r/GamingLaptops • 1 mo. ago
VictoryT7

Acer Helios 18 0x12B Microcode Update when?

Tech Support

r/AcerPredatorHelios • 1 mo. ago

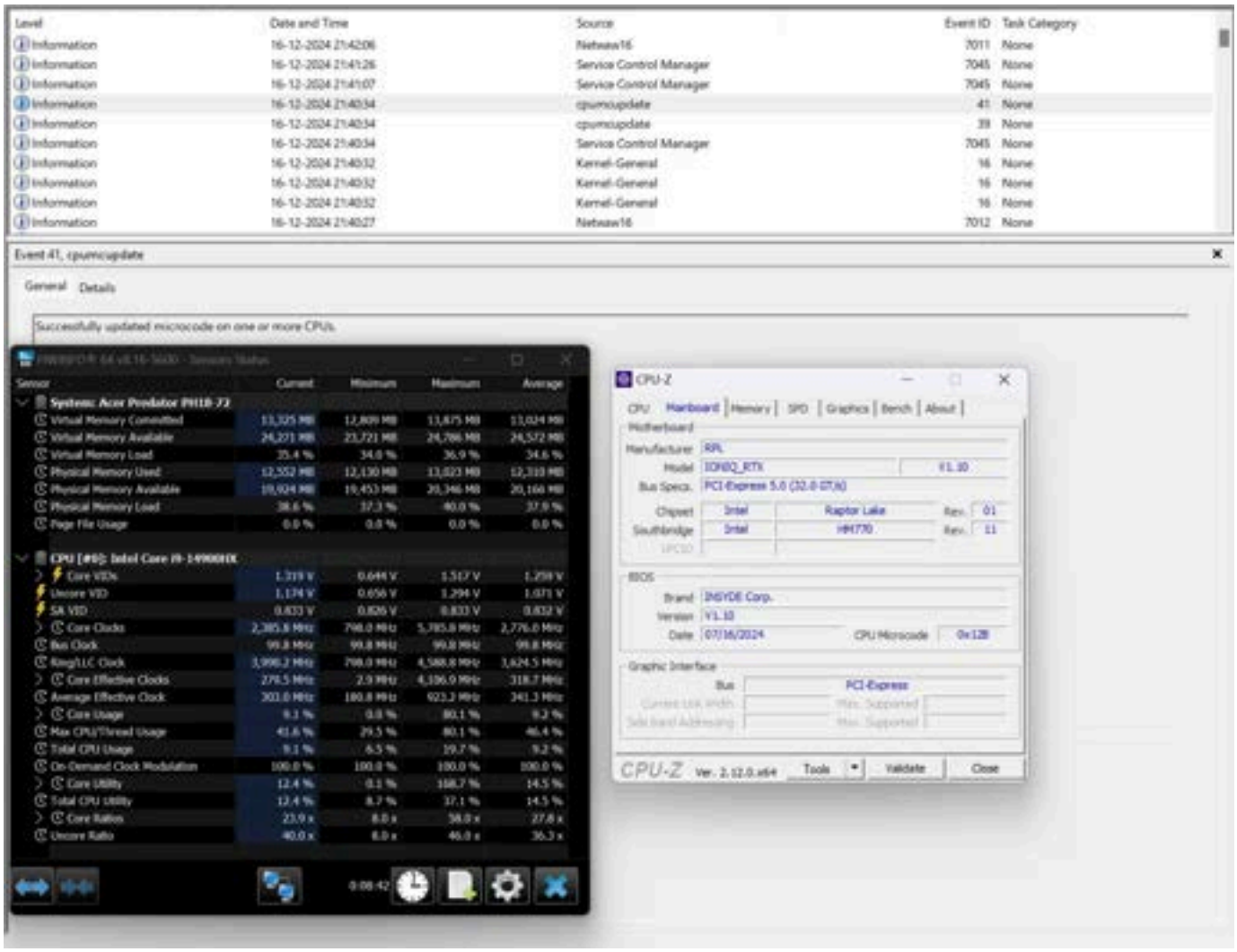
Helios 18 (ph18-72) 0x12b Microcode update when?

This post has details about how to unlock advanced BIOS on Acer Predator Helios 18 (PH18-72) using SREP. It also has details regarding a few settings , possible issues and best settings for the PH18-72 Models. You can skip the intel issues part.

