I'm not a bot



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AMD offers a free overclocking program called Ryzen Master that lets you experiment with overclocking your AMD Ryzen Master that lets you easily fall back to the default settings if things go wrong. You still need some basic overclocking understanding, but it's a nice, easy
gateway into the world of overclocking? Overclocking? Overclocking? Overclocking? Overclocking up the clock speeds makes your CPU work faster, and that, in turn, improves performance. A CPU needs to be unlocked before you can
overclock, and all AMD Ryzen processors come unlocked by default. Intel, by comparison, unlocks only specific SKUs of its processors. These days, a CPU overclock can show improve ments in general performance and can also improve performance for CPU-intensive work. As for gaming, it may or may not improve your experience, depending on how
heavily your favorite games rely on the GPU. All CPUs have at least two advertised clock speeds: the base clock is the fastest speed at which the CPU will run for light- and medium-intensity computing tasks. The boost is how much higher it can crank up the speeds when under a heavy load, such as when gaming or
video editing is taking place. Going beyond the boost speed is the goal of any overclock. If we look at the Ryzen 5 2600 (the CPU we'll be using as an example in this article), we can see on AMD's site that it has a base clock of 3.4GHz and a maximum boost clock of 3.9GHz. If we were looking at Intel processors, these measures would be called the
"processor base frequency" and the "maximum turbo frequency." Using Ryzen Master is very different from using a traditional overclock that's set in the BIOS. With Ryzen Master, if you reboot the PC, the overclock again is as simple as a button
click. The advantage of this is that you can set your PC to overclock for gaming or other intensive tasks, and then return it to stock settings the rest of the time to avoid wear and tear on your system and void your warranty. If you're smart aboutte
overclocking, the risk is reasonable, but you can never fully remove the risk. Consider yourself warned. Let's also add that these instructions are for typical desktop PCs. Trying to overclock a laptop or a compact desktop PC is not advisable. It's much harder to keep the components cool. Before overclocking a Ryzen CPU, there are a few things you'll
need. First, a reliable power supply unit (PSU) with more wattage than what you typically need in a non-overclocked state. A Corsair recommends in a blog postthat a power supply should meet your PC's power consumption using PC Part
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you have a stable overclock, it's time for more in-depth testing. First, let's check the thermals one last time using OCCT, one of the aforementioned free benchmarking utilities. Test CPU temperatures stay below 80 degrees Celsius
(preferably under 70), then we'll move on to stage two. If not, go back to the drawing board to get a more usable overclock by lowering the clock speed. Assuming that everything is looking good, it's time for the bigger test. Run Asus Realbench's Stress Test for four to eight hours using half of your system's RAM. Do this preferably during the day
when you can pop in and make sure that the temps stay below 80 degrees Celsius. If the test runs successfully and your temperatures are good, then you've probably got a stable overclock. Now, run Cinebench again, this time shutting down as many background programs as possible as well as wireless and wired connections. Then, use that score to
compare your official overclock performance with that non-overclocked benchmark we ran earlier. In our test case, we increased our Cinebench multi-core score by nearly 800 points. Remember, Ryzen Master is not a permanent overclock. After every system reboot, the clock speeds reset to their defaults. However, getting back the overclock is as
simple as applying the settings from "Profile 1" once again. Now, it's time to get out there and start shredding that video edit---or watch the barbarian hordes overrun your burgeoning empire in Civilization VI(only faster this time). In this comprehensive guide, well delve into the intricacies of overclocking with Ryzen Master, providing step-by-step
instructions and expert tips to help you master the art of overclocking and unleash the true potential of your Ryzen CPU. By pushing the CPU to run at a higher frequency, you can squeeze out more instructions per second, resulting in faster processing speeds. Run a stress test using a tool like Prime95 or OCCT to assess the stability of your
