Clock Tuner for Ryzen™ Roadmap

CTR 2.0

Release: End of January

Early access: December 28 *

- Support for Ryzen 5000 Series (X processors)
- Support for Ryzen Renoir (AM4)
- Updated Tuning and Diagnostic modes
- New Monitoring (No longer needs Ryzen Master)
- Phoenix feature (Restores the operation after reboot or BSOD)
- CTR HYBRID OC (Utilizes both, manual OC and PBO simultaneously)
- Initial Frequency Smart Offset 2.0
- Improvements in software performance and safety. Improved profile management

CTR 2.1

Release: End of 1Q

- Auto Curve Optimizer (Zen 3)
- Measurement mode
- CTR HYBRID OC 2.0 (Zen 3)
- Additional optimization for Ryzen 5000 Series

CTR 2.2

Release: 3Q

- Support for Threadripper Genesis
- Support for Ryzen APU Cezanne

***Early access is only available to certain categories of Patreon subscribers, partners, and testers.**

Clock Tuner for Ryzen™ 2.0 – new GUI

CTR 2.0 follows modern trends and gets support for a special dark theme, which in particular will be convenient for people who have problems with color blindness.

Clock Tuner for Ryzen™ 2.0 - HYBRID OC

(example: AMD Ryzen 5 5600X)

CTR HYBRID OC - now you don't have to worry about choosing between standard boost and manual overclocking. Hybrid OC is a combination of two custom profiles and auto boost.

P1 profile is designed for maximum all-core load, while the P2 profile is capable of delivering the highest performance of the best CCX (or multiple CCXs). P2 profile can also be called a “game profile”, which will allow you to achieve higher frequencies for multiple cores than standard single-core boost. Both profiles can be configured by the user as well as the “holding” time.

The activation of the profiles depends only on the load on the CCX or CPU. This means that this control method does not have all disadvantages of technologies that estimate the load based on EDC or TDC values.

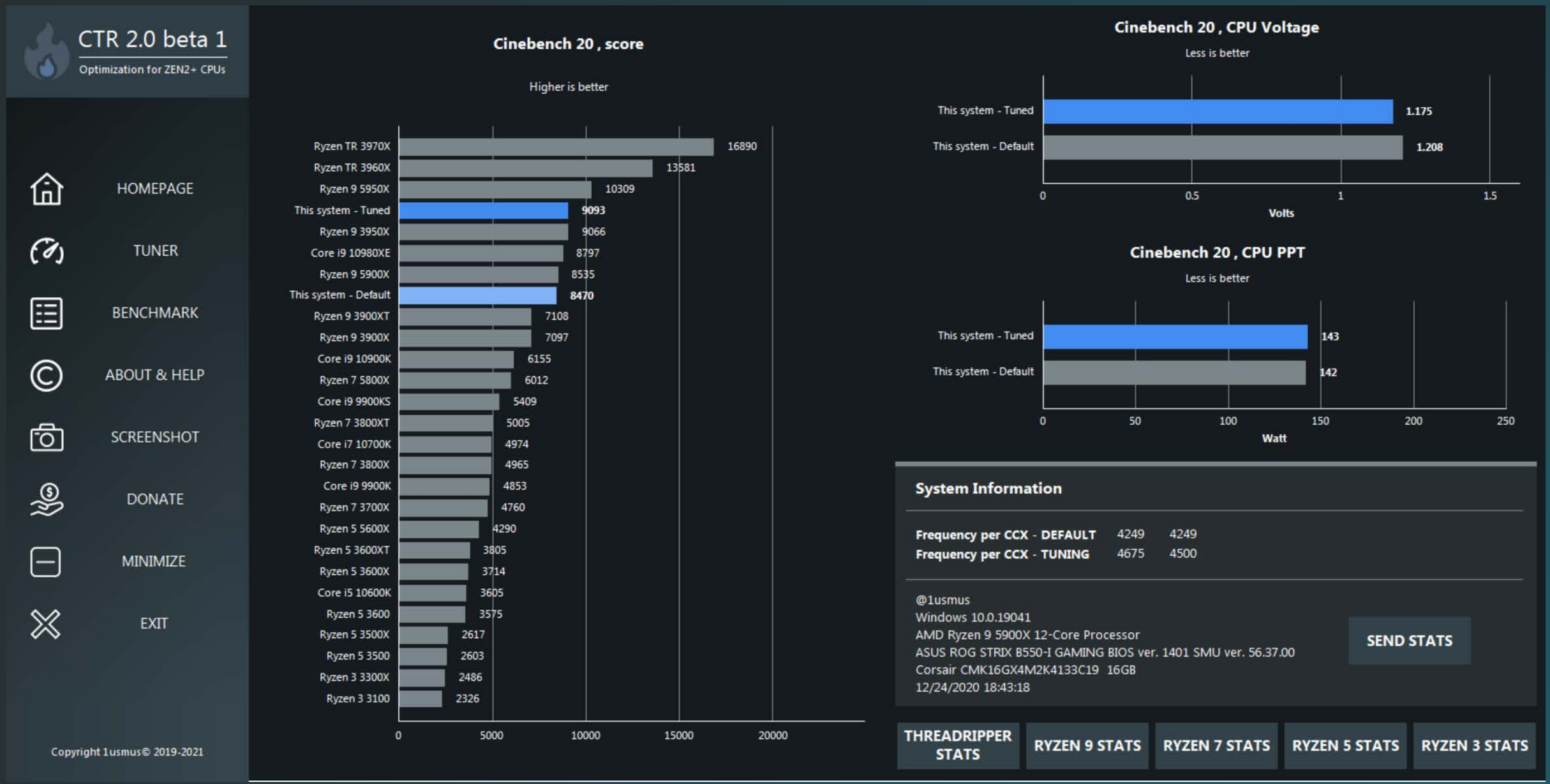
HYBRID OC Advantages:

