



## VT-TRIGGER NextSensor plug-in

### Quick Introduction User Guide

The VIA VT 8237 Series South Bridge features a **Thermal Alarm Monitor** (Thermal Monitor) control function designed to prevent processor overheating and keep its die temperature within factory specifications. If the Thermal Monitor is activated it automatically monitors processor's temperature and when it has reached a critical point (it can be given by the TCaseMax temperature parameter specific for the AMD64 processors) THRM# signal is asserted and the system logic begins modulating the STPCLK# cycle. Its assertion halts the processor for some fixed amount of time (**Duty Cycle**). This mechanism is called **Thermal Throttling**.

VT-Trigger enables to program a value of duty cycle into a register that reduces the processor's performance to a percentage of maximum performance. The lower the duty cycle the lower the processor clock frequency. Despite, the clock frequency has been decreased by Thermal Throttling mechanism the software may report the full frequency of the processor, because it corrects its Time Stamp Counter using an appropriate correction factor.

Besides Automatic Thermal Throttling, there is the second throttling mechanism that can be used for immediate reducing of the processor's clock frequency. It is **On-Demand Clock Throttling**. The difference is that the user can activate ODC T immediately while the thermal throttling is controlled by the system logic at a critical level only.

ODCT is practically the same as FID transition. But now, using VT-Trigger plug-in you can easily decrease the frequency of any processor both mobile and desktop. VT-Trigger can lower the frequency to the level that cannot be reached even at the minimum power state after FID transition.