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(I have Windows 10 Professional installed currently). axur-delmeria Senior ThinkPadder Posts: 4218 Joined: Mon May 28, 2012 5:49 am Location: Metro Manila, Philippines #2 Post by axur-delmeria ~ Wed Mar 03, 2021 9:39 am No BIOS update needed. The i7 quad core mod is a bit risky because of overheating concerns, as the T420 heatsink is not designed to handle the extra heat generated by a quad-core processor. Also, a 90w charger is necessary. Planned Purchase: T480s i5-8350 FHD Touch Impulse Buy: Thinkpad not named for safety reasons RIP: X220 4291-C91 X61 7676-A24 760X-U9E RealBlackStuff Admin Emeritus Posts: 24424 Joined: Mon Sep 18, 2006 5:17 am Location: Loch Garman, Eire #3 Post by RealBlackStuff ~ Wed Mar 03, 2021 10:32 am BIOS can also be updated from a self-booting USB or CD/DVD via the .ISO download. Lovely day for a Guinness! (The Real Black Stuff) But I actually prefer Murphy's from Cork! gybek Posts: 4 Joined: Wed Mar 03, 2021 7:13 am Location: Saint Paul, MN #4 Post by gybek ~ Wed Mar 03, 2021 8:25 pm axur-delmeria wrote: No BIOS update needed. The i7 quad-core mod is a bit risky because of overheating concerns, as the T420 heatsink is not designed to handle the extra heat generated by a quad-core processor. Also, a 90w charger is necessary. Oh, I have a 90w charger already, and have read that using quality paste can help (and I won't be using it too intensely just because of overheating concerns). And secondarily, I don't officially see the 26700QM listed as an upgrade, but that is acceptable on that motherboard, and with the bios that is on there? With the upgrade to a new CPU, that would then natively permit 16gb of ram then as well, if putting in an i7? This is supposedly the list that is: Intel® Core™ i3 processor i3-2310M with dual-core DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache Intel® Core™ i5 processor i5-2410M with dual-core DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache Intel® Core™ i5 processor i5-2540M with dual-core DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache Intel® Core™ i5 processor i5-2540M with dual-core DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache Intel® Core™ i5 processor i5-2520M with dual-core DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache Intel® Core™ i5 processor i5-2520M with dual-core DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache gybek Posts: 4 Joined: Wed Mar 03, 2021 7:13 am Location: Saint Paul, MN #5 Post by gybek ~ Wed Mar 03, 2021 8:26 pm RealBlackStuff wrote: I ~ Wed Mar 03, 2021 10:32 am BIOS can also be updated from a self-booting USB or CD/DVD via the .ISO download. see the pic above, in last post, for the current bios axur-delmeria Senior ThinkPadder Posts: 4218 Joined: Mon May 28, 2012 5:49 am Location: Metro Manila, Philippines #6 Post by axur-delmeria ~ Wed Mar 03, 2021 8:52 pm gybek wrote: 1 (and I won't be using it too intensely just some relatively basic video encoding for streaming). IMO video encoding qualities as "using it too intensely", and have read that using quality paste can help. It's called liquid metal-something you shouldn't use unless using your laptop is an acceptable risk. One more thing: I just discovered that your T420 i78-BVU has an nVidia GPU. In that case, don't do the quad-core upgrade. The heatsink of the T420 cannot handle heat about 140W. All the T420 quad-core mods I've read about were Intel-only models, and in more than a few cases they actually upgraded the heatsink to the one used on the nVidia model just to keep CPU temperature in check. It's that bad. Bottom line: don't do it. Buy/build a computer more suited to the task. Planned Purchase: T480s i5-8350 FHD Touch Impulse Buy: Thinkpad not named for safety reasons RIP: X220 4291-C91 X61 7676-A24 760X-U9E gybek Posts: 4 Joined: Wed Mar 03, 2021 7:13 am Location: Saint Paul, MN #7 Post by gybek ~ Wed Mar 03, 2021 9:34 pm axur-delmeria wrote: I ~ Wed Mar 03, 2021 8:52 pm gybek wrote: 1 (and I won't be using it too intensely just some relatively basic video encoding for streaming). IMO video encoding qualities as "using it too intensely", and have read that using quality paste can help. It's called liquid metal-something you shouldn't touch unless losing your laptop is an acceptable risk. One more thing: I just discovered that your T420 i78-BVU has an nVidia GPU. In that case, don't do the quad-core upgrade. The heatsink of the T420 cannot handle heat about 140W. All the T420 quad-core mods I've read about were Intel-only models, and in more than a few cases they actually upgraded the heatsink to the one used on the nVidia model just to keep CPU temperature in