- Better performance at any workload.
  CB20 results:
  12 threads 4289 / 4616 **+8%**
  6 threads 2842 / 3144 **+10%**
  1 thread 599 / 597 **identical**
- Easy to use, CTR controls everything in a minimized state.
- A special approach to profile customization.
- Profile activation time is less than 35ms.
- Energy Efficiency. Standard TDP value for P1 and for P2 profiles.
- Active energy-saving functions in all profiles.
- Only the best cores or CCXs are used for P2 profile. Controlled by the operating system.
- Zen 2 and Zen 3 supported.

Clock Tuner for Ryzen™ 2.0 – best choice for media creation workloads

(example: AMD Ryzen 9 5900X)

Each processor has individual silicon characteristics. Because of this, CTR adjusts the frequency for each CCX individually. This allows for unprecedented levels of energy efficiency or performance. **+ 7.5% performance*** at the same power consumption for all-core load.

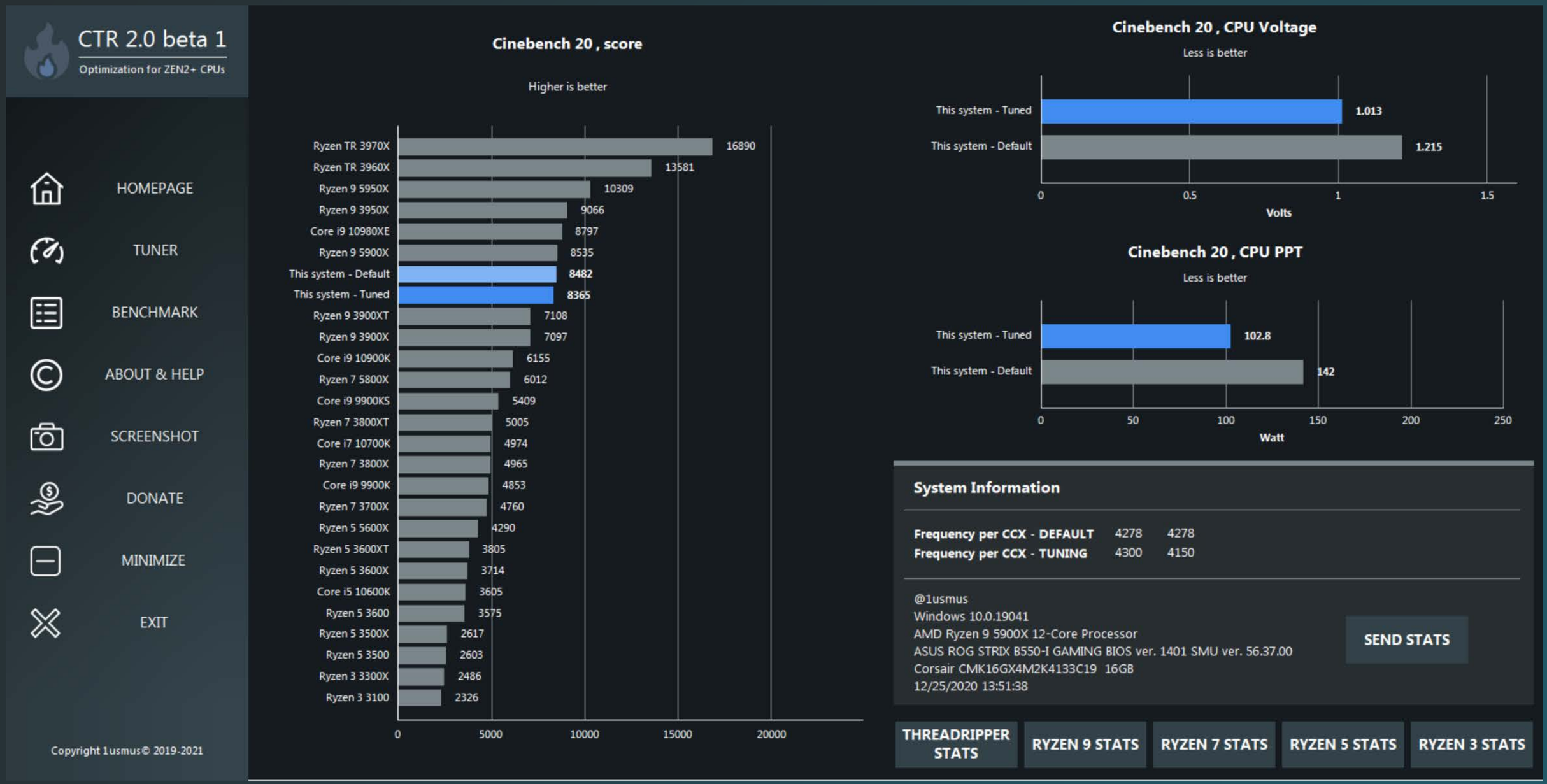


*** The results seriously depend on the CPU sample, the cooling and the motherboard.**

Clock Tuner for Ryzen™ 2.0 - UNDERVOLTING

(example: AMD Ryzen 9 5900X)

All users has a choice. To get more performance with the same TDP or to reduce the TDP without loss of performance.
-28% power consumption* this is reality. With **HYBRID OC** you can also create a super super-efficient system for workload and at the same time super-performance for games or applications that do not use all cores.



*** The results seriously depend on the CPU sample, the cooling and the motherboard.**

Clock Tuner for Ryzen™ 2.0 – Curve Optimization

(example: AMD Ryzen 9 5900X)

