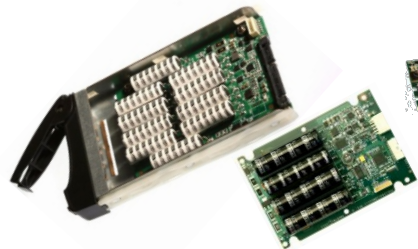# NVDIMM Integration and Backup Power Scaling
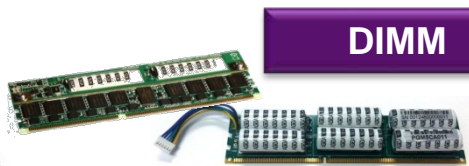
Arthur Sainio

SMART Modular Technologies

Backup Power
Form Factor Options

- One size does not fit all
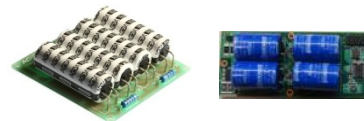- Affected by chassis type, available PCIe/DIMM slots, cabling, x,y,z, constraints

PCI Express Card

DIMM

Fan Mount

2.5" Drive
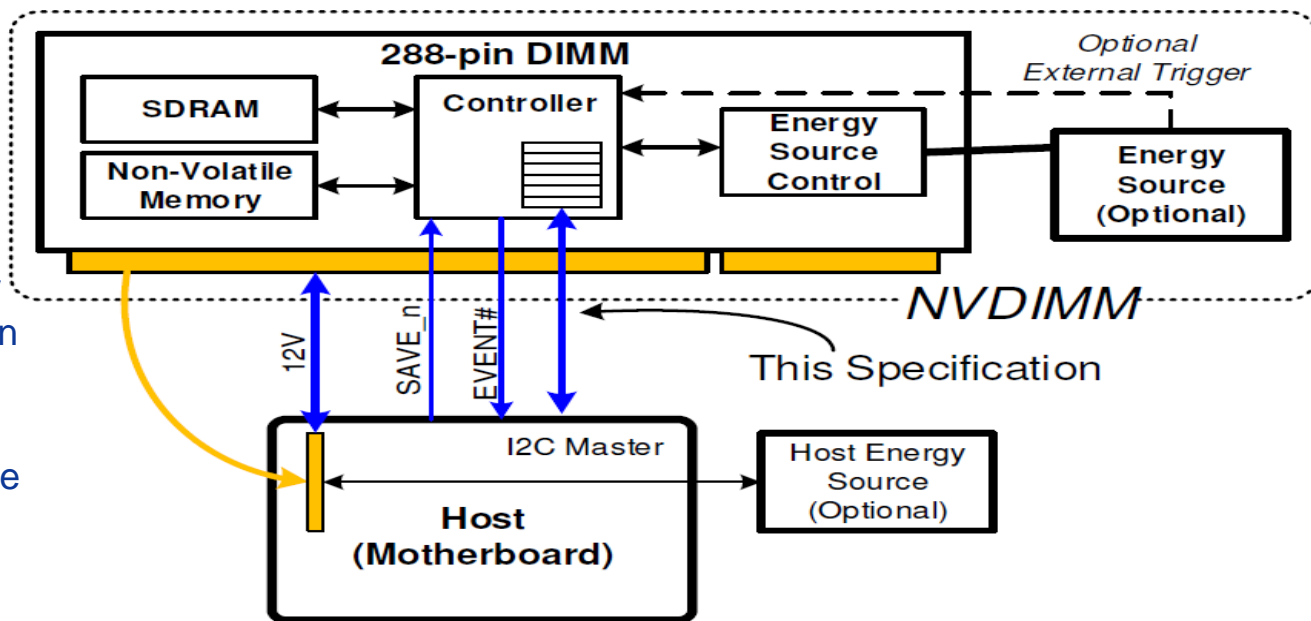
Battery Pack Form Factors

Chassis Mounted

NVDIMM-N DDR4 Platform Energy Source Options

JEDEC JC45.6 Byte Addressable Energy Backed Interface

- It allows for the option of a tethered power source to the NVDIMM or a power source on the motherboard

- When the power is on the motherboard it is routed directly to the NVDIMM socket during an unplanned shut down

- This is a possible trend for future systems to eliminate tethering/cabling

Supercap / Backup Power Industry Initiatives

- JEDEC Specification - Byte Addressable Energy Backed Interface
  - Defines that a NVDIMM module shall support a paging mechanism to access registers beyond 256 offsets
- But, no mechanical standardization for the host-managed energy source
- Are mechanical standards for the energy source needed?