Team SAF - Fatima Bagom, Sasha Burshteyn, Anisa Palevic
L1: On Wednesdays We Wear Pink
Intro CS Pd 05
2020-04-21

Our Pitch:

Computers specifically for architecture can end up costing a considerable amount of money and often leave the purchaser wondering, did they get the best possible bang for their buck? Unfortunately they often pay high prices for a machine that doesn't even do everything they wanted it to do.

With this build we avoid this regret for you. We have constructed a machine with the same functionality and efficiency of a computer that could cost $3000-4000. The graphics card, one of the most crucial components in the computer of an architect, is top of the line and used in many of the pricey alternatives. We insured that your CPU has six cores, with the standard for many computers being around two or four cores, it outshines all the rest and will be your best friend when it comes to processing. We can even ensure a speedy machine as our storage has been praised repeatedly in many reviews for its efficiency. Most of all the machine will undoubtedly run the newest version of AutoCAD and most other architecture programs you could need.

Furthermore, something we understand is that you would want your machine to be manageable and easy to expand upon. The fully modular power supply allows for cables to be detached, leaving for a cleaner and easier to comprehend computer. Also, say in the future you would like to add more RAM to your computer, it is very easily achieved because we used 8 GB sticks as opposed to 16 GB, however you still get a quality amount of RAM as we have implemented two sticks of the 8 GB RAM.

We really wanted to make sure that you would have the best user experience possible for a manageable price. This build comes in at a minimal $1710.91, a considerable amount under the maximum budget asked for. We accounted for the fact that the numerous programs often needed for architecture are great expenses, with AutoCAD alone being around $1000 a year, so we wanted to deliver to you the best product without wasting time one unneeded products or types of products, such as trying to make the computer ultra compact and small, which could've also came with losing some of the functionality of the computer.

We took into account all of the important factors that play when choosing a computer for architecture as well as the struggles of being able to afford the software, and we return to you a very sophisticated build that easy to understand, does the job beautifully, and doesn't break the bank

Our Build:

Item category	Item name	Why we bought it	Cost
Operating system	Microsoft Windows 10 Pro	We chose this over any other OS because it is one of the newest Windows OS's and the alternatives to Windows are very expensive and somewhat difficult to repair.	$139.99
Graphics Card	Asus GeForce RTX 2070 SUPER 8 GB STRIX GAMING Advanced Video Card	This was the GPU with the highest rating (and amount of ratings) out of the ones that did not take up ⅔ of the budget. In addition, many of the "best" architect computers use GeForce.	$584.99
Power Supply	Cooler Master MWE Gold 650 W 80+ Gold Certified Fully Modular ATX Power Supply	It has a mediocre amount of wattage but is gold for efficiency. Also, it's fully modular, meaning cables can be removed, allowing for less clutter.	$99.99
CPU	Intel Core i7-8700 3.2 GHz 6-Core Processor	The 6-core is amazing for processing, which is needed with architecture programs. It is compatible with all products so far and has amazing reviews.	$309.99

		Furthermore, it comes with its own cooler, saving us an extra expense.	
Motherboard	MSI Z390-A PRO ATX LGA1151 Motherboard	An architect will have many files saved and depending on what they are working on, each file can be very big. For this, we chose a motherboard with 128 GB and 4 slots for memory to give them as much as memory as they need. This motherboard also has an integrated wired-in network.	$129.99
RAM	G.Skill Ripjaws V Series 16 GB (2 x 8 GB) DDR4-3200 Memory	This RAM is great and affordable; it's in 8 GB sticks so if the architect ever wishes to expand the amount of RAM he has, it's much easier than if we used a 16 GB stick. This RAM allows you to do various operations quickly at once, and it would be good for architectural projects because they can be large and require a lot of RAM.	$75.99
Storage	Seagate Barracuda Compute 2 TB 3.5" 7200RPM Internal Hard Drive	This hard drive provides a lot of storage for its price. Compared to GB, a TB is 1024GB, and even though its pricing is low, its reviews and capacity	$49.99

		are very high. With this hard drive, lots of architecture and design projects are able to be stored. In addition, many comments say it is fast, which an architect will be in need of.	
Monitor	Asus VG278Q 27.0" 1920x1080 144 Hz Monitor	At 144hz, 1ms, and 1080p it's pretty hard to beat for this price point, and will allow Tyrone to get a much better view of what he is modelling. This monitor has a large screen, enabling the architect to get large and clear views of his work and have room to open up many files as he works on his piece. Furthermore, there is a three year warranty which is extremely useful should something happen.	$299.99
Case	NZXT H510 ATX Mid Tower Case	For its price, it has high ratings. It is a case that is compatible with all other pieces and can fit our build.	$69.99

Total Cost:$1710.91

Our Research

Refresher on comp stuff: Processor (CPU) – This controls the speed that the software/programmes will run at …the more ghz the better.

> Graphics card (GPU) – Controls how fast the screen updates and refreshes, so no screen lag.
> Screen resolution – More pixels equal better quality
> Memory (Ram) – Controls the computer's ability to handle large tasks (such as 3D and rendering work) and enables you to do more tasks at once.
> Storage – Controls the speed of how quickly applications open up and files are accessed.

"I'm an architect. I've been tweaking my build for a few years. First, the screens and chair is first priority. After that here are the main differences between a gaming rig and a workstation:

> A simple software RAID 1 for my file structure is key. This then gets backed up on backblaze, Dropbox, etc. and an external drive from time to time (which is ideally kept off site).

