.3GHz clock speed	LGA 1155 Socket
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### **Product Details:**

- ⊙ Specs: Quad-core 3.3GHz, 6M Cache, Intel HD Graphics 3000, 95 watt TDP, Dual-channel DDR3 memory support, socket LGA1155
- ⊙ Quad-core processor delivers four-way multicore processing via parallelism resulting in more efficient use of processor
- ⊙ Enhanced Intel SpeedStep Technology is an advanced means of enabling very high performance while also delivery power-conservation.
- ⊙ 6 MB Intel Smart Cache is dynamically shared to each processor core, based on workload
- ⊙ All Core i5 processors have Intel Turbo Boost Technology

[ASRock LGA1155/ Intel Z68/ DDR3/ Quad CrossFireX & Quad SLI/ SATA3&USB3.0/ A&V&GbE/ ATX Motherboard, Z68 EXTREME4](#)



ASRock LGA1155: Intel Z68: DDR3: Quad CrossFireX & Quad SLI: SATA3&USB3.0: A&V&GbE: ATX Motherboard, Z68 EXTREME4

I have swapped the Asus P8Z68-V PRO/GEN3 this month for this ASRock Z68 Extreme4 motherboard. This enabled room for the higger end GTX 560 Ti graphics card whose benefits far out weigh that of the motherboard functionality. This ASRock motherboard does indeed have it all and everything one would need for a quality high end gaming build. Just take a look at its specifications and details below:

### **Product Details:**

- ⊙ ASRock DuraCaps (2.5 x longer life time), 100% Japan-made high-quality Conductive Polymer Capacitors
- ⊙ Digi Power, Advanced V8 Power Phase Design
- ⊙ Supports Intel® K-Series unlocked CPU
- ⊙ Supports Intel® Smart Response Technology (ASRock Updates Intel® RST Driver For Intel® Smart Response Technology)
- ⊙ Supports Dual Channel DDR3 2133(OC)
- ⊙ Integrated PLX PEX8608 chip onboard to offer sufficient PCI-E lanes
- ⊙ Supports ATI™ Quad CrossFireX™ , 3-Way CrossFireX™ and CrossFireX™
- ⊙ Supports NVIDIA® Quad SLI™ and SLI™
- ⊙ Supports Intel® HD Graphics with Built-in Visuals
- ⊙ Multi VGA Output options: D-Sub, DVI-D, HDMI and DisplayPort
- ⊙ 2 x Front USB 3.0 ports, 2 x Rear USB 3.0 ports, 4 x SATA3 connectors, 1 x eSATA3 connector
- ⊙ Supports ASRock XFast RAM, XFast LAN, XFast USB Technologies
- ⊙ Supports ASRock Extreme Tuning Utility (AXTU), Graphical UEFI, Lucid Virtu, On/Off Play, Instant Boot, Instant Flash, Good Night LED, APP Charger, SmartView
- ⊙ Combo Cooler Option (C.C.O.)
- ⊙ 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec), THX TruStudio PRO™
- ⊙ Free Software: Cyberlink MediaEspresso 6.5 Trial
- ⊙ Free Bundle : 1 x Front USB 3.0 Panel, 1 x Rear USB 3.0 Bracket, 1 x 3.5mm Audio Cable

## [ASUS ENGTX560 TI DCII TOP/2DI/1GD5 GeForce GTX 560 Ti](#)



ASUS ENGTX560 TI DCII TOP:2DI:1GD5 GeForce GTX 560 Ti

For March, I have swapped the previous GTX 560 for this Asus **GTX 560 Ti**. The Ti has a faster Effective Memory Clock - Core Clock, Memory Clock, and Shader Clock making it that much stronger. For a quick side by side comparison check the chart below:

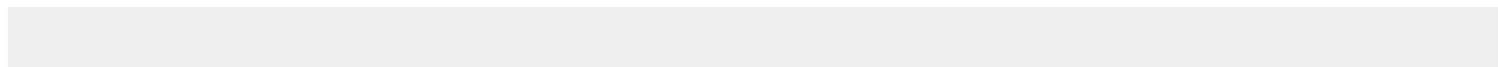
GPU	<b><u>GeForce GTX 560 (Fermi)</u></b>	<b><u>GeForce GTX 560 Ti (Fermi)</u></b>
Core Clock	850MHz	900MHz
Shader Clock	1700MHz	1800MHz
Stream Processors	336 Processor Cores	384 Processor Cores
Effective Memory Clock	4200MHz	4200MHz

Memory Size	1GB	1GB
Memory Interface	256-bit	256-bit
Memory Type	GDDR5	GDDR5
DirectX	DirectX 11	DirectX 11
OpenGL	OpenGL 4.1	OpenGL 4.1
HDMI	1 x mini HDMI	1 x mini HDMI
DVI	2 x DVI	2 x DVI
RAMDAC	400 MHz	400 MHz
Max Resolution	2560 x 1600	2560 x 1600
3D VISION Game Ready	Yes	Yes
SLI Support	SLI Ready	SLI Ready
Cooler	With Fan	With Fan
Dual-Link DVI Supported	Yes	Yes
HDCP Ready	Yes	Yes

**Product Details:**

- ⊙ Top-selected and overclocked to 900MHz, 80MHz higher than reference for faster and smoother performance
- ⊙ Speed up heat dissipation with doubled airflow via exclusive DirectCU dual fan design
- ⊙ Pump up graphics performance with Super Alloy Power delivering a 15% performance boost, 2.5 longer lifespan and 35C cooler operation
- ⊙ Crank up 50% faster clock speeds with exclusive Voltage Tweak
- ⊙ Powered by NVIDIA GeForce GTX 560 Ti