overclock. Overclocking, the art of pushing your CPU beyond its default limits, can unlock a new level of performance for your Ryzen processor. With Ryzen Master, AMDs official overclocking utility, you can safely and easily tweak your CPUs settings to achieve higher clock speeds, improved performance, and an overall enhanced computing
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performance. By pushing the CPU to run at a higher frequency, you can squeeze out more instructions per second, resulting in faster processing speeds. However, overclocking comes with inherent risks, as it can generate excessive heat and potentially shorten the lifespan of your CPU if not done correctly. Before embarking on your overclocking
journey, ensure you have the following prerequisites in place: 1. A Compatible Ryzen CPU: Overclocking is only supported on select Ryzen Master Software: Download and install the latest version of Ryzen Master from AMDs website. 3. Adequate
Cooling: Overclocking can generate additional heat, so a high-quality CPU cooler is essential to keep temperatures under control.4. Stable Power Supply: Ensure you have a reliable power supply unit (PSU) that can handle the increased power draw during overclocking. With the necessary preparations complete, lets dive into the step-by-step process
of overclocking with Ryzen Master: 1. Open Ryzen Master: Launch Ryzen Master and familiarize yourself with its user interface. 2. Adjust Core Clock section and increase the value by small increments (e.g., 25 MHz) while monitoring temperatures and system stability. 3. Monitor Temperatures: Keep a close eye on CPU
temperatures using Ryzen Masters temperature monitoring feature. Ensure temperatures remain within safe limits (typically below 85C).4. Stress Test: Run a stress test using a tool like Prime95 or OCCT to assess the stability of your overclock. Look for errors or system crashes during the test.5. Fine-Tune Voltage: If necessary, adjust the CPU
voltage to provide more headroom for overclocking. However, be cautious as excessive voltage can damage your CPU.6. Save and Apply: Once youre satisfied with your overclocking increments to minimize the risk of instability or damage. 2. Monitor
Temperatures: Regularly check CPU temperatures to ensure they remain within safe limits. 3. Use Quality Cooling: Invest in a high-quality CPU cooler to effectively dissipate heat generated during overclocking. 4. Test Thoroughly: Run stress tests to thoroughly assess the stability of your overclock under various workloads. 5. Document Your Settings:
Keep a record of your overclocking settings for future reference or troubleshooting. 1. System Instability: If your system crashes or experiences errors, reduce your overclocking settings. 3. Performance
Degradation: If performance decreases after overclocking, reset your settings to default and start over. Overclocking with Ryzen Master can be a rewarding experience, unlocking the true potential of your Ryzen CPU. By following the steps outlined in this guide, you can safely and effectively push your CPUs limits, achieving higher performance and
an enhanced computing experience. Remember to prioritize stability and monitor temperatures throughout the process to ensure a successful overclocking journey. 1. Q: Is overclocking journey. 1. Q: Is overclocking safe for my Ryzen CPU?A: Overclocking safe for 
increased heat generated during overclocking overclocking.4. Q: What are the risks of overclocking?A: Overclocking can potentially shorten the lifespan of your CPU and other components if not done correctly. It can also lead to system instability and crashes.5. Q: How do I reset my overclocking settings to default?A: In Ryzen Master, click the Reset button to
restore default settings. You can also clear CMOS on your motherboard to reset BIOS settings. Dans le monde passionnant de linformatique, loverclocking est une pratique qui consiste pousser un composant matriel au-del de ses spcifications dusine pour en obtenir des performances accrues. Pour les processeurs AMD Ryzen, loutil officiel
loverclocking de votre processeur AMD avec Ryzen Master. Avant de vous lancer dans loverclocking, il est essentiel de vous lancer dans loverclocking. Assurez-vous que votre modle est pris en charge par Ryzen