- The GPU is probably fine, but I've been trying nicer cards over the years with good results. The typical priority between gaming vs workstation is switching the emphasis from the GPU to the CPU, so for a workstation you want the best CPU you can afford and a GPU that's one or two steps down from the best (assuming you don't have an unlimited budget). I've tried workstation GPUs, they're just expensive and I haven't noticed that much of a difference. Most of my time is spent inside Autodesk and Adobe software. A workstation card that can compete with a $300 card is about $1000.
- Get a really nice power supply; gold or better. The computer will be turned on pretty much it's entire existence and it helps to keep everything else stable."

Details on the "best computers for architects according to archisoup.com

DELL XPS Power special edition:

Processor (CPU) – **Intel Core i7 8700**

Processor speed – **Up To 4.60 GHz**

Graphics Card – **NVIDIA GeForce GTX 1050 TI**

Screen resolution – **NA**

Memory (Ram) – **16GB** (available in 8GB)

Storage – **2TB SATA Hard Drive**

Costs: 4.3K

What one guy did:

PROCESSOR: i7-7700K http://amzn.to/2FcyYiq

MOTHERBOARD: ASRock Z70M-ITX LGA 1151 http://amzn.to/2H1KFc1

RAM: Corsair Vengeance 16GB http://amzn.to/2oFaHvg

GPU: EVGA GeForce GTX 1060 SC Gaming http://amzn.to/2FfZEPp

POWER SUPPLY: Seasonic 550W 80+ Gold http://amzn.to/2oG5qUa

CPU FAN: Noctua NH-L9i http://amzn.to/2FbE56z

M.2 SSD: WD Black Performance 256GB http://amzn.to/2oHurOJ

HDD: Seagate Barracude 2TB http://amzn.to/2FQdOrw

CASE: Thermaltake Core V1 http://amzn.to/2H2bQ6T

CASE FAN: Apevia 200mm http://amzn.to/2FbUDeG

CASE FANS: Apevia 80mm http://amzn.to/2oFzA9N

WINDOWS 10 Pro 64 Bit: http://amzn.to/2FcngIl

BACKUP DRIVE: http://amzn.to/2DjLVFe

Processor:

amd - more cores for less money

I7 quadcore or six core- for rendering

    -socket type is important for compatibility

    -you have to get motherboard with 11 51 socket type

	Intel Core i7-4510U @ 2.00GHz	Intel Core i7-2620M @ 2.70GHz	Intel Core i7-4600U @ 2.10GHz
Price	Search Online	Search Online	Search Online
Socket Type	FCBGA1168	BGA1023	FCBGA1168
CPU Class	Laptop	Laptop	Laptop
Clockspeed	2.0 GHz	2.7 GHz	2.1 GHz
Turbo Speed	Up to 3.1 GHz	Up to 3.4 GHz	Up to 3.3 GHz
# of Physical Cores	2 (2 logical cores per physical)	2 (2 logical cores per physical)	2 (2 logical cores per physical)
Max TDP	15W	35W	15W
First Seen on Chart	Q2 2014	Q1 2011	Q2 2013
# of Samples	128	410	149
Single Thread Rating	1697	1577	1786
CPU Mark	4006	3884	4303

Motherboard:

Compatibility issues:

    -socket

    -size

Storage:

    M2 Sal state drive

        -PCIE speeds, motherboard has to to have M2 speed

        -256 gig

Ram:

compatibility :

    Size

    Speed

DDR4 188 pin ram- p standard

    Get 8 gig sticks maybe dude wants more in the future

Power Supply:

Don't skimp

80+ gold maybe?

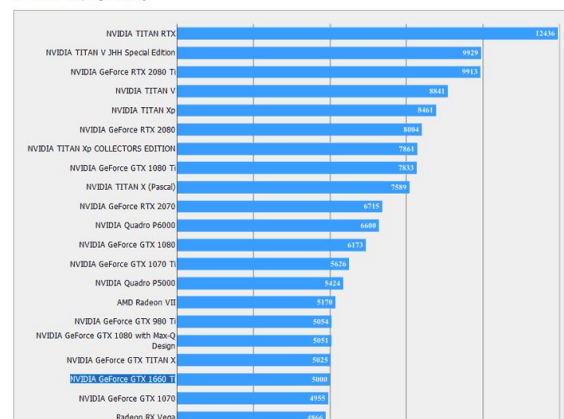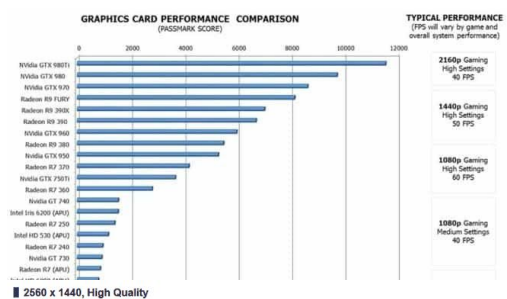   Can look for standard, semi-modular, modular

Processor:

- You need a cooler
- Needs to be compatible with motherboard
- Form factor

Graphics card:
- MAJOR EXPENSE!!!
  YOU NEED IT TO DO BIG
  ARCHITECT!!!!!!!
- Needs to coordinate with case

Operating system:=
windows 10? 100% let's not use macOs bc is p
pricey and there are apparently some architecture

programs that cant be run on it, and Windows is easier to repair should something happen

	Intel Core i7-4510U @ 2.00GHz	Intel Core i7-2620M @ 2.70GHz	Intel Core i7-4600U @ 2.10GHz
Price	Search Online	Search Online	Search Online
Socket Type	FCBGA1168	BGA1023	FCBGA1168
CPU Class	Laptop	Laptop	Laptop
Clockspeed	2.0 GHz	2.7 GHz	2.1 GHz
Turbo Speed	Up to 3.1 GHz	Up to 3.4 GHz	Up to 3.3 GHz
# of Physical Cores	2 (2 logical cores per physical)	2 (2 logical cores per physical)	2 (2 logical cores per physical)
Max TDP	15W	35W	15W
First Seen on			