[Corsair Vengeance 8 GB \( 2 x 4 GB \) DDR3 1600 MHz \(PC3 12800\) 240-Pin DDR3 Memory Kit for Intel Core i3, i5, i7 and AMD Platforms SDRAM CMZ8GX3M2A1600C9](#)





Corsair Vengeance 8 GB ( 2 x 4 GB ) DDR3 1600 MHz

I have used it before and I am using it again, the Corsair Vengeance 8Gb RAM kit consisting of two 4GB RAM modules is a good amount of memory for this build, looks nice, and has good reviews. And who not better to quote than Corsair themselves saying that this Corsair Vengeance package is:

*"Designed with overclockers in mind, Corsair Vengeance DDR3 memory modules use carefully selected RAMs to enable excellent overclocking results on current and future generation Intel and AMD platforms. All initial Vengeance memory modules have a low 1.5V supply voltage for maximum compatibility and energy efficiency. Aluminum heat spreaders help dissipate heat effectively while providing an aggressive appearance for your gaming rig. As a bonus, the attractive low price of Vengeance memory will also leave lots of room in your system build budget.*

*Vengeance DDR3 memory is available in single module, and two or three module kits, with sizes ranging from 4GB all the way up to 16GB, making it easy for you to match the DIMM population requirements of your motherboard."*

### **Product Details:**

- ⊙ 8GB (2x4GB) DDR3 for AMD, Intel Dual processors and upcoming 2nd Generation Intel Core platforms
- ⊙ Speed: 1600MHz
- ⊙ Timing: 9-9-9-24
- ⊙ Voltage: 1.5V
- ⊙ Vengeance heat spreader for styling and performance

[Western Digital Caviar Blue 500 GB SATA III 7200 RPM 16 MB Cache Bulk/OEM Desktop Hard Drive - WD5000AAKX](#)



Western Digital Caviar Blue 500 GB SATA III 7200 RPM 16 MB Cache Bulk:OEM Desktop Hard Drive

Again and again I keep going back to the Western Digital Caviar Blue Hard Drives these days for the gaming PC builds of the month. The prices have been a tad more stable on these than the rest and it is hard to beat the quality of these drives. Is 500GB not enough for you? Then you can always purchase a 1TB for around \$130, but if it is keep in mind that you can always increase your hard drive space later simply by purchasing another and plugging a new one in.

## Performance Details From Western Digitals' Website:

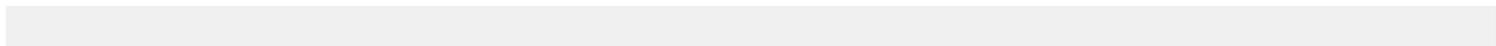
Performance Specifications		▲
	Rotational Speed	7,200 RPM (nominal)
	Buffer Size	16 MB
	Load/unload Cycles	300,000 minimum
<b>Transfer Rates</b>		
	Transfer Rate (Buffer To Disk)	126 MB/s (Max)
Physical Specifications		▲
	Formatted Capacity	500,107 MB
	Capacity	500 GB
	Interface	SATA 6 Gb/s
	User Sectors Per Drive	976,773,168
<b>Metric</b>		
	Height	26.1 mm
	Depth	147 mm
	Width	101.6 mm
	Weight	0.69 kg
<b>Temperature (English)</b>		

	Operating	32° F to 140° F
	Non-operating	-40° F to 158° F
<b>Temperature (Metric)</b>		
	Operating	-0° C to 60° C
	Non-operating	-40° C to 70° C
Electrical Specifications		▲
<b>Current Requirements</b>		
Power Dissipation		
	Read/Write	6.80 Watts
	Idle	6.10 Watts
	Standby	0.70 Watts
	Sleep	0.70 Watts

## Product Details

- ⊙ WD Caviar Blue hard drives have a multitude of features to deliver rock solid performance and ultra-cool and quiet operation.
- ⊙ 3rd generation SATA interface for 6 GB/s maximum data transfer rates.
- ⊙ WhisperDrive technology minimizes noise to levels near the threshold of human hearing.
- ⊙ 500 GB capacity holds up to 100,000 digital photos, 125,000 MP3 files, and 60 hours of HD video.
- ⊙ Ships in Certified Frustration-Free Packaging
- ⊙ 3rd generation SATA interface for 6 GB/s maximum data transfer rates
- ⊙ 500 GB capacity holds up to 100,000 digital photos, 125,000 MP3 files, and 60 hours of HD video
- ⊙ WD Caviar Blue hard drives have a multitude of features to deliver rock solid performance and ultra-cool and quiet operation
- ⊙ WhisperDrive technology minimizes noise to levels near the threshold of human hearing

[Corsair Enthusiast Series 750-Watt 80 Plus Bronze Certified Power Supply Compatible with Intel Core i3, i5, i7 and AMD platforms - CMPSU-750TXV2](#)





Corsair Enthusiast Series 750-Watt 80 Plus Bronze Certified Power Supply Compatible with Intel Core i3, i5, i7 and AMD platforms - CMPSU-750TXV2

