Clock Tuner for Ryzen™ 2.0 – INTRO

- **Windows Defender sometimes sees a trojan program, this is a false positive. Latest VIRUSTOTAL report :**

- **FACEIT Client Anti-cheat can block inpoutx64.dll library. This library is used for monitoring. You will have to add it to an exception.**

Clock Tuner for Ryzen™ 2.0 – INTRO

System requirements:

- .NET Framework 4.7.2
- BIOS for Zen 3 with AGESA 1.1.0.0 path B or newer
- BIOS for Zen 2 with AGESA (any)
- BIOS for APU with AGESA 1.1.8.0 or newer
- Windows 10 x64 (with all updates)
- BIOS settings **without** manual CPU OC, **without** PBO (Fmax too) and **without** Performance Enhancer (or other similar technologies)
- **Stable DRAM overclocking**

Supported CPU:

- Zen 3: Ryzen 9 5950X, Ryzen 9 5900X, Ryzen 7 5800X, Ryzen 5 5600X
- Zen 2: Threadripper 3970X, Threadripper 3960X, Ryzen 9 3950X, Ryzen 9 3900X, Ryzen 9 3900XT, Ryzen 9 3900, Ryzen 7 3800XT, Ryzen 7 3800X, Ryzen 7 3700X, Ryzen 5 3600XT , Ryzen 5 3600X, Ryzen 5 3600, Ryzen 5 3500X, Ryzen 5 3500, Ryzen 3 3300X, Ryzen 3 3100
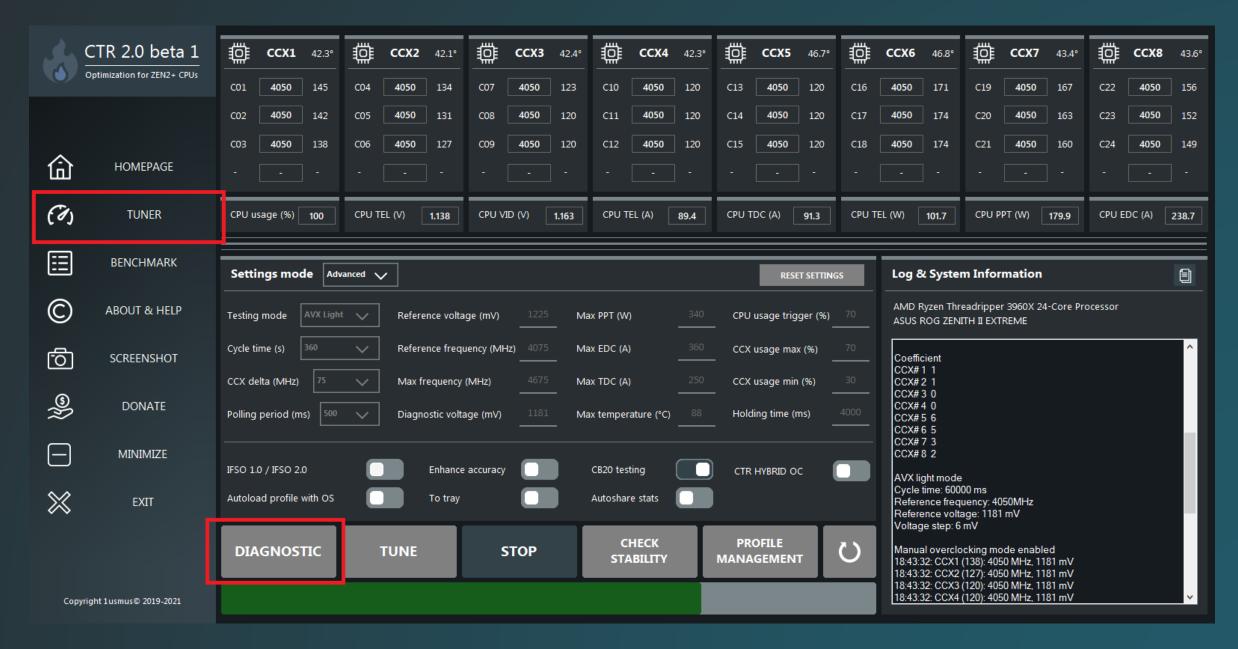- APU: Ryzen 7 PRO 4750G , Ryzen 7 PRO 4650G, Ryzen 3 PRO 4350G

Clock Tuner for Ryzen™ 2.0 – FIRST STEPS

1. Download **Cinebench R20** and put the archive contents into the "**CB20**" folder. "**CB20**" is in the "**CTR Early Access**" folder.