EDIT: SREP WORKED!!

OG POST: I have the Acer PH18-72-93VM (RTX 4080) version. Intel has severe instability issues with HX series 13th and 14th Gen Processors. Since we can count the oxidation part if system is stable , up and running all that remains is the VIDs. I have seen mine go to 1.5V+ very rarely. Most of the times its below 1.5 or 1.4v , the problem is Acer's recent BIOS 1.10V has 0x120 Microcode which is old and the latest one for Raptor Lake HX processors is 0x12b which Intel claims that it should fix the issues. So when can the 0x12b Microcode BIOS update be expected ?, Asus has already done it for their strix's 2024/2023 Strix BIOS 0x12b Update with these processors. For more Context on these issues one can refer Intel Instability Issues and Fix credit : THEBOSS619

I've tried using his method of doing the VMware 0x12b MCU but it seems that it has had inverse effect and that my system was frequently hitting 1.5V+(look at the attached picture) so I decided to revert back to 0x120. I hope we get Official Microcode update from Acer since Helios and Triton are there Top series in Predator Division.



VMware 0x12B MCU not limitng Voltage to 1.4v , Voltage Boosting past 1.5V quite often

I've tried using the method of SREP Voltage Guide but it seems that through the BIOS there is No USB Boot option (or there is but it is greyed out as in Boot Mode - UEFI) , and that it rejects loading into the USB even after Disabling Secure Boot. If anyone has been able to bypass this please tell.

Undervolt Protection is really wrong for these HX series CPUs , atleast Voltage Control or Lock should have been given. The accepted fix if microcode is not feasible is to lock Voltage to 1400mv through BIOS but all Acer has given us a Fancy BIOS with no real options for tuning or voltage control.

I've also read that Intel has another issues with these Prcoessor's that they throttle more because of the PL4 limit being below 400W where the PPP(Potential Peak Power - a Prediction of Power Consumption) thinks that there is too low power to boost . This investigation can be found here Intel PL4 limit Bug. Again knowing the amount of control Acer gives to its customers we can forget about this one. (Edit: In SREP you can actually set PL4 Limit to 330W as that is the max the adapter can provide throttling is reduced in normal tasks but not gaming unless you have a 400W brick which is available in Titan HX MSI model.)I have seen Razer and other manufacturers PL4 limit control in the BIOS.

All these issues and Acer hasn't provided a microcode update for the 14900HX in its Helios 18 series. The PHN16-72 has already gotten the 0x129 update PHN16-72 update BIOS.

Update : SREP has worked , I have finally unlocked full fledged BIOS through SREP , really easy process. If needed here are the steps

1)Create a FAT32 USB

2) DOWNLOAD SREP

3)Extract and Put in the usb , make sure EFI is in usb root.

4)Download config SREP Config for your laptop. Eg. Ph18-72>Download raw>Three Dots>Download or View RAW, Now rename it to SREP_Config.cfg and replace it in the usb.

5)Download the bootx64.efi BOOTX64.efi

6) Copy and Paste it into EFI>Boot>Bootx64.efi , on prompt replace

7)Shut down laptop. Press Power button , repeatedly tap BIOS Key (F2) till BIOS appears. Go into Advanced.

8)Go to Main> F12 boot key and enable it.

9)Go to Boot >Disable Secure Boot

9.1)IF UNABLE TO DISABLE SECURE BOOT!

Go into Security and set a Supervisor password and a user password and toggle the password on boot. Exit and Save changes. Then once rebooted click F2 repeatedly, enter the Supervisor password and then go and try disabling the Secure boot.