Because I use this power supply again and again I am going to quote the previous descriptions from last months build... *"Again...the Corsair Enthusiast Series has become a staple for mid range builds with an array of high customer ratings. Just check out Amazon's rating; at the time of writing this this PSU had a rating of 4.5/5 Stars from 274 customers (not bad!). 750 Watts is almost too much wattage, however it does not hurt to have too much! If you would like to watch a quick overview of the Enthusiast Series PSU's then check this You Tube video done by NewEgg - [Newegg TV: Corsair TX v2 Enthusiast Series Power Supplies - First Look](#)"*

### Product Details:

© Over-voltage and over-current protection, under-voltage protection, and short circuit protection provide maximum safety

### [NZXT Phantom 410 Mid Tower USB 3.0 Gaming Case](#)



NZXT Phantom 410 Mid Tower USB 3.0 Gaming Case Black - NZXT Phantom 410 Mid Tower USB 3.0 Gaming Case RED - NZXT Phantom 410 Mid Tower USB 3.0 Gaming Case White

You can't go wrong with a quality case that comes in the colors of Black, White and Red can you? I absolutely love the look of the NZXT Phantom 410 cases. It is sleek and has a very finite futuristic look to it with plenty of room for any hardware expansion. The following are the features as laid out by NZXT themselves -

### Product Details:

- Clearance for top 240mm dual radiator for water cooling solutions
- Adjustable interior pivot 120mm/140mm fan slot for directional air flow
- Removable HDD cage to allow more room for extended video cards

- Innovative right mounted HDD rails for easy hard drive replacement
- Single 120mm/140mm side fan with acrylic window for interior viewing and cooling
- Front Internal 2x USB 3.0 headers, 2x USB 2.0, audio and microphone input
- 30W 3-step fan control for setting up your system for silence or performance
- Wire management support up to 25mm space for easy cable management
- Screw-less 5.25" and HDD trays that secures 2.5" SSD
- Cooling capability of up to eight fans (2x 120mm and 1x 140mm LED fan included)

## [Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive \(Black\)](#)



Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive (Black)

I usually use the same optical drive in all of my builds for a specific month, and this month is no exception. As quoted from the \$500 build above -

*"This basic Sony DVD+/-RW optical drive has went down in price this month to about \$18.99 so not a bad price. As I have before mentioned optical drives are a dying piece of hardware as they are becoming less and less necessary and they all seem to be one of the same. So when choosing the right optical drive, I mostly look at the price tag and whether or not they include a basic SATA connection."*

### **Product Features**

- ⊙ Drive Type: Internal DVD+/-RW Dual Layer Drive
- ⊙ Interface: SATA
- ⊙ Buffer Memory: 1 MB
- ⊙ Random Access Time: DVD - 160ms; CD - 140ms
- ⊙ O/S Compatibility: Windows 7 compatible
- ⊙ Write: DVD+R/-R: 24X; DVD+RW/-RW: 8X/6X; DVD+R/-R DL: 12X; DVD-RAM: 12X

## \$500 - \$1000 Gaming PC Build Additions / Swap Suggestions

**Note: Prices are in additional \$ amounts...** These additions are to act as supplemental hardware the the Gaming PC Build Recipe Above

 <p><b>Add a SSD Boot</b>  <b>Drive:</b> <a href="#">Crucial 64 GB m4 2.5-Inch Solid State Drive SATA 6Gb/s CT064M4SSD2</a> = + <b>\$92</b></p>	 <p><b>Add a Blu-Ray Optical</b>  <b>Drive:</b> <a href="#">LG Electronics WH12LS30 12X Blu-ray SATA Writer</a>  <b>Drive</b> = + <b>\$94</b> (without excluding the other optical DVD drive)</p>
 <p><b>Better CPU Cooler (To Overclock Intel 2500K):</b> <a href="#">Corsair Hydro Series H80 High Performance Liquid CPU Cooler (CWCH80)</a> = + <b>\$95</b> (not excluding previous CPU cooler)</p>	 <p><b>Do SLI with another</b> <a href="#">ASUS ENGTX560 TI DCII TOP/2DI/1GD5 GeForce GTX 560 Ti</a> = + <b>\$250</b></p>

### Additions / Part Swaps Overview

The hardware in this months additions are all included the show you what else you could add to your PC build over and above the basic build if say you would like to add something in the future or have that extra bit more in budget.

#### [Crucial 64 GB m4 2.5-Inch Solid State Drive SATA 6Gb/s CT064M4SSD2](#)

This Crucial Solid State Hard Drive would be a great little \$92 addition to any build since you could install a

couple of your favorite games on it as well as your operating system to allow for faster boot and load times.

### **Technical Details:**

- ⊙ Performance - Improve boot up and application load times
- ⊙ Compatibility - SATA 6Gb/s, backward compatible to SATA 3Gb/s
- ⊙ Reliability - Withstand extreme shock and vibration
- ⊙ Quality - Crucial, a Micron company, is a trusted name in DRAM and SSD products
- ⊙ Quieter. Cooler. More Durable.
- ⊙ Three Year Limited Warranty

### **[LG Electronics WH12LS30 12X Blu-ray SATA Writer Drive](#)**

Do you enjoy gaming as well as the odd movie? Then perhaps you may want to invest in a Blu-ray drive for your PC expanding the functionality of your newly built PC.