2. Go to the "**CB20**" folder and run **Cinebench.exe**. Accept the license agreement and close **Cinebench R20**.

3. You can now launch the application.

Clock Tuner for Ryzen™ 2.0 – DIAGNOSTIC

1. Run **CTR 2.0.exe** and go to "**TUNER**" tab.

2. Press "**DIAGNOSTIC**" button. The diagnosis will begin. Be patient, CTR will automatically test the different parameters, this may take some time. And the better your processor is, the longer it will take. If a BSOD occurs or if the computer reboots, CTR will automatically restore itself. Timeout is 90 seconds after Windows starts.

Clock Tuner for Ryzen™ 2.0 – DIAGNOSTIC

3. Make a screenshot or write down the results of the diagnostics. You will need them to create profiles (**P1** and **P2**).
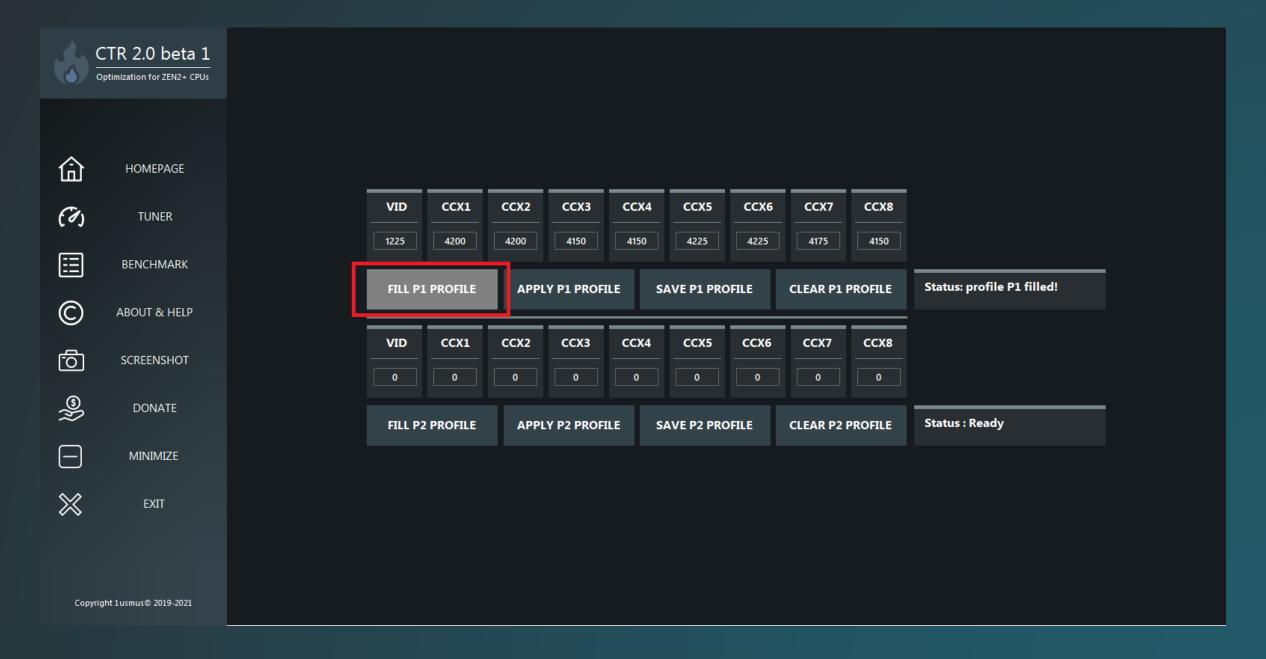
Clock Tuner for Ryzen™ 2.0 – TUNE

1. After completing the diagnostics, CTR itself will offer you the recommended settings, some fields will be changed automatically. Press the "**TUNE**" button and wait until the work is finished. If a BSOD occurs or the computer reboots, CTR will automatically recover and continue to perform the required operations. The recovery time is 90 seconds after starting Windows.

