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ACPI 3

ACPI

Intel platforms have capabilities to optimize power usage. There are multiple standard PC power modes that are documented in the Advanced Configuration and Power Interface (ACPI) specification. It is not the intention of this document to re-iterate all of the ACPI specification, but the global and sleeping states, which affect the platform hardware design, will be highlighted.

Global States

- **G0** (**S0**): System is fully on and running
- **G1**, Sleeping States: (divided into the four states **S1** through **S4**) The behavior of the sleeping state is cumulative as the mode increases (numerically).
    - **S1**: All processor caches are flushed, and the CPU(s) stop executing instructions. Power to the CPU(s) and RAM is maintained; devices that do not indicate they must remain on may be powered down.
    - **S2**: CPU is powered off.
    - **S3**: Commonly referred to as Standby, Sleep, or Suspend to RAM. RAM remains powered, but all non-standby power rails are turned off.
    - **S4**: Hibernation or Suspend to Disk. All content of main memory is saved to non-volatile memory such as a hard drive. The system is powered down to same level as **S5**.
- **G2** (**S5**), Soft Off: **G2** is almost the same as **G3** Mechanical Off, but some components remain powered so the computer can «wake» from input from the keyboard, clock, LAN, I/O, or USB device.
- **G3**, Mechanical Off: All externally provided power sources are turned off(typically, only the real-time clock is running off its own small internalbattery)