### **Technical Details:**

- ⊙ Drive Type: Internal Blu-ray Writer Drive w/ LightScribe
- ⊙ Buffer Memory: 4 MB
- ⊙ Access Time:BD-ROM - 180ms; DVD-ROM - 160ms; CD-ROM - 150ms; DVD-RAM - 180ms
- ⊙ With software
- ⊙ Data Transfer Rate: Write: BD-R SL/DL: 12X Read: BD-ROM SL/DL: 10X/8X

### **[ASUS ENGTX560 TI DCII TOP/2DI/1GD5 GeForce GTX 560 Ti](#)**

The exact graphics card included in the base build above. You can add another one of these puppies in SLI to further increase your graphics power. Perhaps you may want to keep this in the back burner of your mind just in case you want that slight bit of upgrade in the future as games become more and more complex and you simply want to keep up.

### **[Corsair Hydro Series H80 High Performance Liquid CPU Cooler \(CWCH80\)](#)**

With the purchase of the Intel 2500K processor you have the potential to overclock easily. With the purchase of any quality CPU cooler you can do this without worrying about any overheating issues. This Corsair Hydro Series is an example of a higher end CPU cooler and there are many other examples that will do the trick too.

### **Technical Details:**

- ⊙ Push-button fan control so you can select the fan speed and cooling performance that best suits your needs.
- ⊙ Double-thick 120mm radiator for increased surface area and cooling potential.
- ⊙ Two all-new 120mm fans optimize static pressure and airflow for amazing performance.
- ⊙ FEP tubing provides extraordinarily low coolant evaporation levels.
- ⊙ A new improved micro-channel cold-plate design more efficiently transfers heat.
- ⊙ A new improved micro-channel cold-plate design more efficiently transfers heat
- ⊙ Double-thick 120mm radiator for increased surface area and cooling potential
- ⊙ FEP tubing provides extraordinarily low coolant evaporation levels
- ⊙ Includes mounting hardware compatible with all modern CPU socket designs

- ⊙ Push-button fan control so you can select the fan speed and cooling performance that best suits your needs
- ⊙ Quick and easy installation brackets make it easier than ever to upgrade to watercooling.
- ⊙ Two all-new 120mm fans optimize static pressure and airflow for amazing performance

## \$1000 - \$1500 GAMING PC BUILD



# Monthly Gaming PC Build ( \$1000 - \$1500 ): March 2012

## Gaming PC Build Recipe:

<p><b>Processor:</b> <a href="#">Intel Core i5-2500K Processor</a></p> <p><b>CPU Cooler</b> (For OverClocking): <a href="#">Cooler Master Hyper 212 EVO CPU Cooler (RR-212E-20PK-R1)</a></p>	<p><b>Motherboard:</b> <a href="#">ASUS LGA 1155 - Z68 - PCIe 3.0 and UEFI BIOS Intel Z68 ATX DDR3 2200 LGA 1155 Motherboards P8Z68-V/GEN3</a></p>
<p><b>Graphics Card:</b> <a href="#">ASUS HD7950 DirectCU II 900MHz Overclocked GPU and Eyefinity Capability Graphics Cards HD7950-DC2T-3GD5</a></p>	<p><b>RAM:</b> <a href="#">Corsair Vengeance Blue 16 GB DDR3 SDRAM Dual Channel Memory Kit CMZ16GX3M4A1600C9B</a></p>
<p><b>Hard Drive:</b> <a href="#">Western Digital 1 TB Caviar Blue SATA III 7200 RPM 32 MB Cache Bulk/OEM Desktop Hard Drive - WD10EALX</a></p> <p><b>SSD Hard Drive:</b> <a href="#">Crucial 64 GB m4 2.5-Inch Solid State Drive SATA 6Gb/s CT064M4SSD2</a></p>	<p><b>Power Supply:</b> <a href="#">Corsair HX Professional Series 750-Watt 80 Plus Certified Power Supply Compatible with Core i7 and Core i5 - CMPSU-750HX</a></p>
<p><b>Computer Case:</b> <a href="#">Cooler Master HAF ATX Mid Tower Case, RC-922M-KKN1-GP (Black)</a></p>	<p><b>Optical Drive:</b> <a href="#">Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive (Black)</a></p>
<p><b>Estimated Price: \$1444.92</b> (Under budget! Savings and / or room for upgrades)</p>	

## Overview: Gaming PC Build ( \$1000 - \$1500 )

Welcome to the \$1000 - \$1500 Gaming PC Build for March 2012. Above in the \$500 - \$1000 build overview I had said that it was a great gaming build without all the bells and whistles. Well this build is

quite the opposite as it is a fantastic gaming pc build WITH all the bells and whistles.

For a quick example of a few: Instead of having just what you need this build includes a Solid State Drive for faster boot / loading times, even double the hard drive space with 1TB instead of 500GB, double the RAM (beyond what most even need), a non-stock CPU cooler for even greater overclocking advantage, and lastly a modular power supply unit that makes cable management clean and easy.

In my opinion that list is significant, so as you can see if your budget allows it you can always boost your performance by a little more and make like easier in the meanwhile.

**\*\*With this build you should be able to play most of all recent games at the highest possible settings with top end FPS rates at resolutions of 1920x1080 OR even most games at 2560X1600.**

## Overview: The Gaming PC Hardware

### [Intel Core i5-2500K Processor](#)



Intel Core i5-2500K Processor

As this is the same processor used in the build above...I quote *"The **Intel 2500K** is the go to norm in mid to high end gaming PCs these days and there is good reason for this. I mean you could go for a cheaper Intel i5 2400 processor and get similar performance, however this one is clocked a few MHz higher and has an unlocked CPU multiplier! This enables you to overclock this processor easily which makes this processor a wonderful choice for gamers wanting to push as much as they can out of a quality processor."*

You could always choose to go with an Intel i7 2600K processor and I always debate including this one in the higher end gaming build, however as Toms' Hardware has said in their CPU of the month articles this is past the point of reason. For the cost increase it just is not worth it for a Gaming PC so we mise wel pump that extra cash into a graphics card in my opinion.

