Erledigt ASRock X299 OC Formula - i9-7920X immer nur bei 1,20 Ghz.

Beitrag von „Mork vom Ork“ vom 16. März 2020, 22:20

Hallo zusammen,

ich habe mir nun zu meinem ASRock X299 OC Formula eine Intel i9-7920X CPU geleistet und diese auch schon eingebaut.

Leider scheint diese aber immer nur konstant bei 1,20 Ghz. zu laufen und unter macOS Mojave 10.14.6 liegt der CPU Package Multiplier immer nur bei 12x

Die CPU sollte jedoch ohne OverClocking bis 2,90 Ghz. laufen. Daher habe ich mal via Hackintool folgenden AppleIntelInfo Test laufen lassen und daurch die nachfolgend gelisteten Werte erhalten:

Code

1. AppleIntelInfo.kext v3.0 Copyright © 2012-2017 Pike R. Alpha. All rights reserved.
2.
3. Settings:
4. ----------
5. enableHWP..... : 1
6. logMSRs..... : 1
7. logIGPU..... : 0
8. logIntelRegs..... : 0
9. logCStates..... : 1
10. logIPGStyle..... : 1
11. InitialTSC..... : 0xb941ba178b9 (438 MHz)
12. MWAIT C-States..... : 8224
13.
14. Processor Brandstring..... : Intel(R) Core(TM) i9-7920X CPU @ 2.90GHz
15.
16. Processor Signature..... : 0x50654
17. ----------
18. - Family..... : 6

- Stepping..... : 4
- Model..... : 0x55 (85)

Model Specific Registers (MSRs)

MSR_IA32_PLATFORM_ID.....(0x17) : 0x8000000000000

- Processor Flags..... : 2

MSR_CORE_THREAD_COUNT.....(0x35) : 0xC0018

- Core Count..... : 12
- Thread Count..... : 24

MSR_PLATFORM_INFO.....(0xCE) : 0x70C2CF3011D00

- Maximum Non-Turbo Ratio..... : 0x1D (2900 MHz)
- Ratio Limit for Turbo Mode..... : 1 (programmable)
- TDP Limit for Turbo Mode..... : 1 (programmable)
- Low Power Mode Support..... : 0 (LMP not supported)
- Number of ConfigTDP Levels..... : 2 (additional TDP level(s) available)
- Maximum Efficiency Ratio..... : 12
- Minimum Operating Ratio..... : 7

MSR_PMG_CST_CONFIG_CONTROL.....(0xE2) : 0x7E000003

- I/O MWAIT Redirection Enable..... : 0 (not enabled)
- CFG Lock..... : 0 (MSR not locked)
- C3 State Auto Demotion..... : 1 (enabled)
- C1 State Auto Demotion..... : 1 (enabled)
- C3 State Undemotion..... : 1 (enabled)
- C1 State Undemotion..... : 1 (enabled)
- Package C-State Auto Demotion..... : 1 (enabled)
- Package C-State Undemotion..... : 1 (enabled)

MSR_PMG_IO_CAPTURE_BASE.....(0xE4) : 0x0
- C-state Range..... : 0 (C-States not included, I/O MWAIT redirection not enabled)

IA32_MPERF.....(0xE7) : 0x11606198A9
IA32_APERF.....(0xE8) : 0x7132C5DA5

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MSR_FLEX_RATIO.....(0x194) : 0xE0000

MSR_IA32_PERF_STATUS.....(0x198) : 0x176800000C00
----------------------------------------
- Current Performance State Value..... : 0xC00 (1200 MHz)

MSR_IA32_PERF_CONTROL.....(0x199) : 0x1D00
----------------------------------------
- Target performance State Value..... : 0x1D00 (2900 MHz)
- Intel Dynamic Acceleration..... : 0 (IDA engaged)

IA32_CLOCK_MODULATION.....(0x19A) : 0x0

IA32_THERM_INTERRUPT.....(0x19B) : 0x0

IA32_THERM_STATUS.....(0x19C) : 0x8853000C
----------------------------------------
- Thermal Status..... : 0
- Thermal Log..... : 0
- PROCHOT # or FORCEPR# event..... : 1
- PROCHOT # or FORCEPR# log..... : 1
- Critical Temperature Status..... : 0
- Critical Temperature log..... : 0
- Thermal Threshold #1 Status..... : 0
- Thermal Threshold #1 log..... : 0
- Thermal Threshold #2 Status..... : 0
- Thermal Threshold #2 log..... : 0
- Power Limitation Status..... : 0
- Power Limitation log..... : 0
- Current Limit Status..... : 0
- Current Limit log..... : 0
- Cross Domain Limit Status..... : 0
- Cross Domain Limit log..... : 0
- Digital Readout..... : 83
- Resolution in Degrees Celsius..... : 1
- Reading Valid..... : 1 (valid)

