

Limiting TDP Under BIOS for Intel® NUC 10 (Frost Canyon)

Date: 16/07/2020

Following Intel® specification for Configurable Thermal Design Power (TDP)-up of 25W for the Core™ i3, i5 and i7^{1,2,3}. Intel® Turbo Boost Technology 2.0 is enabled by default and increases the VRM and TDP values, which may cause the CPU to throttle in order to cool down when installed inside the Turing FX case (Product Code: A-NUC52-M1B). The thermal design of the Turing FX case follows the 25W TDP specification. To prevent this, please follow the instructions to keep the 25W TDP power limit.

Instructions

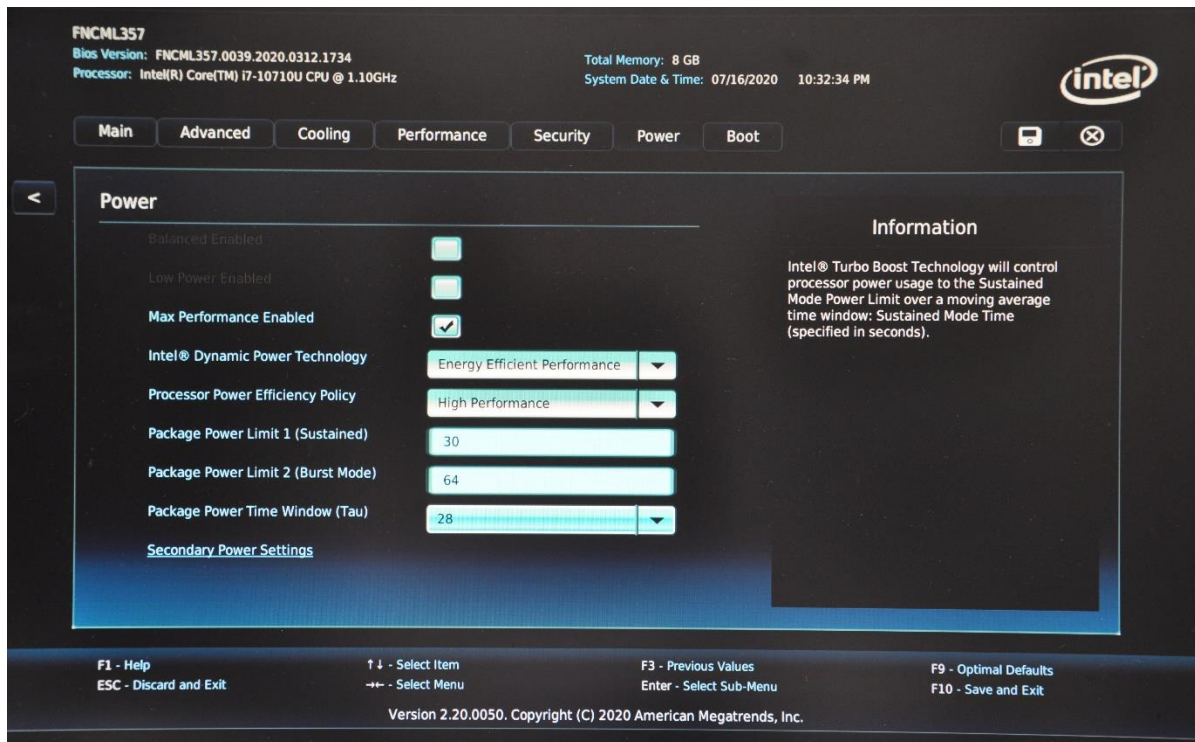
1.) Latest BIOS version: FNCML357 (3/12/2020)

<https://downloadcenter.intel.com/download/29458/BIOS-Update-FNCML357-?product=188811>

2.) To get to the BIOS setting ---> Boot up the system, when you see the screen with the Intel NUC logo, immediately press the F2 function key for a few times.