check. It's that bad. Bottom line: don't do it. Buy/build a computer more suited to the task. hah it's not like it's 4k or even 1440p encoding. Just 1080p, nothing else, no games, no CAD, no nothing, just encoding for 1080p streaming. So something like ThermalGrizzly Liquid Metal Paste? I spent all of \$110 on the laptop just under 2 years ago, so I am not too sad about losing it. Ok, to clarify here, ... n-photos/ the optional configs for that model included an Intel® Core™ i7-2620M dual core. I can still have an i7... just not a quadcore, which at that point, should still be enough for that I am looking to do, I guess. So if I go with the i7-2620M does that allow the memory expansion permitted to go to 16gb or will I be restricted to 8 only? RealBlackStuff Admin Emeritus Posts: 24424 Joined: Mon Sep 18, 2006 5:17 am Location: Loch Garman, Eire #8 Post by RealBlackStuff ~ Thu Mar 04, 2021 12:24 am You can run 16GB RAM with the T420 CPU and any T420 you like. Lovely day for a Guinness! (The Real Black Stuff) But I actually prefer Murphy's from Cork! axur-delmeria Senior ThinkPadder Posts: 4218 Joined: Mon May 28, 2012 5:49 am Location: Metro Manila, Philippines #9 Post by axur-delmeria ~ Thu Mar 04, 2021 6:56 am Anything that pegs the CPU usage to 100% (or close to it) for sustained periods classifies as heavy use in my book. I guess it depends on how long those video streams are, and which video codec (H.264, VP9, etc.) you use. Another reason for recommending newer processors is that encoder software like x264 have notable performance gains when using AVX2 instructions, which are found in Haswell and newer CPUs. Skip the i7 dual-core as it won't give a noticeable performance increase from your current processor. The 200MHz clock speed difference between the i7-2620M and i5-2520M is just 8%. Last year, I got a barebones (no RAM and HDD) HP EliteDesk 800 G1 SFF with a quad-core i5-4570 for around 60\$. Already had DDR3 RAM and HDD so it wasn't an issue. It's around twice as fast as my X220 (which has a dual-core i7) when encoding videos. TL;DR: I'm trying to dissuade you from undertaking an upgrade that may very well roast your T420, and waste your time and money. Whatever you earmark for the i7-2670QM and liquid metal paste, you can instead spend on a second-hand desktop that's faster and has better cooling and upgrade options. Planned Purchase: T480s i5-8350 FHD Touch Impulse Buy: Thinkpad not named for safety reasons RIP: X220 4291-C91 X61 7676-A24 760X-U9E WarMachine Junior Member Posts: 472 Joined: Sat Nov 18, 2006 3:38 pm Location: Lyon, France Contact: Contact WarMachine ~ You Post by WarMachine ~ Fri Mar 19, 2021 9:56 am Hello, Liquid metal is not bad if well used. It must be applied carefully, because it conducts electricity. I have used it on ten laptops or so (a MacBook Alu, a T61, a T410, a T420, a T420s, a T440, a T430, a X220 and a T400s), with no problem at all. I have bought Thermalgrizzly Conductonaut and you have all it takes to apply with the paste. I put the paste on the CPU before mounting the CPU in the laptop. What I find tricky is that as this paste is liquid, it's really difficult to put on the die. You have like a small drop of metal and it won't break easily, it'll literally flow on the die. But once it's broken, well, it's like applying some paint. It's easier on the heatsink because it's not as flat as the die. I obtained the best results on my 2009 MacBook Alu. The machine was obviously never taken care of (I bought it from an old lady who seemed to know nothing about computers). The first time I used it, the fan was circa 3000 rpm and I had a temperature over 70°C. 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In practice temperature rises super quickly and throttles or shuts down under anything intensive. The only way I can use my W530 normally is to disable the discrete card and hyperthreading (I do it in the advanced menu of a custom BIOS, but you can do it in software with Throttlestop). You can only image what would happen if you drop the same processor in a 35W machine. Just don't do it. P. S. Performance increase isn't 100% to begin with, I get about 150% of a dual core. X301: SU9600 | 8GB | 1TB | WNGXA+ X1C9: 1185G7 | 32GB | 1TB | WNGXA | WWAN X1Y8: 13651 | 32GB | 1TB | WNGXA For the sake of ecology I donated all my classic Thinkpads. wslomlon Freshman Member Posts: 83 Joined: Sat Nov 17, 2021 6:24 pm Location: Boston, ME #12 Post by wslomlon ~ Sat Dec 04, 2021 5:56 pm Also, if you are upgrading, you may be thinking of putting in the die. You have like a small drop of metal and it won't break easily, it'll literally flow on the die. 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