<b>Intel Core i5-2500K</b>	4 cores	3.3GHz clock speed	LGA 1155 Socket
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#### Product Details:

- © Specs: Quad-core 3.3GHz, 6M Cache, Intel HD Graphics 3000, 95 watt TDP, Dual-channel DDR3 memory support, socket LGA1155
- © Quad-core processor delivers four-way multicore processing via parallelism resulting in more efficient use of processor

- ⊙ Enhanced Intel SpeedStep Technology is an advanced means of enabling very high performance while also delivery power-conservation.
- ⊙ 6 MB Intel Smart Cache is dynamically shared to each processor core, based on workload
- ⊙ All Core i5 processors have Intel Turbo Boost Technology

## [Cooler Master Hyper 212 EVO CPU Cooler \(RR-212E-20PK-R1\)](#)



Cooler Master Hyper 212 EVO CPU Cooler

This really is a great CPU cooler for its price. I have seen the price of this one rising in certain retailers, however at Amazon it seems to have staid steady at around \$30, which is a great deal for what you get.

As said by CoolerMaster themselves -

*"The Hyper 212 EVO cooling systems are designed and optimized to provide the best user experience and cooling potential for a new generation of processors. The Hyper 212 EVO now features four Cooler Master patented Continuous Direct Contact™ (CDC) heat pipes that are tightly packed into a flat array on the CPU Cooler base. This acts as a virtual vapor chamber that dissipates a large amount of heat. The aluminum fin structure has been optimized to provide the perfect performance balance between high and low speed fan operations."*

### **Product Details:**

- ⊙ Well-balanced cooling performance provides fin optimizations with perfect balance between high and low speed operations.
- ⊙ Wide-range PWM fan with unique wave-shaped blade design for excellent airflow.
- ⊙ 4 Direct Contact heat pipes with the patented (Continuous Direct Contact) technology - creating a perfect, sleek surface for heat conduction.
- ⊙ Versatile all-in-one mounting solution supporting the latest Intel LGA 1366 /1155 and AMD FM1 / AM3+.

## [ASUS LGA 1155 - Z68 - PCIe 3.0 and UEFI BIOS Intel Z68 ATX DDR3 2200 LGA 1155 Motherboards P8Z68-V/GEN3](#)



ASUS LGA 1155 - Z68 - PCIe 3.0 and UEFI BIOS Intel Z68 ATX DDR3 2200 LGA 1155 Motherboards P8Z68-V:GEN3

Last month I did include the ASUS p8Z68-V Pro motherboard, however have decided to switch to this (in

essence slightly lower model) ASUS P8Z68-V /GEN 3. You might be asking why? Well, there really is very little improvement in one form the other and I thought saving the extra \$10-30 or so was worth the swap. Below I have posted the side by side comparison of both so you can decide on which one you like more - (as the budget still allows for either)

Model#	<b>P8Z68-V/GEN3</b>	<b>P8Z68-V PRO/GEN3</b>
Brand	ASUS	ASUS
CPU Socket Type	LGA 1155	LGA 1155
CPU Type	Core i7 / i5 / i3 / Pentium (LGA1155)	Core i7 / i5 / i3 / Pentium (LGA1155)
Supported CPU Technologies	Turbo Boost Technology 2.0	Turbo Boost Technology 2.0
North Bridge	Intel Z68	Intel Z68
Number of Memory Slots	4×240pin	4×240pin
Memory Standard	DDR3 2200(O.C.) / 2133(O.C.) / 1866(O.C.) / 1600 / 1333 / 1066	DDR3 2200(O.C.) / 2133(O.C.) / 1866(O.C.) / 1600 / 1333 / 1066
Maximum Memory Supported	32GB	32GB
Channel Supported	Dual Channel	Dual Channel
PCI Express 3.0 x16	2 (single @ x16 or dual @ x8)	2 (single @ x16 or dual @ x8)
PCI Express 2.0 x16	1 (@ x4)	1 @ x4
PCI Express x1	2	2
PCI Slots	2	2

<b>SATA 3Gb/s</b>	4	4
<b>SATA 6Gb/s</b>	2 x SATA 6Gb/s	4 x SATA 6Gb/s
<b>SATA RAID</b>	0/1/5/10	2 x SATA 6Gb/s (gray) and 4 x SATA 3Gb/s (blue) support Raid 0, 1, 5, 10
<b>Onboard Video Chipset</b>	None	None
<b>Audio Chipset</b>	Realtek ALC892	Realtek ALC892
<b>Audio Channels</b>	8 Channels	8 Channels
<b>LAN Chipset</b>	Intel 82579	Intel 82579
<b>Max LAN Speed</b>	10/100/1000Mbps	10/100/1000Mbps
<b>Bluetooth</b>	Bluetooth V2.1+EDR	Bluetooth V2.1+EDR
<b>Video Ports</b>	D-Sub + DVI	D-Sub + DVI
<b>HDMI</b>	1 x HDMI	1 x HDMI
<b>USB 1.1/2.0</b>	6 x USB 2.0	6 x USB 2.0
<b>USB 3.0</b>	2 x USB 3.0	2 x USB 3.0
<b>eSATA</b>	1 x eSATA 3Gb/s	1 x eSATA 3Gb/s
<b>S/PDIF Out</b>	1 x Optical	1 x Optical
<b>Audio Ports</b>	6 Ports	6 Ports
<b>Onboard USB</b>	2 x USB 3.0 + 6 x USB 2.0	2 x USB 3.0 + 6 x USB 2.0