Master et quil possde un potentiel doverclocking suffisant. Carte mre doit galement tre compatible : Votre carte mre pour plus dinformations. Systme de refroidissement performant : Loverclocking gnre de la chaleur supplmentaire, il est
la charge supplmentaire. Loverclocking implique daugmenter la frquence dhorloge du processeur, ce qui se traduit par un nombre dinstructions excutes par seconde plus lev. Deux paramtres cls influence de base du processeur. Frquence de base : La
frquence de base est la vitesse dhorloge laquelle le processeur fonctionne par dfaut. En augmentant de noter que loverclocking peut entraner une instabilit du systme et des dommages matriels sil nest pas effectu correctement. Ryzen
Master est un logiciel gratuit dvelopp par AMD spcifiquement pour les processeurs AMD Ryzen. Il offre une interface conviviale qui permet aux utilisateurs dajuster facilement les processeurs Ryzen dverrouills, ce qui signifie que vous pouvez modifier les
paramtres doverclocking sans rencontrer de limitations imposes par le fabricant. Le logiciel Ryzen Master offre galement la possibilit de revenir aux rglages dusine dun
simple clic. Maintenant que vous comprenez les bases de loverclocking et que vous tes familiaris avec Ryzen Master, passons aux tapes concrtes pour overclocker votre processeur AMD. La premire tape consiste tlcharger et installer Ryzen Master sur votre ordinateur. Vous pouvez trouver la dernire version du logiciel sur le site officiel dAMD.
Assurez-vous de tlcharger la version compatible avec votre systme dexploitation. Avant de commencer loverclocking, il est important de sassurer que votre processeur fonctionne correctement ses rglages dusine. Une fois Ryzen Master install
lancez le logiciel. Vous serez accueilli par une interface conviviale qui affiche les informations sur votre processeur, y compris les frquences dhorloge actuelles et les tempratures. Dans Ryzen Master, recherchez loption permettant dactiver le mode doverclocking. Cela peut varier en fonction de la version du logiciel, mais gnralement, vous trouverez
cette option dans les paramtres avancs. Une fois que vous avez activ le mode doverclocking, vous pouvez commencer ajuster les paramtres pour augmenter les frquence de chaque cur individuellement ou de manire globale. Vous pouvez galement ajust Aprs avoir ajust
les paramtres doverclocking, il est essentiel de tester la stabilit de votre systme. Ryzen Master propose un outil de test intgr qui vous permet de vrifier si votre processeur. Si vous rencontrez des erreurs ou
des instabilits pendant le test, cela signifie que votre overclocking est trop agressif. Dans ce cas, vous devrez revenir en arrire et ajuster les paramtres pour trouver un quilibre entre performances et stabilit. Une fois que votre votre processeur de manire stable, il est important de surveiller rgulirement les tempratures et les
trop de CPU ? Utilisez des logiciels de surveillance tels que HWMonitor pour suivre les tempratures de votre processeur et ajustez si ncessaire les performances de votre processeur AMD, mais il doit tre effectu avec prudence. Assurez-vous de bien
comprendre les risques encourus avant de commencer overclocker. Ryzen Master offre plusieurs fonctionnalits pour amliorer les performances sans overclocker, un systme de refroidissement adquat. En suivant ces conseils et en procdant avec prudence, vous pouvez profiter
friendly interface that enables real-time adjustments and monitoring. This guide will walk you through the steps to download, install, and effectively use AMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting, make sure that you have: Windows 10 or 11 operating systemAMD Ryzen processor. Before starting systemAMD Ryzen processor. Before system syst
liquid cooling)Stable power supplyUpdated BIOS with the latest AGESA firmwarePart 1: Download and InstallationPart 1: Download Option: Click on the download button for Ryzen Master. Ensure you are downloading
the latest version compatible with your operating system and CPU generation. (Image credit: Tom's Hardware)3. Save the Installation File: Choose a location on your computer where you can easily find the file after downloading.4. Locate the Downloaded File: Navigate to the folder where you saved the installation file.5. Run the Installer: Double-click