CTR 2.0 beta 1
Optimization for ZEN2+ CPUs

CCX1 31.2°		CCX2 31°		CCX3 32.1°		CCX4 32.9°		CCX5 36.9°		CCX6 36.9°		CCX7 32.5°		CCX8 32.6°	
C01	636	145	C04	780	134	C07	775	123	C10	1599	120	C13	1291	120	C16	760	171	C19	710	167	C22	789	156
C02	646	142	C05	664	131	C08	1222	120	C11	1332	120	C14	1255	120	C17	1766	174	C20	700	163	C23	604	152
C03	677	138	C06	641	127	C09	1237	120	C12	1268	120	C15	1335	120	C18	1270	174	C21	783	160	C24	572	149

CPU usage (%) 2 — CPU TEL (V) 1.375 — CPU VID (V) 1.38 — CPU TEL (A) 24.8 — CPU TDC (A) 22 — CPU TEL (W) 34.7 — CPU PPT (W) 91.4 — CPU EDC (A) 270.4

Settings mode Advanced — RESET SETTINGS

Testing mode AVX Light — Reference voltage (mV) 1225 — Max PPT (W) 340 — CPU usage trigger (%) 70
Cycle time (s) 360 — Reference frequency (MHz) 4200 — Max EDC (A) 360 — CCX usage max (%) 70
CCX delta (MHz) 75 — Max frequency (MHz) 4675 — Max TDC (A) 250 — CCX usage min (%) 30
Polling period (ms) 500 — Diagnostic voltage (mV) 1181 — Max temperature (°C) 88 — Holding time (ms) 4000

IFSO 1.0 / IFSO 2.0 — Enhance accuracy — CB20 testing — CTR HYBRID OC
Autoload profile with OS — To tray — Autoshare stats

DIAGNOSTIC — **TUNE** — **STOP** — **CHECK STABILITY** — **PROFILE MANAGEMENT**

Log & System Information

AMD Ryzen Threadripper 3960X 24-Core Processor
ASUS ROG ZENITH II EXTREME

19:51:02: Stress test stopped.
19:51:03: Stress test #2 started...
19:51:08: CPU Vdroop: 2.2 % temperature: 46.9°
19:52:41: Stress test stopped.
19:52:42: Stress test #3 started...
19:52:47: CPU Vdroop: 2.2 % temperature: 47.3°
19:54:20: Stress test stopped.
19:54:20: Stress test #4 started...
19:54:25: CPU Vdroop: 2.2 % temperature: 47.4°
19:55:59: Stress test stopped.
Calculation of penalties for the final profile:
19:55:59: CCX1 (138): 4200 MHz, 1225 mV OC+
19:55:59: CCX2 (127): 4200 MHz, 1225 mV OC+
19:55:59: CCX3 (120): 4150 MHz, 1225 mV OC=
19:55:59: CCX4 (120): 4150 MHz, 1225 mV OC=
19:55:59: CCX5 (120): 4225 MHz, 1225 mV OC+
19:55:59: CCX6 (171): 4225 MHz, 1225 mV OC+
19:55:59: CCX7 (160): 4175 MHz, 1225 mV OC=
19:55:59: CCX8 (149): 4150 MHz, 1225 mV OC=
Cinebench 20 started
Cinebench 20 finished with result: 13730
Voltage: 1.225 V PPT: 255.2 W Temperature: 60.2°

HOMEPAGE
TUNER
BENCHMARK
ABOUT & HELP
SCREENSHOT
DONATE
MINIMIZE
EXIT

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Clock Tuner for Ryzen™ 2.0 – SAVE PROFILE

1. After finishing the tuning, the user will have to save the profile. In order to transfer the data to the profile press "**FILL P1 PROFILE**" (this and other profiles management buttons are in "**PROFILE MANAGEMENT**"). Then you can save the profile or activate (apply) it without saving. Be careful, if you close the program without saving your profile, you will lose it. I also want to point out that all the basic CTR settings will be saved when you click "**EXIT**" button.

Clock Tuner for Ryzen™ 2.0 – HYBRID OC

1. "**HYBRID OC**" mode requires only 1 (minimum) profile **P1** or **P2**. To activate HYBRID OC mode you must have a saved profile (**P1** or **P2**), activate "**Autoload profile with OS**" and "**CTR HYBRID OC**".

2. Go to the "**PROFILE MANAGEMENT**" tab and activate one of the saved profiles. If you have both profiles (**P1** and **P2**) filled (and saved) "**HYBRID OC**" will automatically use 2 profiles and default boost.

Clock Tuner for Ryzen™ 2.0 – HYBRID OC

- If **CPU usage** exceeds **70%**, **P1** profile will be activated. If the load is less than 70% - profile **P2** will be active (in case it was saved beforehand). If only **P1** profile is present in CTR, below 70% the standard boost will be activated.