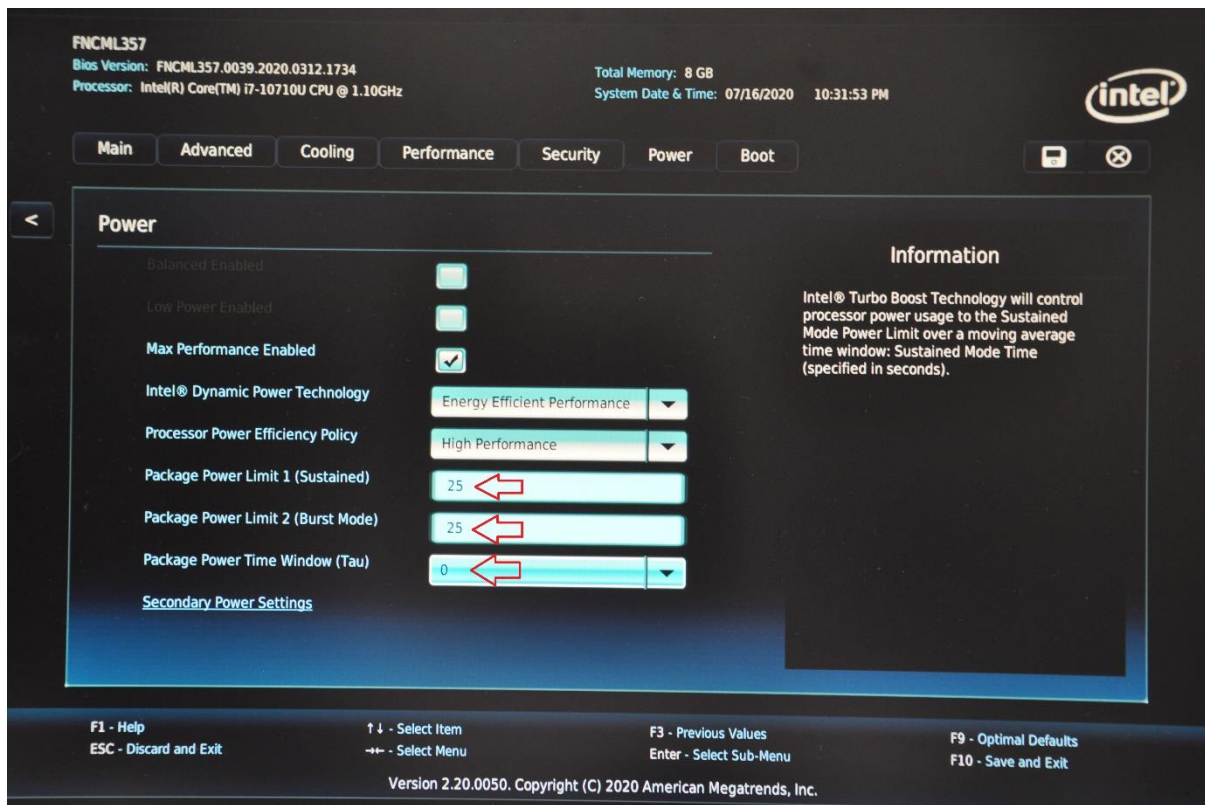


3.) Select the 'Power' tab and the default setting is as below:



4.) Change the parameters:

- i.) 'Package Power Limit 1 (Sustained)' to '25'
- ii.) 'Package Power Limit 2 (Burst Mode)' to '25'
- iii.) 'Package Power Time Window (Tau)' to '0'



5.) Press 'F10' to Save settings

Reference

- 1.) <https://www.intel.co.uk/content/www/uk/en/products/processors/core/i7-processors/i7-10710u.html>
- 2.) <https://ark.intel.com/content/www/us/en/ark/products/195436/intel-core-i5-10210u-processor-6m-cache-up-to-4-20-ghz.html>
- 3.) <https://ark.intel.com/content/www/us/en/ark/products/196451/intel-core-i3-10110u-processor-4m-cache-up-to-4-10-ghz.html>