on the downloaded file to start the installation process. Get Tom's Hardware's best news and in-depth reviews, straight to your inbox. 6. Follow Installation Prompts: Accept the license agreement and follow any prompts to complete the installation from your inbox. 6. Follow Installation Prompts: Accept the license agreement and follow any prompts to complete the installation from your inbox. 6. Follow Installation Prompts: Accept the license agreement and follow any prompts to complete the installation from your inbox. 6. Follow Installation from your inbox. 6
desktop or start menu. (Image credit: Tom's Hardware) Part 2: Initial SetupPart 2: Initial SetupPart 2: Initial SetupPart 2: Initial SetupPart 3: Use of the initial hardware detection process 4. Familiarize yourself with the interface layout: Basic View: Displays essential
information such as current clock speeds, temperatures, and power usage.(Image credit: Tom's Hardware) Advanced View: Provides access to more detailed settings for overclocking purposes, switch to Advanced View by clicking on the corresponding option.(Image credit
Tom's Hardware)Part 3: Prepare for Overclocking Prepare for Overclockin
applications are closed to avoid interference during benchmarking.3. Monitor Temperatures: Keep an eye on CPU temperatures using Core Temp, MSI Afterburner, or similar software to prevent overheating during overclocking. (Image credit: Tom's Hardware) Understanding Basic Controls Key parameters you can adjust in Ryzen Master: PPT
4: Overclocking Your AMD Ryzen CPU Setting Up Profiles 1. Access Profiles: In Advanced View, locate Profile 1 or Profile 2 at the bottom of the window. (Image credit: Tom's Hardware) 2. Select Profiles 1 to set up your overclock settings. Control Mode Selection 1. Choose Control Mode: Select "Manual" from the Control Mode options at
the top of the window. This allows you to adjust core speeds and voltages manually. 2. Disable Additional Controls: Uncheck any boxes next to "Additional Controls to prevent accidental changes in these areas. Adjusting Core Speeds 1. Select All Cores: In the Cores Section, expand your desired CCD or core cluster, which is a
subdivision of your Ryzen CPU that has a set amount of cores. (Image credit: Tom's Hardware)2. The number of cores in each CCD will see each individual core with its respective number on the left-hand side. Make sure you
select all of them so that all changes apply evenly to all cores.4. Increase Clock Speed: Click on the number from its base value (3.8GHz for our test CPU, but it can vary depending on your particular model) to a higher value (start with increments of about
100 MHz).6. Press "Enter" after each adjustment. Voltage Control: Find the Voltage Control section in Ryzen Master.2. Increase Voltage Gradually: Click the "Up" button once in this section to increase voltage slightly (start with
increments of 0.025V).3. Keep in mind that keeping CPU voltage around 1.35V is advisable; do not exceed 1.45V. Applying Settings are stable.3. If it passes, proceed; if it fails, revert changes and try lower settings. Part 5: Benchmarking Your
OverclockPart 5: Benchmarking Your OverclockAfter successfully applying your overclock settings.1. Open Cinebench and initiate a multi-core test while monitoring temperatures with Core Temp or MSI Afterburner.2. Record your score with
benchmarks taken before overclocking to assess performance improvements.1. Make sure to run other stress tests and benchmarks besides Cinebench as well.2. Some CPU overclocks can appear stable in one benchmarks to run at least a l
few times.4. Nothing beats real-world testing. Make sure you run your favorite games and play them for at least a couple of hours to see if the overclockIf initial tests are successful Incremental Adjustments1. Gradually increase clock speeds or voltages further while
continuously testing stability using Cinebench or other benchmarks.2. Monitor temperatures closely; if they exceed safe limits (typically above 85C), reduce settings immediately. Creating Additional Profiles for different use cases (e.g., gaming vs productivity).2. You can also export
and import individual profiles.(Image credit: Tom's Hardware) Temperature at all times. 2. Maintain safe temperatures under load. 3. Adjust fan curves if necessary. Part 7: Advanced Optimization For better results, you can even consider these advanced settings: Curve
Optimizer1. Enable PBO (Precision Boost Overdrive). (Image credit: Tom's Hardware) 2. Set Curve Optimizer to "All Cores" or "Per Core". 3. Start with conservative offsets. (Image credit: Tom's Hardware) 4. Test stability and adjust accordingly. Power Limits 1. Adjust PPT based on cooling capability. 2. Modify TDC and EDC values proportionally. 3.