A surprise that many people don't know about. Processors based on the Zen 3 architecture have differentiated power management for each core. Thanks to AMD for this fantastic feature. This allows the processor to be tuned more accurately, making it cooler and more efficient. In CTR 2.1 we have planned an automated tuner for voltage curve, but now you can experiment manually. You can see the basic coefficients of the voltage curve in the diagnostic mode.

Clock Tuner for Ryzen™ 2.0 other features

- **New Monitoring** - has the highest response time of all existing monitoring programs: 1ms (avg) in idle and 7ms (avg) in all-core load mode. Does not requires AMD chipset drivers. Additional information about processor telemetry, the temperature, and the VID of each core (Zen3).

- **Phoenix feature** –BSOD or reboot happened? Worry not! CTR will automatically recover and will finish the diagnostic or profile creation. If necessary, it will test in Cinebench R20 as well.

- **Initial Frequency Smart Offset 2.0** - diagnostic mode will predict the recommended frequencies more accurately, so you can significantly reduce tuning time. Important for processors that have 4 and 8 CCX. The evaluation is based on dynamic FIT, not static data.

- **Improvements in software performance** - most of the code has been rewritten. CTR now uses less CPU time, particularly when minimized. Special attention was paid to safety when communicating with SMU.

- **Diagnostic mode** now provides information about the basic coefficients of the voltage curve (Zen 3) as well as information about the values that are recommended for P1 and P2 profiles.

- **Advanced logging system** allows you to create a logbook individually for each CTR startup.

- Improved **profile management** system for more comfort.