10)Exit and Save Changes

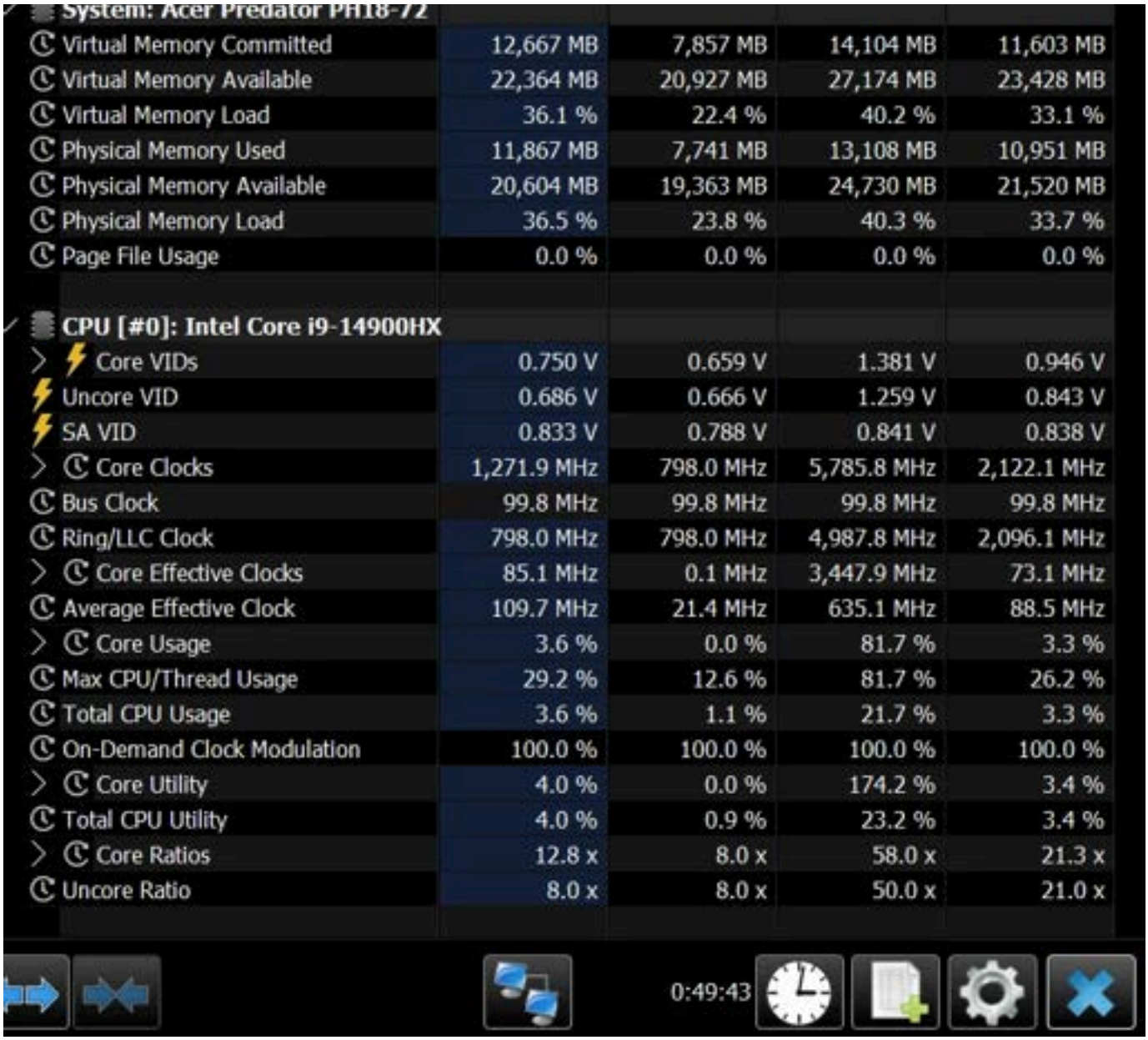
11)One laptop reboots repeatedly tap F12 till Boot selection screen appears , select USB.(if USB efi doesn't appear then remove the USB and plug it in again.)

12)Laptop should boot into SREP and display Welcome to SREP wait 5 mins it will load up the BIOS

13)Go to the second Advanced> Power and Performance>CPU Power Management Control > Scroll to CPU VR settings > Core/IA VR Settings > Scroll to VR Voltage limit > Set as 1400> Yes

14)Exit Exit and Save Changes

15) Boot back to Life!



VR Limit through BIOS works.

I also disabled Overclocking Lock ,gonna try that.