Monitor temperatures carefully.4. Consider power delivery capabilities. Memory Controls1. Enable DOCP/XMP if available.2. Adjust the infinity fabric clock (FCLK).3. Match FCLK to memory clock (1:1 ratio recommended). Part 8: Saving Your SettingsPart 8: S
Master, click on Save next to your profile name to keep your settings for future use. Reapplying After Reboots 1. Remember that settings will reset after a reboot; youll need to reapply them by selecting your profile each time you start your PC.2. You can choose to write PBO and CO settings to BIOS in Ryzen Master settings, which means that those
parameters will stay the same even after a system restart. (Image credit: Tom's Hardware) Part 9: Troubleshooting Common Issues System Crashes 1. Revert to the default profile. 2. Increase voltage slightly. 3. Decrease clock speed. 4. Test again. Temperature Issues 1. Reduce power limits. 2. Check cooler
mounting.3. Reapply thermal paste if necessary.4. Improve case airflow. Performance Problems1. Check for background processes.2. Monitor CPU usage.3. Verify power plan settings.4. Update chipset drivers. Finishing UpAMD Ryzen Master provides powerful tools for optimizing your Ryzen CPU, but overclocking is still a matter of trial and error.
Start conservatively and gradually push the limits while monitoring temperatures and stability. Remember that every CPU is different, and results will vary. Document your successful settings and always maintain a safe, stable profile for daily use. Focus on finding the sweet spot between performance, temperature, and stability rather than pushing for
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when you can pop in and make sure that the temps stay below 80 degrees Celsius. If the test runs successfully and your temperatures are good, then you've probably got a stable overclock. Now, run Cinebench again, this time shutting down as many background programs as possible as well as wireless and wired connections. Then, use that score to
compare your official overclock performance with that non-overclocked benchmark we ran earlier. In our test case, we increased our Cinebench multi-core score by nearly 800 points. Remember, Ryzen Master is not a permanent overclock is as
Ryzen CPU. Ryzen Master makes overclocking a lot easier than it used to be. Ryzen Master lets you easily fall back to the default settings if things go wrong. You still need some basic overclocking understanding, but it's a nice, easy gateway into the world of overclocking. What Is Overclocking? Overclocking understanding, but it's a nice, easy gateway into the world of overclocking.
processor (measured in Megahertz or Gigahertz) beyond what its advertised specifications are. Dialing up the clock speeds makes your CPU work faster, and that, in turn, improves performance. A CPU needs to be unlocked before you can overclock, and all AMD Ryzen processors come unlocked by default. Intel, by comparison, unlocks only specific
SKUs of its processors. These days, a CPU overclock can show improvements in general performance for CPU-intensive work. As for gaming, it may or may not improve your experience, depending on how heavily your favorite games rely on the GPU. All CPUs have at least two advertised clock speeds: the base clock
and the boost clock. The base clock is the fastest speed at which the CPU will run for light- and medium-intensity computing tasks. The boost is how much higher it can crank up the speeds when under a heavy load, such as when gaming or video editing is taking place. Going beyond the boost speed is the goal of any overclock. If we look at the Ryzen
 5 2600 (the CPU we'll be using as an example in this article), we can see on AMD's site that it has a base clock of 3.4GHz and a maximum boost clock of 3.9GHz. If we were looking at Intel processors, these measures would be called the "processor base frequency" and the "maximum turbo frequency." Using Ryzen Master is very different from using a
traditional overclock that's set in the BIOS. With Ryzen Master, if you reboot the PC, the overclock is wiped out and the CPU returns to its default settings. Not to fear, however, as activating the overclock for gaming or other intensive tasks, and then
return it to stock settings the rest of the time to avoid wear and tear on your parts. Even though it's a little easier with Ryzen Master, overclocking, the risk is reasonable, but you can never fully remove the risk. Consider yourself warned. Let's also
add that these instructions are for typical desktop PCs. Trying to overclock a laptop or a compact desktop PC is not advisable. It's much harder to keep the components cool. Before overclocking a Ryzen CPU, there are a few things you'll need. First, a reliable power supply unit (PSU) with more wattage than what you typically need in a non-
overclocked state. A Corsair recommends in a blog postthat a power supply should meet your power needs while staying somewhere within 50 to 80 percent of the PSU's rated wattage. You can estimate your Ryzen processor.
