

Intel® Core™ Microarchitecture (Nehalem) CPU Turbo Mode Overview

What is Turbo Mode?

- Opportunistically and automatically allows the CPU to run faster than the TDP frequency IF the processor is operating below specifications
 - Must be below the power, temperature and current specification limits
 - Increases performance of both multi-threaded and single-threaded workloads

Turbo Mode Operation:

- Operates under OS control (only entered when OS requests higher performance)
 - Transition from P1 to P0 state in ACPI terminology
 - Can be enabled or disabled by BIOS
- Ability to enter Turbo Mode is independent of the number of active cores