

Kernel driver peci-cputemp

Supported chips:

One of Intel server CPUs listed below which is connected to a PECI bus.

- Intel Xeon E5/E7 v3 server processors
Intel Xeon E5-14xx v3 family Intel Xeon E5-24xx v3 family Intel Xeon E5-16xx v3 family Intel Xeon E5-26xx v3 family Intel Xeon E5-46xx v3 family Intel Xeon E7-48xx v3 family Intel Xeon E7-88xx v3 family
- Intel Xeon E5/E7 v4 server processors
Intel Xeon E5-16xx v4 family Intel Xeon E5-26xx v4 family Intel Xeon E5-46xx v4 family Intel Xeon E7-48xx v4 family Intel Xeon E7-88xx v4 family
- Intel Xeon Scalable server processors
Intel Xeon D family Intel Xeon Bronze family Intel Xeon Silver family Intel Xeon Gold family Intel Xeon Platinum family

Datasheet: Available from <http://www.intel.com/design/literature.htm>

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Description

This driver implements a generic PECI hwmon feature which provides Digital Thermal Sensor (DTS) thermal readings of the CPU package and CPU cores that are accessible via the processor PECI interface.

All temperature values are given in millidegree Celsius and will be measurable only when the target CPU is powered on.

Sysfs interface

temp1_label	"Die"
temp1_input	Provides current die temperature of the CPU package.
temp1_max	Provides thermal control temperature of the CPU package which is also known as Tcontrol.
temp1_crit	Provides shutdown temperature of the CPU package which is also known as the maximum processor junction temperature, Tjmax or Tprochot.
temp1_crit_hyst	Provides the hysteresis value from Tcontrol to Tjmax of the CPU package.
temp2_label	"DTS"
temp2_input	Provides current temperature of the CPU package scaled to match DTS thermal profile.
temp2_max	Provides thermal control temperature of the CPU package which is also known as Tcontrol.
temp2_crit	Provides shutdown temperature of the CPU package which is also known as the maximum processor junction temperature, Tjmax or Tprochot.
temp2_crit_hyst	Provides the hysteresis value from Tcontrol to Tjmax of the CPU package.
temp3_label	"Tcontrol"
temp3_input	Provides current Tcontrol temperature of the CPU package which is also known as Fan Temperature target. Indicates the relative value from thermal monitor trip temperature at which fans should be engaged.
temp3_crit	Provides Tcontrol critical value of the CPU package which is same to Tjmax.
temp4_label	"Throttle"
temp4_input	Provides current Throttle temperature of the CPU package. Used for throttling temperature. If this value is allowed and lower than Tjmax - the throttle will occur and reported at lower than Tjmax.
temp5_label	"Tjmax"
temp5_input	Provides the maximum junction temperature, Tjmax of the CPU package.
temp[6-N]_label	Provides string "Core X", where X is resolved core number.
temp[6-N]_input	Provides current temperature of each core.