Overclocking creates more heat, requiring something beefier, such as an all-in-one liquid cooler with dual fans, or an aftermarket fan with a serious heatsink. You'll also need a Ryzen processor, of course (as this won't work with Intel CPUs), and theRyzen Master software, which you can download from AMD's website. Our example overclock uses a
standard Ryzen 5 2600 desktop CPU, but this can also work with Ryzen desktop APUs that have integrated GPUs. In fact, Ryzen Master can even let you overclock your integrated GPU, but this can also work with Ryzen desktop APUs that have integrated GPU, but this can also work with Ryzen desktop APUs that have integrated GPUs. In fact, Ryzen Master can even let you overclock your integrated GPUs. In fact, Ryzen Master can even let you overclock your integrated GPUs.
for benchmarking the CPU and monitoring its temperatures. The last thing you'll need is some patience. Going through an overclock, even an easy one with Ryzen Master, is slow going. The basic idea we're shooting for with this overclock, even an easy one with Ryzen Master is slow going. The basic idea we're shooting for with this overclock, even an easy one with Ryzen Master is slow going. The basic idea we're shooting for with this overclock, even an easy one with Ryzen Master.
settings in Ryzen Master, let's open and run the latest version of Cinebench using the multi-core and single-core CPU tests, Each test takes about 10 minutes to run. Be sure to write down your score for each test, as they'll allow you to compare the non-overclocked and overclocked states of your PC. During benchmarking shut down every other
running program and any wireless and wired connectivity (Bluetooth, Wi-Fi, Ethernet) to get a more accurate picture of what your system can do. Once you've run the tests, open Ryzen Master and take a look at the basic interface. You'll see a left rail with menu items. At the bottom, you have several tabs, including Current, Creator Mode, Game
Mode, Profile 1, Profile 2, and a few others. Looking at the default view on the "Current" tab, you'll be greeted with a dashboard showing all the active clock speeds for each core of your processor as well as some stats, including current CPU temperature, peek speeds, total socket power, and so on. Then, below those two sections, we have what's
called "Control Mode," which includes Auto, Precision Boost Overdrive, and Manual options. Those are all the basic controls we're going to deal with in this article. We're not going to touch the "Memory Control" or "Additional Control" or "Additi
it's stable and that temperatures are in the right range. If all's well, creep up the speeds a little more and test again. If you find that your CPU isn't getting too hot, but that at a new speed, it's unstable to the point of crashing or freezing, then you probably need to provide more power to the CPU. To slowly increase the voltage, click the "Up" button
once in the "Voltage Control" section, which will move Ryzen Master to the next voltage preset. The general rule of thumb with Ryzen CPU site can shorten the CPU's lifespan. Now, let's get going. In Ryzen Master, click on the "Profile 1"
tab at the bottom, which is where we'll be making our changes. Then, select "Manual" in the "Control Mode" section. This frees up the controls of voltage and core speeds for overclocking. Now, unclick the buttons next to "Additional Control" and "Memory Control" (if they are green) so that we don't accidentally change anything in here. Next, let's go
to the "Core Speed (MHz)" section and click "All Cores." This button means that any change to one core changes them all to the same value. You could overclock on a per-core basis since Ryzen Master helpfully puts a star on the core with the best potential for overclocking, but we want a simple, stable overclock across all cores. To change the clock
