

DDR4 Differential DIMM (DDIMM)

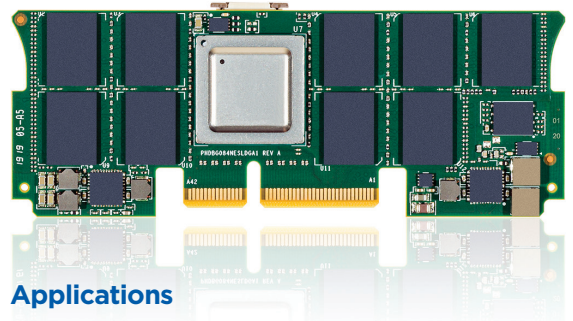
DDR4 DDIMM

SMART's OpenCAPI DDR4 DDIMM is leading-edge transformative memory module that enables a data throughput rate of 25.6GB/s with a latency of 40ns and densities up to 256GB. The new 84-pin DDR4 DDIMM is intended for use in standard server environments. It utilizes a serial interface and a differential Data Buffer (dDB) from Microsemi. The DDIMM supports IBM's P9 with Advanced IO (AIO) and P10 processors' memory attached architecture. The P9 with AIO and P10 memory bus is defined with one read port and one write port, each having eight unidirectional differential lanes supporting 25.6 Gbps data rate over OpenCAPI memory Link direct attached to the DDIMM.

SMART Modular is part of a growing roster of technology organizations that are contributing to the OpenCAPI Consortium and driving data center server innovation. Through the Consortium, members are working collaboratively to innovate on top of OpenCAPI, a high performance coherent bus standard designed to help the technology industry work to better meet growing demands for more advanced memory, accelerators, networking and storage technology. Using the OpenCAPI specification developers can enable high performance accelerators like FPGAs, GPUs, network and storage accelerators to perform functions that a server's general purpose CPU is not optimized to execute.

Features & Benefits

- Throughput rate of 25.6GB/s with a latency of 40ns
- Serial interface
- High speed data transfer rates
- High density up to 256GB



Applications

- Data centric and hybrid computing
- Servers and data centers
- The DDIMM supports IBM's P9 with Advanced IO (AIO)



Accelerators:

The performance, virtual addressing and coherence capabilities allow FPGA and ASIC accelerators to behave as if they were integrated into a custom microprocessor.

Coherent Network Controller:

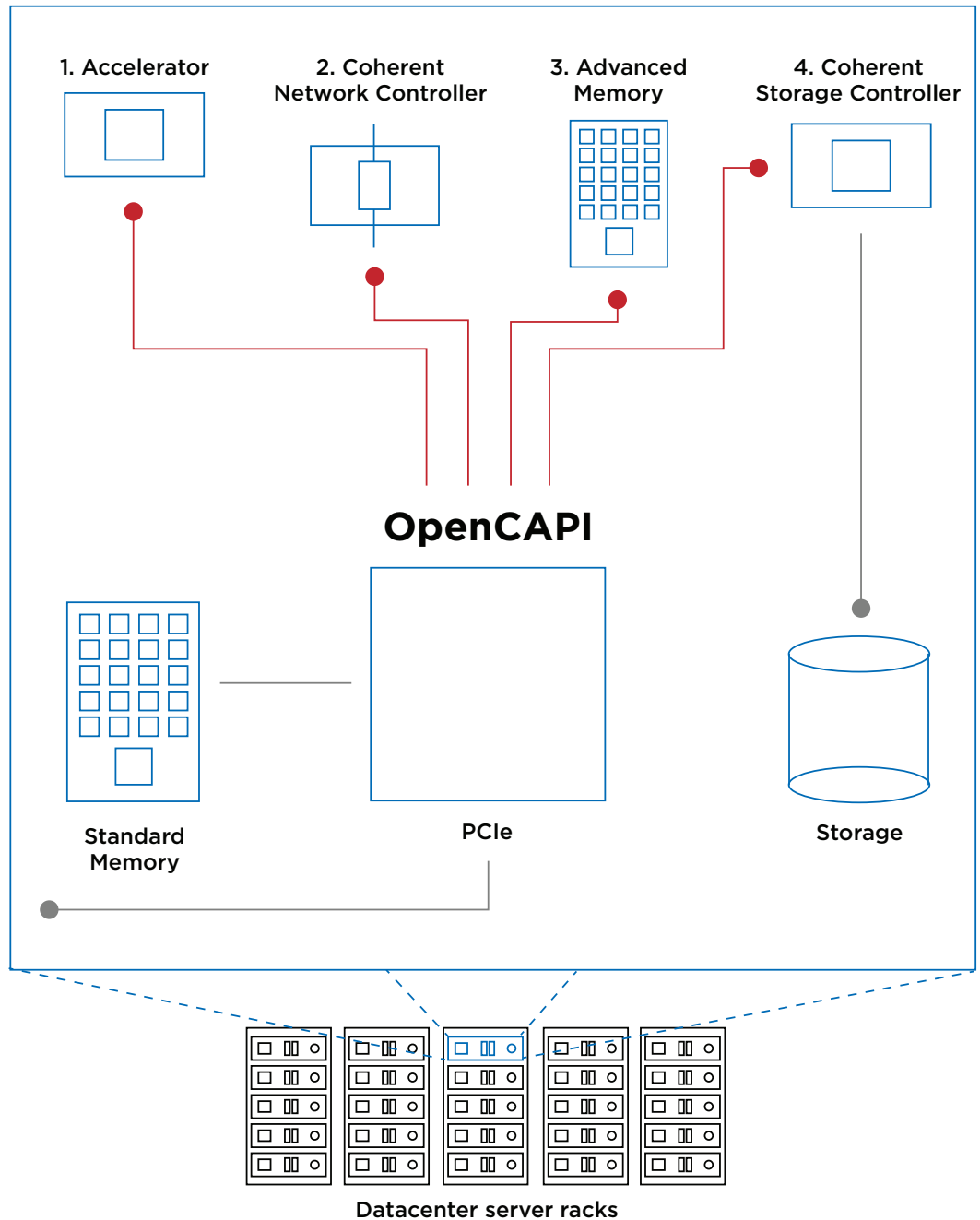
OpenCAPI provides the bandwidth that will be needed to support rapidly increasing network speeds. Network controllers based on virtual addressing can eliminate software overhead without the programming complexity usually associated with user level network protocols.

Advanced Memory:

OpenCAPI allows system designers to take full advantage of emerging memory technologies to change the economics of the data center.

Coherent Storage Controller:

OpenCAPI allows storage controllers to bypass kernel software overhead, enabling extreme IOPS performance and wasting valuable CPU cycles.



Ordering Information

OpenCAPI DDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SR8197DE440425HA	64GB	64.55	2Rx4	4Gbx4	DDR4-3200	1.2V	0°C to +70°C
SR4097DE420425HC	32GB	64.55	2Rx4	2Gbx4	DDR4-3200	1.2V	0°C to +70°C
SR4097DD440425HA	32GB	30.35	1Rx4	4Gbx4	DDR4-3200	1.2V	0°C to +70°C
SR2047DD420425HC	16GB	30.35	1Rx4	2Gbx4	DDR4-3200	1.2V	0°C to +70°C

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