Other  
Connectors

2 x CPU Fan  
connector(s) (4 -pin)2  
x Chassis Fan  
connector(s) (1 x 4 -  
pin, 1 x 3 -pin)2 x  
Power Fan  
connector(s) (3 -pin)1  
x S/PDIF out  
header(s)1 x 24-pin  
EATX Power  
connector(s)

1 x 8-pin ATX 12V Power  
connector(s)

1 x Front panel audio  
connector(s) (AAFP)

1 x System panel(s) (Q-  
Connector)

1 x MemOK! button(s)

1 x TPU switch(es)

1 x EPU switch(es)

2 x CPU Fan  
connector(s) (4 -pin)2  
x Chassis Fan  
connector(s) (1 x 4 -  
pin, 1 x 3 -pin)2 x  
Power Fan  
connector(s) (3 -pin)1  
x S/PDIF out  
header(s)1 x 24-pin  
EATX Power  
connector(s)

1 x 8-pin ATX 12V Power  
connector(s)

1 x Front panel audio  
connector(s) (AAFP)

1 x System panel(s) (Q-  
Connector)

1 x MemOK! button(s)

1 x TPU switch(es)

1 x EPU switch(es)

**Product Details:**

- ⊙ 2 x PCIe 3.0/2.0 x16 (1x16 or dual x8)
- ⊙ 16-Phase Power Digital power phase
- ⊙ AMD Quad-GPU CrossFireX and NVIDIA Quad-GPU SLI support
- ⊙ 1 x Gb LAN featuring the latest Intel chipset
- ⊙ Bluetooth v2.1 + EDR
- ⊙ 4 x USB 3.0 (2 ports at back panel, 1 port at mid-board)
- ⊙ BT GO! (BT Turbo Remote) - Beyond your Imagination of what Bluetooth can do!
- ⊙ UEFI (Extensible Firmware Interface) BIOS

**[ASUS HD7950 DirectCU II 900MHz Overclocked GPU and Eyefinity Capability Graphics Cards HD7950-DC2T-3GD5](#)**



First off, the Radeon HD 7950 Graphics Card is a fantastic choice for any hardcore gamer out there right now. Last month was the first month you were able to purchase the AMD HD 7950 card and I chose to go with the Sapphire branded HD 7950. However, this month I went with the ASUS HD 7950 card clocked at 900MHz which makes it clocked a tad faster than the last one.

### Product Details:

- ⊙ 900MHz factory overclocked
- ⊙ 20% Cooler with exclusive DirectCU II thermal solution
- ⊙ 28nm GPUs and 3GB GDDR5 for smoother gaming
- ⊙ GPU Tweak utility allows you to tune graphics card performance and check card status via an intuitive interface
- ⊙ Expand your visual horizons across six displays with AMD Eyefinity technology
- ⊙ CrossFire X Support
- ⊙ Microsoft DirectX 11 Support
- ⊙ New PCI Express 3.0 delivers improved encoding and twice the performance of PCI Express 2.0

### [Corsair Vengeance Blue 16 GB DDR3 SDRAM Dual Channel Memory Kit CMZ16GX3M4A1600C9B](#)



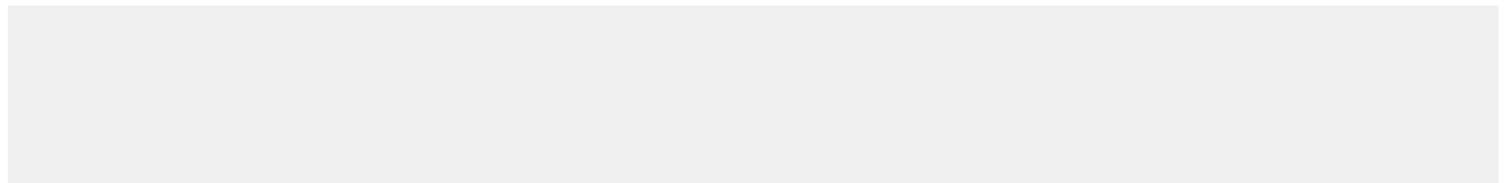
Corsair Vengeance Blue 16 GB DDR3 SDRAM Dual Channel Memory Kit CMZ16GX3M4A1600C9B

Yep, that is 16Gb worth of DDR3 RAM. This Corsair Vengeance 16GB (four 4GB stick) of memory should be enough to last you a while with this Gaming PC.

### Product Features:

- ⊙ Designed for Sandy Bridge Platform and AMD Platforms
- ⊙ 16GB (4 x 4GB) DDR3 for AMD, Intel Dual Channel processors and Sandy Bridge 2nd Generation Intel Core platforms
- ⊙ Intel XMP (Extreme Memory Profile) Support
- ⊙ Speed: 1600mhz
- ⊙ Timing: 9-9-9-24
- ⊙ Lifetime Warranty
- ⊙ Pin Out: 240-pin
- ⊙ Voltage: 1.5v

### [Western Digital 1 TB Caviar Blue SATA III 7200 RPM 32 MB Cache Bulk/OEM Desktop Hard Drive - WD10EALX](#)





Western Digital 1 TB Caviar Blue SATA III 7200 RPM 32 MB Cache Bulk:OEM Desktop Hard Drive - WD10EALX

Finally, I have increased the Hard Drive storage space from the usual 500GB to 1TB! Before I seemed to have been constantly hindered by the hard drive shortages to even muster up a plausible reason to include 1TB as they were very pricy (and still are some). The Western Digital Hard Drives are of a great quality, uses SATA III and is 7200RPM.