speed, click the number beneath the first core. Change the number from its base to something higher and hit "Enter" on your keyboard. Next, lock in that new value by clicking "Apply & Test." This will carry out a very brief test where Ryzen Master will figure out whether these overclock settings will work. The test is not that robust and won't catch
many problems---but, if by chance you get a fail on this basic test, you'll know something's not right with your settings. Assuming it passes AMD's test, let's run a preliminary test to see how the overclock is doing. For that, let's use Cinebench again. At the same time, we'll have Core Temp running to watch our temperatures. During the test, you want
to keep an eye on two things: that your CPU temperature doesn't go above 80 degrees Celsius (sticking around 70 is even better), and that Cinebench doesn't freeze or crash. If your PC can run this 10-minute test without crashing or without the processor getting too hot, we can go back, crank up the clock speeds, and run the test again. Keep doing
this until you hit some instability, and then try upping the voltage to stabilize things again. If your CPU fails the Cinebench test because of temperatures and you have a quality cooler, then decrease the clock speed until you get reasonable temperatures and you have a quality cooler, then decrease the clock speed until you get reasonable temperatures again. After going through this process, we ended up with an overclock to 4,100 MHz (4.1GHz) in
Ryzen Master, with a voltage of 1.34375. We'd strongly advise against using our presets if you have the same CPU. All processors, even the same model, have different overclocking capabilities thanks to the infamous "silicon lottery." Once you have a stable overclock, it's time for more in-depth testing. First, let's check the thermals one last time using
OCCT, one of the aforementioned free benchmarking utilities. Test CPU temperatures with a 20 minute stability test. Run OCCT's CPU test with a small data set for about 30 minutes. If your temperatures stay below 80 degrees Celsius (preferably under 70), then we'll move on to stage two. If not, go back to the drawing board to get a more usable
overclock by lowering the clock speed. Assuming that everything is looking good, it's time for the bigger test. Run Asus Realbench's Stress Test for four to eight hours using half of your system's RAM. Do this preferably during the day when you can pop in and make sure that the temps stay below 80 degrees Celsius. If the test runs successfully and
your temperatures are good, then you've probably got a stable overclock. Now, run Cinebench again, this time shutting down as many background programs as possible as well as wireless and wired connections. Then, use that score to compare your official overclock performance with that non-overclocked benchmark we ran earlier. In our test case,
we increased our Cinebench multi-core score by nearly 800 points. Remember, Ryzen Master is not a permanent overclock is as simple as applying the settings from "Profile 1" once again. Now, it's time to get out there and start shredding that
video edit---or watch the barbarian hordes overrun your burgeoning empire in Civilization VI(only faster this time). AMD offers a free overclocking your AMD Ryzen Master that lets you experiment with overclocking program called Ryzen Master that lets you experiment with overclocking your AMD ryzen Master than it used to be. Ryzen Master that lets you experiment with overclocking your AMD ryzen Master than it used to be. Ryzen Master than it used to be.
