

Monitoring internal power consumption of computing systems

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1. Why measuring inside ?

A first step for finding out energy efficient solutions.

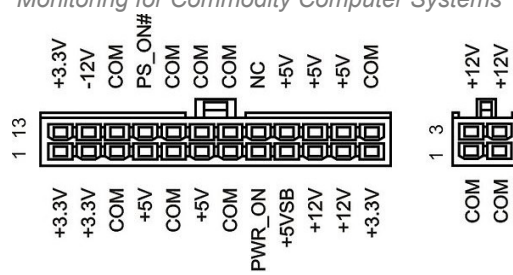
A tool to validate experimentally the energy efficiency.

A high measuring frequency (up to 1000 Hz).

A fine-grained power consumption:
power consumption for each component.

2. Powermon 2

An equipment from RENCI ilab: ilab.renci.org/powermon
[D. Bedard et al] *PowerMon: Fine-grained and Integrated Power Monitoring for Commodity Computer Systems*



3. Some benchmark results

Monitoring power consumption

External by OmegaWatt (Up to 1 Hz).

Internal by PowerMon 2 (Up to 1000 Hz).

Correlating internal and external measures to deduct:

Global power consumption inside the computing system.

Power consumption of fan and power supply.