MSR_THERM2_CTL.....(0x19D) : 0x0

IA32_MISC_ENABLES.....(0x1A0) : 0x850089
----------------------------------------
```

- Fast-Strings..... : 1 (enabled)
- FOPCODE compatibility mode Enable.... : 0
- Automatic Thermal Control Circuit.... : 1 (enabled)
- Split-lock Disable..... : 0
- Performance Monitoring..... : 1 (available)
- Bus Lock On Cache Line Splits Disable : 0
- Hardware prefetch Disable..... : 0
- Processor Event Based Sampling..... : 0 (PEBS supported)
- GV1/2 legacy Enable..... : 0
- Enhanced Intel SpeedStep Technology.. : 1 (enabled)
- MONITOR FSM..... : 1 (MONITOR/MWAIT supported)
- Adjacent sector prefetch Disable..... : 0
- CFG Lock..... : 0 (MSR not locked)
- xTPR Message Disable..... : 1 (disabled)

MSR_TEMPERATURE_TARGET.....(0x1A2) : 0x6E0A00

- Turbo Attenuation Units..... : 0
- Temperature Target..... : 110
- TCC Activation Offset..... : 0

MSR_MISC_PWR_MGMT.....(0x1AA) : 0x400041

- EIST Hardware Coordination..... : 1 (hardware coordination disabled)
- Energy/Performance Bias support..... : 1
- Energy/Performance Bias..... : 0 (disabled/MSR not visible to software)
- Thermal Interrupt Coordination Enable : 1 (thermal interrupt routed to all cores)
- SpeedShift Technology Enable..... : 1 (enabled)
- SpeedShift Interrupt Coordination.... : 0 (disabled)
- SpeedShift Energy Efficient Perf..... : 0 (disabled)
- SpeedShift Technology Setup for HWP.. : Yes (setup for HWP)

MSR_TURBO_RATIO_LIMIT.....(0x1AD) : 0x262626262628292C

- Maximum Ratio Limit for C01..... : 2C (4400 MHz)
- Maximum Ratio Limit for C02..... : 29 (4100 MHz)
- Maximum Ratio Limit for C03..... : 28 (4000 MHz)
- Maximum Ratio Limit for C04..... : 26 (3800 MHz)
- Maximum Ratio Limit for C05..... : 26 (3800 MHz)
- Maximum Ratio Limit for C06..... : 26 (3800 MHz)
- Maximum Ratio Limit for C07..... : 26 (3800 MHz)

143. - Maximum Ratio Limit for C08..... : 26 (3800 MHz)
144.
145. MSR_TURBO_RATIO_LIMIT1.....(0x1AE) : 0x1C1814100C080402
146. ----------
147. - Maximum Ratio Limit for C09..... : 2 (200 MHz)
148. - Maximum Ratio Limit for C10..... : 4 (400 MHz)
149. - Maximum Ratio Limit for C11..... : 8 (800 MHz)
150. - Maximum Ratio Limit for C12..... : C (1200 MHz)
151.
152. IA32_ENERGY_PERF_BIAS.....(0x1B0) : 0x1
153. ----------
154. - Power Policy Preference..... : 1 (highest performance)
155.
156. MSR_POWER_CTL.....(0x1FC) : 0x210C005B
157. ----------
158. - Bi-Directional Processor Hot..... : 1 (enabled)
159. - C1E Enable..... : 1 (enabled)
160.
161. MSR_RAPL_POWER_UNIT.....(0x606) : 0xA0E03
162. ----------
163. - Power Units..... : 3 (1/8 Watt)
164. - Energy Status Units..... : 14 (61 micro-Joules)
165. - Time Units ..... : 10 (976.6 micro-Seconds)
166.
167. MSR_PKG_POWER_LIMIT.....(0x610) : 0x15FFF80014FFF8
168. ----------
169. - Package Power Limit #1..... : 4095 Watt
170. - Enable Power Limit #1..... : 1 (enabled)
171. - Package Clamping Limitation #1..... : 0 (disabled)
172. - Time Window for Power Limit #1..... : 10 (2560 milli-Seconds)
173. - Package Power Limit #2..... : 4095 Watt
174. - Enable Power Limit #2..... : 1 (enabled)
175. - Package Clamping Limitation #2..... : 1 (allow going below OS-requested P/T state setting Time Window for Power Limit #2)
176. - Time Window for Power Limit #2..... : 10 (2560 milli-Seconds)
177. - Lock..... : 0 (MSR not locked)
178.
179. MSR_PKG_ENERGY_STATUS.....(0x611) : 0x30A755B
180. ----------
181. - Total Energy Consumed..... : 3113 Joules (Watt = Joules / seconds)
182.
183. MSR_CONFIG_TDP_NOMINAL.....(0x648) : 0x1D

MSR_CONFIG_TDP_LEVEL1.....(0x649) : 0xEC000000160460
MSR_CONFIG_TDP_LEVEL2.....(0x64a) : 0xEC000000160460
MSR_CONFIG_TDP_CONTROL.....(0x64b) : 0x80000000
MSR_TURBO_ACTIVATION_RATIO.....(0x64c) : 0x0
MSR_PKGC3_IRTL.....(0x60a) : 0x0
MSR_PKGC6_IRTL.....(0x60b) : 0x0
MSR_PKG_C2_RESIDENCY.....(0x60d) : 0x10FABB7B5
MSR_PKG_C3_RESIDENCY.....(0x3f8) : 0x0
MSR_PKG_C2_RESIDENCY.....(0x60d) : 0x10FABB7B5