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performance for CPU-intensive work. As for gaming, it may or may not improve your experience, depending on how heavily your favorite games rely on the GPU. All CPUs have at least two advertised clock speeds; the base clock and the boost clock. The base clock is the fastest speed at which the CPU will run for light- and medium-intensity
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3.4GHz and a maximum boost clock of 3.9GHz. If we were looking at Intel processors, these measures would be called the "processor base frequency." Using Ryzen Master is very different from using a traditional overclock that's set in the BIOS. With Ryzen Master, if you reboot the PC, the overclock is wiped out
and the CPU returns to its default settings. Not to fear, however, as activating the overclock for gaming or other intensive tasks, and then return it to stock settings the rest of the time to avoid wear and tear on your parts. Even though it's a little easier
with Ryzen Master, overclocking still has the potential to damage your system and void your warranty. If you're smart about overclocking, the risk is reasonable, but you can never fully remove the risk. Consider yourself warned. Let's also add that these instructions are for typical desktop PCs. Trying to overclock a laptop or a compact desktop PC is
not advisable. It's much harder to keep the components cool. Before overclocking a Ryzen CPU, there are a few things you'll need. First, a reliable power supply unit (PSU) with more wattage than what you typically need in a non-overclocked state. A Corsair recommends in a blog postthat a power supply should meet your power needs while staying
somewhere within 50 to 80 percent of the PSU's rated wattage. You can estimate your PC's power consumption using PC Part Picker. Next, you'll need something better than the Wraith cooler that came with your Ryzen processor. Overclocking creates more heat, requiring something better than the Wraith cooler with dual fans, or an
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fact, Ryzen Master can even let you overclock your integrated GPU, but that's an adventure for another time. Let's also download a few more useful pieces of free software: Asus Realbench, Core Temp, and OCCT. These are for benchmarking the CPU and monitoring its temperatures. The last thing you'll need is some patience. Going
through an overclock, even an easy one with Ryzen Master, is slow going. The basic idea we're shooting for with this overclock is a moderately faster CPU that's open and run the latest version of Cinebench using the multi-core and single-core
CPU tests. Each test takes about 10 minutes to run. Be sure to write down your score for each test, as they'll allow you to compare the non-overclocked and overclocked and overclocked states of your PC. During benchmarking shut down every other running program and any wireless and wired connectivity (Bluetooth, Wi-Fi, Ethernet) to get a more accurate picture
of what your system can do. Once you've run the tests, open Ryzen Master and take a look at the basic interface. You'll see a left rail with menu items. At the bottom, you have several tabs, including Current, Creator Mode, Game Mode, Profile 2, and a few others. Looking at the default view on the "Current" tab, you'll be greeted with a
dashboard showing all the active clock speeds for each core of your processor as well as some stats, including current CPU temperature, peek speeds, total socket power, and so on. Then, below those two sections, we have what's called "Control Mode," which includes Auto, Precision Boost Overdrive, and Manual options. Those are all the basic
controls we're going to deal with in this article. We're not going to touch the "Memory Control" or "Additional Control" sections. When overclocking, it's wise to slowly increase the clock speed by 25 to 50 megahertz and then test that it's stable and that temperatures are in the right range. If all's well, creep up the speeds a little more and test again. If
you find that your CPU isn't getting too hot, but that at a new speed, it's unstable to the point of crashing or freezing, then you probably need to provide more power to the CPU. To slowly increase the voltage preset. The general rule of
thumb with Ryzen CPUs is to keep your CPU voltage below 1.35 volts, with 1.45 volts being the maximum. Using voltages beyond 1.45 volts can shorten the CPU's lifespan. Now, let's get going. In Ryzen Master, click on the "Profile 1" tab at the bottom, which is where we'll be making our changes. Then, select "Manual" in the "Control Mode" section
This frees up the controls of voltage and core speeds for overclocking. Now, unclick the buttons next to "Additional Control" and "Memory Control" and click "All Cores." This button means that any change to one core changes
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around 70 is even better), and that Cinebench doesn't freeze or crash. If your PC can run this 10-minute test without crashing or without the processor getting too hot, we can go back, crank up the clock speeds, and run the test again. Keep doing this until you hit some instability, and then try upping the voltage to stabilize things again. If your CPU
fails the Cinebench test because of temperatures and you have a quality cooler, then decrease the clock speed until you get reasonable temperatures again. After going through this process, we ended up with an overclock to 4,100 MHz (4.1GHz) in Ryzen Master, with a voltage of 1.34375. We'd strongly advise against using our presets if you have the
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