Performance Details From Western Digital's Website:

Rotational Speed	7,200 RPM (nominal)	
	Buffer Size	32 MB
	Load/unload Cycles	300,000 minimum
<b>Transfer Rates</b>		
	Transfer Rate (Buffer To Disk)	126 MB/s (Max)
Physical Specifications ▲		
	Formatted Capacity	1,000,204 MB
	Capacity	1 TB
	Interface	SATA 6 Gb/s
	User Sectors Per Drive	1,953,525,169
Physical Dimensions ▲		

## English

Height	1.028 Inches
Depth	5.787 Inches
Width	4.00 Inches
Weight	1.52 Pounds
Electrical Specifications	▲
<b>Current Requirements</b>	
Power Dissipation	
Read/Write	6.80 Watts
Idle	6.10 Watts
Standby	0.70 Watts
Sleep	0.70 Watts

### Product Details:

- ⊙ WD Caviar Blue hard drives have a multitude of features to deliver rock solid performance and ultra-cool and quiet operation.
- ⊙ 3rd generation SATA interface for 6 GB/s maximum data transfer rates.
- ⊙ WhisperDrive technology minimizes noise to levels near the threshold of human hearing.
- ⊙ 1 TB capacity holds up to 200,000 digital photos, 250,000 MP3 files, and 120 hours of HD video.
- ⊙ Ships in Certified Frustration-Free Packaging

### [Crucial 64 GB m4 2.5-Inch Solid State Drive SATA 6Gb/s CT064M4SSD2](#)



I have chosen to use the Crucial 64 GB m4 Solid State Drive because of both its inclusion into Toms Hardware's SSD's of the month and because it has faster Sequential Read / Write rates than the OCZ one I included last month. Look at the follow specifications:

Samsung 830	64 GB
Sequential Read	520 MB/s
Sequential Write	160 MB/s
Power Consumption (Active)	.11 W
Power Consumption (Idle)	.08 W

### Product Details:

- ⊙ Performance - Improve boot up and application load times
- ⊙ Compatibility - SATA 6Gb/s, backward compatible to SATA 3Gb/s
- ⊙ Reliability - Withstand extreme shock and vibration
- ⊙ Quality - Crucial, a Micron company, is a trusted name in DRAM and SSD products
- ⊙ Quieter. Cooler. More Durable.
- ⊙ Three Year Limited Warranty

## [Corsair HX Professional Series 750-Watt 80 Plus Certified Power Supply Compatible with Core i7 and Core i5 - CMPSU-750HX](#)



Corsair HX Professional Series 750-Watt 80 Plus Certified Power Supply Compatible with Core i7 and Core i5 - CMPSU-750HX

A PSU that is both stylish, modular and full of quality; the Corsair Professional Series model. It is a modular design, which allows for fantastic cable management and fantastic power consumption to keep your PC cool as well as saves on energy.

Corasiar's Decription -

*"If you're looking for a power supply to feed your hungry system, look no further. The HX750 PSU from Corsair puts out an impressive 750 watts of power and supports the latest ATX12V v2.3 standards as well as EPS12V 2.91 standards. The unit is 80 PLUS SILVER certified and has a 99% Active Power Factor Correction to ensure maximum efficiency.*

*The cables are extra long, to work in the largest tower. They are fully sleeved for easy routing and bundling. There are four 8-pin PCIe power connectors so you can build up a CrossFire or SLI system using today's high end video cards. There are also 12 SATA and 8 Molex connectors so you can connect multiple drives and peripherals.*

*Keeping it all cool is a temperature-controlled 140mm fan. Air is vented through the hexagon mesh back panel. The universal input accepts voltages from 90V to 264V so you no longer have to worry if the switch was in the right position."*

### **Product Details:**

- ⊙ Modular Cable design allows you to use only those cables needed & saves you space inside your case
- ⊙ Over Current / Voltage / Power Protection, Under Voltage and Short Circuit Protection provides Maximum Safety for your critical system components
- ⊙ 80 Plus Certified for 80%+ Energy Efficiency at 20%, 50% and 100% Load Condition for less Heat Generation and Lower Energy Bill
- ⊙ Dedicated Single +12V Rail Offers Maximum Compatibility with Latest Components
- ⊙ High quality Japanese Capacitors provide Uncompromised Performance and Reliability

### **[Cooler Master HAF ATX Mid Tower Case, RC-922M-KKN1-GP \(Black\)](#)**



Cooler Master HAF ATX Mid Tower Case, RC-922M-KKN1-GP (Black)

Last month was the Corsair Carbide Series 400R case, which was a great sleek and elegant choice of a case for the high end build, however this month I went with the infamous Cooler Master HAF Mid Tower Case. HAF stand for "High Air Flow".