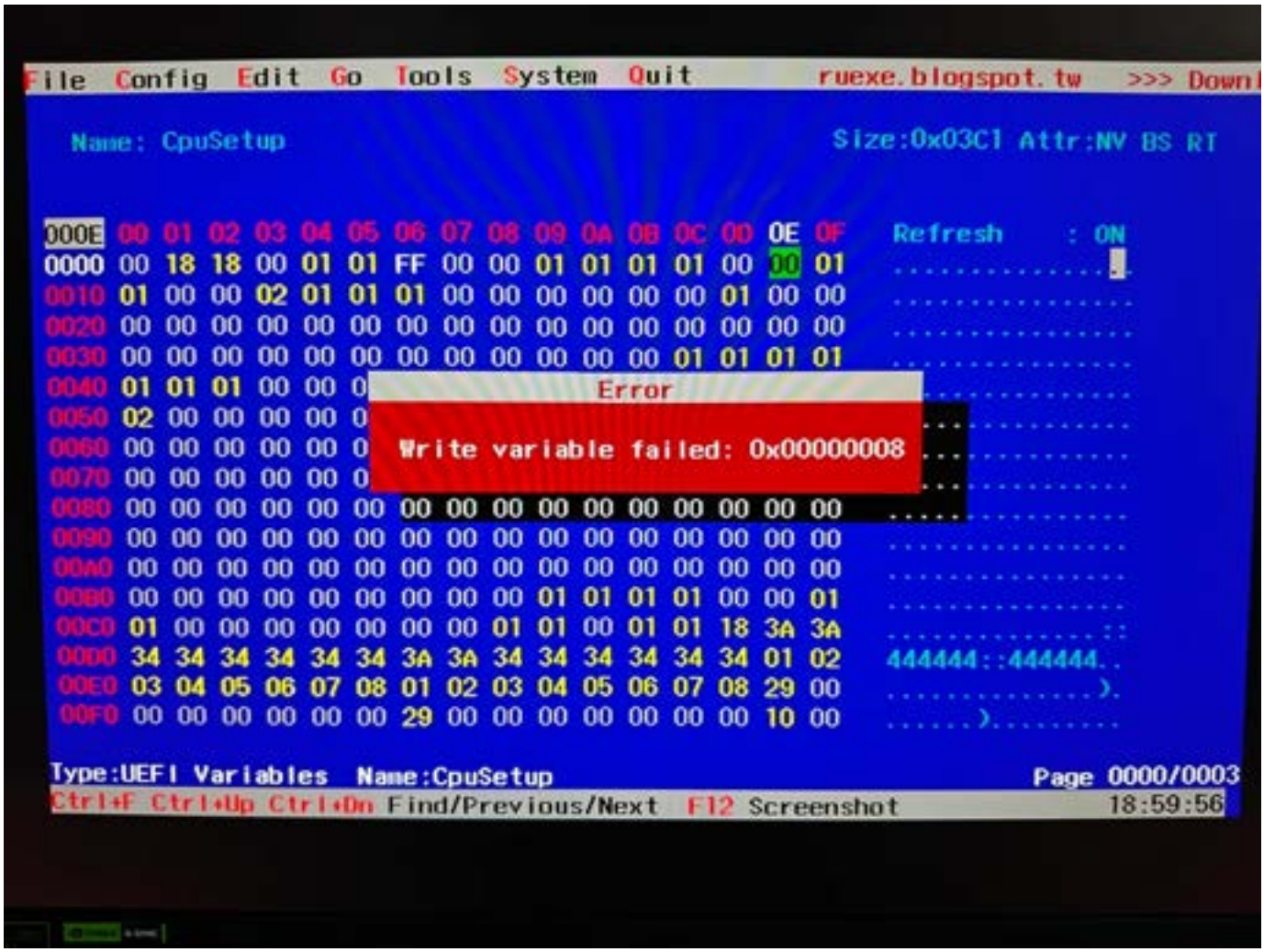
Edit: Undervolting doesn't work , UV Protection is on ,also Predator Sense gets a bit disoriented(bad UI) so gonna enable Overclock lock so it runs according to Acer's settings as PredatorSense Overclocks the CPU+GPU(100Mhz GPU Core , 200Mhz GPU MEM) don't know about the CPU Values though.

Update on Overclocking and Undervolting

#1 Overclocking can be enabled by disabling Overclocking Lock and CFG Lock.

#2Undervolting can't be done as Undervolt Protection is enabled. Here are a few things I've tried out to disable it but none have worked due to EFI_WRITE_PROTECTION. So If anyone knows what disables the EFI_PROTECTION please tell.

value 0x1 to 0x0. Which gives me with the error : Write Variable Failed : 0x00000008 which is EFI_WRITE_PROTECTED which means the BIOS Value manipulation is locked someway , through SREP I saw many options such as BIOS Guard , BIOS Lock , etc. I've tried those but using RU.efi returns me with the same error.



