



Published on *cisTEM* (<https://cistem.org>)

[Home](#) > System requirements question

---

# System requirements question

Thu, 04/19/2018 - 11:50

#1



jajfitzpatrick

## System requirements question

Hi cisTEM group,

I am in the process of configuring and buying a workstation to run cisTEM. The spec I have is:

2 x Xeon processors (E5-2650V4 - 12 cores)

256GB ECC DDR4 RAM

480GB SSD for boot

2x 1.92TB Enterprise SATA SSD(RAID 0)

5x 8TB Enterprise HDD(software RAID)

Dual 10 Gigabit Ethernet (SFP+)

The cost of this is approx. \$15k. If I change the processors to 2 X Xeon (E5-2699V4 - 22 cores) that are recommended in the cisTEM documentation, the price increases by ~\$9,000 to almost \$25k.

My question is what processor specs have people used, and what has worked well for people.

Thanks so much for the advice!

Best,

James





timgrant

Hi James,

Hi James,

We have some older 20 core (2xE5-2650v3) machines. These still run things at reasonable speed (as expected ~2 times slower than the 44 core machine), so I would say the machine you quote should be ok for most general processing. Obviously, better cpus will make things go faster, so if you have the budget available I would improve the cpus, but this machine should still be nice for processing.

One thing to consider is that whilst the cpu price doesn't go up linearly (i.e. you may pay 3x more for 2x the processing power), you only have to buy the additional components once, so a machine with 2x the processing power is probably still cheaper than 2 machines with the the lesser processing power.

Tim







jajfitzpatrick

System requirements

Hi Tim,

Thanks that is super helpful. One question I meant to ask was what is best, number of cores, faster clock speed, or amount of cache?

Best,

James





timgrant

If you can have two cases

If you can have two cases where  $\text{num\_cores} * \text{clock\_speed} = \text{same value}$ , then I would go for the faster clock speed as the parallelization is not 100% efficient.

If i'm honest, I don't have a good feeling for how important the cache is in the sort of operations we are doing, my guess is that all the Xeons should be pretty good in terms of particle refinements (as particle images are (usually) relatively small). Movie alignment may be affected more by cache, but you only do that once, so it is probably less important. I have never explicitly tested to try and figure out the effect of the cache though, so I could be totally wrong!

Tim







fsigworth

Run on Mac OS?

While we're talking about system requirements, any chance you could compile a version to run on Mac OS computers? That might make it easier for some people to get started.

p.s. Probably someone has already asked my question, but I can't see a way to search the forums. Apart from including a search function, if you just gave an option to download the entire directory on one page I could search it using my browser's search function...





timgrant

Hi Fred,

Hi Fred,

We definitely want to have a Mac version, but the Mac compiled version has some problems that need to be ironed out before it can be used properly. This is on our todo list, and we are working on it - but is not the highest priority at the moment, so may take a little while.

In terms of searching the forums, the web page search function (located in the top right) should also search the forums.

Cheers,

Tim



Thu, 07/04/2019 - 21:00 (Reply to #6)



mohsenkazemi20

Mac version

Hi Tim,

I was wondering if your Mac Os version of cisTEM is available?

Wbw,

Mohsen

[Log in](#) or [register](#) to post comments

---

**Source URL:** <https://cistem.org/system-requirements-question>