MSR_PKG_C3_RESIDENCY.....(0x3f8) : 0x0
MSR_PKG_C6_RESIDENCY.....(0x3f9) : 0x4177724BE

IA32_TSC_DEADLINE.....(0x6E0) : 0xB94204AFD21

IA32_PM_ENABLE.....(0x770) : 0x1 (HWP Supported and Enabled)

IA32_HWP_CAPABILITIES.....(0x771) : 0x2B

- Highest Performance..... : 43
- Guaranteed Performance..... : 0
- Most Efficient Performance..... : 0
- Lowest Performance..... : 0

IA32_HWP_REQUEST_PKG.....(0x772) : 0x2C2C07

- Minimum Performance..... : 7
- Maximum Performance..... : 44
- Desired Performance..... : 44
- Energy Efficient Performance..... : 0
- Activity Window..... : 0, 0

IA32_HWP_REQUEST.....(0x774) : 0x40000FFFF07

- Minimum Performance..... : 7
- Maximum Performance..... : 255
- Desired Performance..... : 255
- Energy Efficient Performance..... : 0
- Activity Window..... : 0, 0
- Package Control..... : 1 (control inputs to be derived from IA32_HWP_REQUEST_PKG)

IA32_HWP_STATUS.....(0x777) : 0x0

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225. ----------------------------------------
226. - Guaranteed Performance Change..... : 0 (has not occured)
227. - Excursion To Minimum..... : 0 (has not occured)
228.
229. CPU Ratio Info:
230. ----------------------------------------
231. Base Clock Frequency (BLCK)..... : 100 MHz
232. Maximum Efficiency Ratio/Frequency..... : 12 (1200 MHz)
233. Maximum non-Turbo Ratio/Frequency..... : 29 (2900 MHz)
234. Maximum Turbo Ratio/Frequency..... : 44 (4400 MHz)
235. P-State ratio * 100 = Frequency in MHz
236. ----------------------------------------
237. CPU P-States [ (12) ]
238. CPU C6-Cores [ 0 3 5 6 10 12 14 16 18 20 23 ]
239. CPU P-States [ 12 ]
240. CPU C6-Cores [ 0 1 2 3 4 5 6 8 10 12 14 16 18 20 22 23 ]
241. CPU P-States [ (12) ]
242. CPU C6-Cores [ 0 1 2 3 4 5 6 8 10 11 12 14 15 16 18 20 22 23 ]
243. CPU C6-Cores [ 0 1 2 3 4 5 6 8 10 11 12 14 15 16 17 18 20 22 23 ]
244. CPU C6-Cores [ 0 1 2 3 4 5 6 8 10 11 12 14 15 16 17 18 19 20 22 23 ]
245. CPU C6-Cores [ 0 1 2 3 4 5 6 7 8 10 11 12 14 15 16 17 18 19 20 22 23 ]
246. CPU C6-Cores [ 0 1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 22 23 ]
247. CPU C6-Cores [ 0 1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 ]
248. CPU C6-Cores [ 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 ]
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Alles anzeigen

Scheinbar scheinen die P-States nur ein "x12" zuzulassen. Im BIOS selber habe ich KEINE Einstellungen an den CPU-Settings verstellt, sondern die standardmässig gesetzten (DEFAULT) Werte übernommen.

In meiner config.plist für CLOVER steht unter ACPI - SSDT - Generate "PluginType = NO", "CStates = NO" und "PStates = NO".

Was muss ich bitte ggf. noch wo einstellen, damit er das Powermanagement korrekt macht und die CPU auch wirklich mit dem im BIOS gesetzten max SPeed fährt (in meinem Fall also mit 2,90 Ghz.) ?

PS: stelle gerade fest, dass die CPU auch unter WIN10 mit max 1,20 Ghz. läuft ?!?

PPS: anbei auch mal mein EFI.zip Ordner

- - - - -

EDIT: Problem fixed - der "Slow Mode" Dipschalter auf dem Mainboard stand auf "ON". Switched to "OFF" - und alles passt wieder. **Thread kann also wieder geschlossen werden**

Beitrag von „al6042“ vom 16. März 2020, 23:00

Schön zu lesen, dass du das Problem selbst fixen konntest, aber geschlossen wird der Thread nur, wenn er gegen die Forenregeln verstösst.

In deinem Falle reicht es den Vorgang als "Erledigt" zu markieren:

Beitrag von „DSM2“ vom 16. März 2020, 23:01

PluginType solltest du dennoch aktiv schalten falls nicht per SSDT erledigt...

Sowie folgendes im Bios Konfigurieren:

Advanced -> CPU Configuration -> CPU Power Management Configuration

Enhanced Intel Speed Step Technology (EIST): Enabled

Autonomous Core C-States: Enabled

Enhanced Halt State (C1E):Enabled

CPU C6 report: Enabled

Package C-State: C6(non retention) state

Intel SpeedShift Technology:Enabled

MFC Mode Override: OS Native