Write Variable Failed Error

So i tried using modGRUBshell.efi as mentioned in Dell BIOS Modding. It returns me with the same error. I'm not going to explain how to use RU and Grubshell until I figure out how to disable EFI Write protection and successfully disable UV Protection as changing these bits can lead to bricking of the entire system (BIOS Corruption or failure). For now I've kept default settings (Overclocking lock enabled , CFG Lock enabled) with 1.4V Voltage limit.

So all I can say is 1.4V will save my laptop from degradation and Intel issues but it will also limit its performance which was to be recovered by Undervolting which is locked. I hope Acer rolls out a new BIOS with 0x12B Microcode so I can get my performance back without having to worry about Undervolting.

Update: My final verdict and the possible left solutions.

I have seen a few Legion posts suggesting to disable VT-d ,VT-x, HVCI ,and VBS to enable undervolting. I have tried and scoured through the whole BIOS , only noteworthy settings are PL4 limit (I have set 400W), CPU VR

Settings disabled : VBS , HVCI , VPM , VTd , VTx , FPRR , SPD Write

Method 1 : Just disabling OC lock and CFG lock and trying undervolting

Result : Failure , Undervolt Protection Enabled

Method 2 : Bios Modding

1# Try Ru.efi -Failure

Result: Write Variable Failed 0x000000008 (EFI_WRITE_PROTECTED)

2# Try Gurbshell.efi -Failure

Result : Write Variable Failed 0x000000008 (EFI_WRITE_PROTECTED)

3# Insyde tool= Failure

Result: Failed to Parse Variables

All these errors pull up because of the BIOS being locked from the core and Undervolt Protection enabled there, BIOS Lock is enabled and since you can't disable it through the software methods , it will probably need a SPI Programmer or will have to do a complete BIOS Reset , Downgrade to V1.04 then try all these methods but I tried doing a BIOS downgrade as mentioned in Acer Gaming discord but it seems that the also fails.

So the only left solution to getting Undervolt capabilities would be using CH341A or flashing a Custom BIOS.

I think the best settings would be: (These are best settings for max performance , To Avoid instability just lock voltage to 1.4V .Disable E cores if you face stutters. The other settings are optional.)

1)Running on Turbo mode + Max Fans

2)Locking the voltage to 1.4V

3)Keep Overclocking and CFG lock disabled ,

4)then Set PL4 to 400W ,

5)Keep PL1 and PL2 85W and 157W respectively. or just run the Turbo or Performance mode from Predator sense it manages the PL limits.

6)I have disabled E Cores on CPU as it cause stutters and freezes in a few game. Also lowered my CPU Temps.

7)Undervolt the GPU and Overclock it. (Keep in my mind it is different for everyone , and depends on the silicon quality . Some 4080s can go upto 2790Mhz on Core clock like the XMG or Hydroc because of their Water cooling solution.) Undervolting the GPU reduces the Temperatures and reduces CPU Temperatures , This was primarily because the Heatpipes are shared , so it helps in much better heat dissipation since one side is cooler.

8)Liquid Metal repaste (follow this guide)on CPU,GPU and VRAM Repaste and getting a Cooling pad like Llano or IETS.

For CPU keep Liquid Metal , For GPU Kryonaut or PTM7950 and for VRAM go with U6 Pro(Thermal Putty) or Gelide GP Extreme(Thermal Pad).

I have done a Liquid Metal repaste on CPU , applied Kryonaut on GPU(Gonna change it to PTM7950 on the GPU as kryonaut will pump out a few months after) and will do VRAM repaste with probably U6 Pro. And also get a Llano cooling pad. This will help in thermal management.

I think this would be the best way to get both Performance and Stability at the moment without undervolting the CPU as thats not possible.

Goes to say that the only things I observed after setting 1.4V limit vs the original, was stuttering in between when the processor couldn't boost 1.4V in MSFS2020 in 2K Ultra , other games I have seen around negligent fps drops as those become GPU bound (Assetto Corsa with mods didn't fill any different). This can be fixed by turning off the E Cores through the Normal Acer Advanced BIOS.

Still Acer must upload a updated BIOS with 0x12B microcode update man..

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