### **Product Details:**

As Described by Cooler Master -

*"With pure innovative strength, Cooler Master, the leader in enthusiast computer components, has unleashed yet another prevailing arsenal to compete in the full-tower chassis segment. Proud and robust in its appearance, the HAF 932 presents its sturdy sentinel housing and revolutionary High Air Flow structure to enhance and protect any hardware component that is worthy of the highest performance."*

- ⊙ The HAF932 features a fully-rugged appearance and is housed in a tough casing to offer outstanding protection.
- ⊙ A rugged HAF932 comes equipped to operate with unparalleled thermal performance
- ⊙ Patented finger-press buttons for quickly maintaining or upgrading 5.25 inch drive devices
- ⊙ Removable HDD racks and cable management system for better cable routing and neatness
- ⊙ Easy access to liquid coolant fills port

- ⊙ Meshed back slot for providing passive cooling
- ⊙ Independent air intake designed for bottom-mounted PSU or installation of two 120mm fans
- ⊙ Retaining holes for easy installation of CPU coolers

### Product Details:

- ⊙ Built-in compatibility for SSDs in the six hard drive bays gives you the flexibility you need.
- ⊙ Front panel includes USB 3.0, Headphone, Mic, and an LED on/off switch.
- ⊙ Keep your system cool with up to 10 fan mount locations (four 120mm, six 120mm/140mm)
- ⊙ Up to 316mm of length for modern GPUs.
- ⊙ Easily accessible dust filters keep the cool air flowing over your valuable components.
- ⊙ Captive thumbscrews make it easy to remove your side panels without losing the screws.
- ⊙ Install or upgrade your CPU heatsink quickly with the easy-access backplate cutout.
- ⊙ Optimize airflow and keep your system neat and tidy using the intelligent cable management system.

### [Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive \(Black\)](#)



Sony AD-7280S-0B 24x SATA Internal DVD+/-RW Drive (Black)

I usually use the same optical drive in all of my builds for a specific month, and this month is no exception. As quoted from both the \$500 build above and the \$500 - \$1000 build -

*"This basic Sony DVD+/-RW optical drive has went down in price this month to about \$18.99 so not a bad price. As I have before mentioned optical drives are a dying piece of hardware as they are becoming less and less necessary and they all seem to be one of the same. So when choosing the right optical drive, I mostly look at the price tag and whether or not they include a basic SATA connection."*

### Product Features

- ⊙ Drive Type: Internal DVD+/-RW Dual Layer Drive
- ⊙ Interface: SATA
- ⊙ Buffer Memory: 1 MB
- ⊙ Random Access Time: DVD - 160ms; CD - 140ms
- ⊙ O/S Compatibility: Windows 7 compatible
- ⊙ Write: DVD+R/-R: 24X; DVD+RW/-RW: 8X/6X; DVD+R/-R DL: 12X; DVD-RAM: 12X

## \$1000 - \$1500 Gaming PC Build Additions / Swap Suggestions

**Note: Prices are in additional \$ amounts** These additions are to act as supplemental hardware the the Gaming PC Build Recipe Above

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**More Hard Drive Space (RAID if you like)** [Western Digital Caviar Blue 1 TB SATA III 7200 RPM 16 MB Cache Bulk/OEM Desktop Hard Drive - WD5000AAKX](#) = + **\$123.35**



**Double the Graphics Power w/ Crossfire add one more:** [ASUS HD7950 DirectCU II 900MHz Overclocked GPU and Eyefinity Capability Graphics Cards HD7950-DC2T-3GD5](#) = + **\$480**



**Better CPU Cooler (To Overclock Intel 2500K):** [Corsair Hydro Series H80 High Performance Liquid CPU Cooler \(CWCH80\)](#) = + **\$95** (not excluding previous CPU cooler)



**Larger SSD:** [Crucial 128 GB m4 2.5-Inch Solid State Drive SATA 6Gb/s](#) = + **\$162** (Excludes previously included SSD)

## Overview: Additions / Part Swaps

These are the additional hardware suggestions / swaps for the \$1000 - \$1500 PC builds for the month of March. Two have remained the same: The "Better CPU Cooler" which is the **Corsair Hydro Series H80 CPU cooler** which can provide stronger cooling capabilities and the **Crucial 128 GB m4 Solid State Drive** which can provide more space for your boot disk and your most played Games etc. to increase loading times. As well, since this month I already include a **1TB Western Digital Caviar Blue Hard Drive**, I thought I may suggest another for those who want to double their space or go for a RAID setup. And lastly, I have included an outrageous suggestion that if you ever want to blast your graphics beyond necessity, you can add another **Asus Radeon HD 7950 graphics card** for a Crossfire setup.

\*Remember if you ever have any questions on any other additions you can ask via the comments below or the comment form in the top right hand menu. You may be unsure of compatibility or whether you are crazy for adding more to an already great gaming pc.

## Concluding March's 2012's Gaming PC Builds:

This month I have included a ton of information for every piece of hardware included in these three gaming pc builds. With any one of these builds you can basically play any game on the market right now, however

what changed between the builds is the capability to play at higher and higher settings / resolutions / at higher FPS rates. The biggest difference between the \$500 - \$1000 build and the \$1000 - \$1500 build is the boost in graphics card. Remember that if you are build a gaming PC and you ever have a little extra money to spend to always see if you can upgrade you graphics card more as this will make the biggest difference in gaming performance.

If after taking a look at these builds you have any questions while choosing hardware for you personal gaming pc, then by all means leave a comment below or send me one via the comment form in the top right menu and I will try to et back to you as soon as I can. Also, I would love too hear any feedback on how I could improve the site or any of my articles to make them easier to understand, be more helpful or more informative.

Until next time thank you for visiting Newb Computer Build and good luck!

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