- **P2** profile is controlled by the range "**CCX usage max (%)** - **CCX usage min (%)**".

- The user can use individual settings.

Clock Tuner for Ryzen™ 2.0 – HYBRID OC

- "**Holding time (ms)**" - is the time for keeping one of the profiles active. If CPU usage is less than 70% for 4 seconds (4000 ms) - profile **P1** will be deactivated.

- Profile **P1** always has priority, it is able to interrupt the "hold" caused by profile **P2**.

- If the processor temperature exceeds the "**Max temperature**" value, both profiles will be deactivated for a time equal to 45 seconds.

Clock Tuner for Ryzen™ 2.0 – P2 PROFILE

1. To create a **P2** profile, you will need to manually fill in the "**Reference voltage**" and "**Reference frequency**" data that can be found after diagnostics.

2. Run "**TUNE**" again. When the tuning process is finished, save the new profile in slot **P2**.
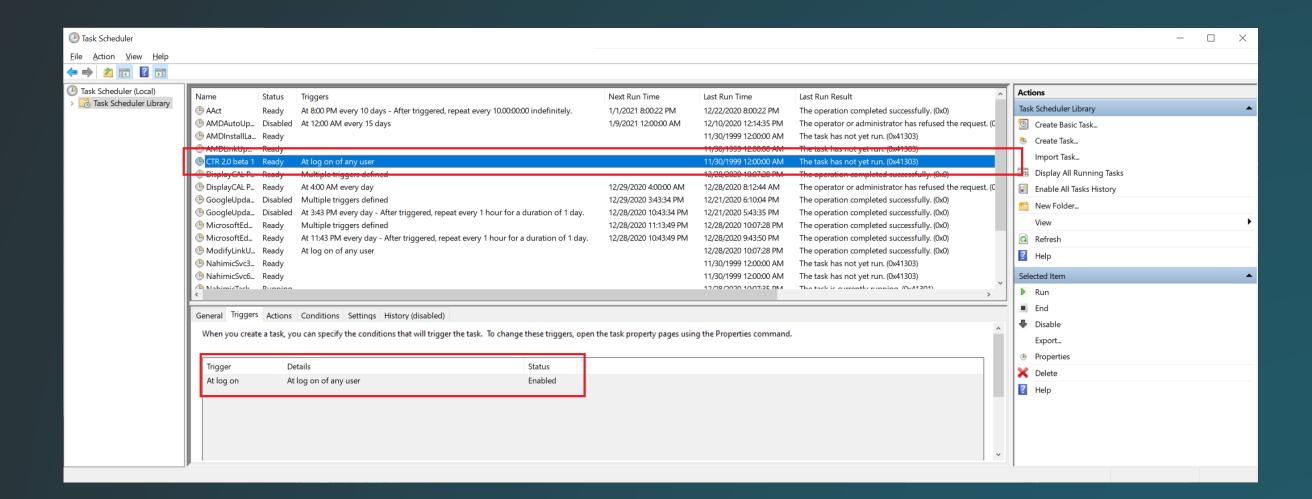
Clock Tuner for Ryzen™ 2.0 – CONFIG FILE

- If you can't start the application or some functions don't work, delete the configuration files.
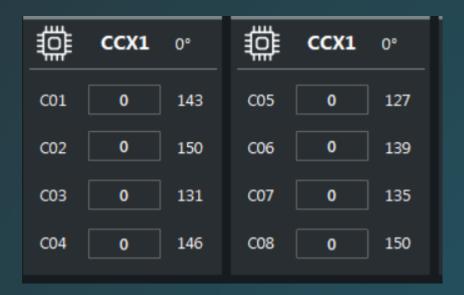
Clock Tuner for Ryzen™ 2.0 – AUTORUN

- Some versions of operating systems Windows 10 have incompatible or corrupted autorun functions. If the application doesn't start - it means that Windows for some reason can't or doesn't want to run CTR.

- You can check the status of the autorun in the "**Task Scheduler**".

Clock Tuner for Ryzen™ 2.0 – SMU PROBLEMS

- Missing frequency and temperature - incompatible BIOS. There are many reasons, up to the motherboard manufacturer's error. The solution is to install another version of the BIOS. The problem may also be due to running third-party monitoring software.

- **CMD_REJECTED_PREREQUISITE** or **FAILED** - incompatible BIOS. There are many reasons, up to the motherboard manufacturer's error. The solution is to install another version of the BIOS. The problem may also be due to running third-party monitoring software.