

## Multi-Core MIPS64® Processors

# OCTEON™ Plus CN57XX 8 to 12-Core MIPS64 Storage Processors

Product Brief



### OVERVIEW

The OCTEON™ Plus CN57XX family of Multi-Core Storage Services processors targets mid to high-end intelligent storage array, storage networking, and storage appliance applications. The family includes six different software-compatible parts, with eight to twelve cnMIPS64 cores on a single chip that integrate high-density, high-bandwidth standard interfaces along with the most advanced storage security, RAID, and storage application acceleration to deliver a scalable platform for developing next-generation storage products.

### FEATURES

- 8-12 cnMIPS Plus cores, up to 800 MHz on a single chip
  - Up to 21.6 Billion MIPS64 instructions per second
  - Up to 2MB L2 Cache
- High-density, high-bandwidth serial I/O for storage and system connectivity
  - 16 high-speed SERDES
  - Flexible combinations of PCI Express x4, x8, XAUI (10GbE), SGMII (GbE)
- Complete hardware acceleration for storage, networking, and security
  - Support for AES-XTS IEEE1619 Data at Rest and IPsec (3DES, AES-GCM, AES up to 256), SHA-1, SHA-2 up to SHA-512, RSA up to 8192, DH
  - Compression/decompression engine with up to 1.2 GBps throughput and highest compression ratios
  - RAID/XOR Acceleration coprocessor for RAID 5 and 6
  - Key Reliability/Availability/Serviceability features

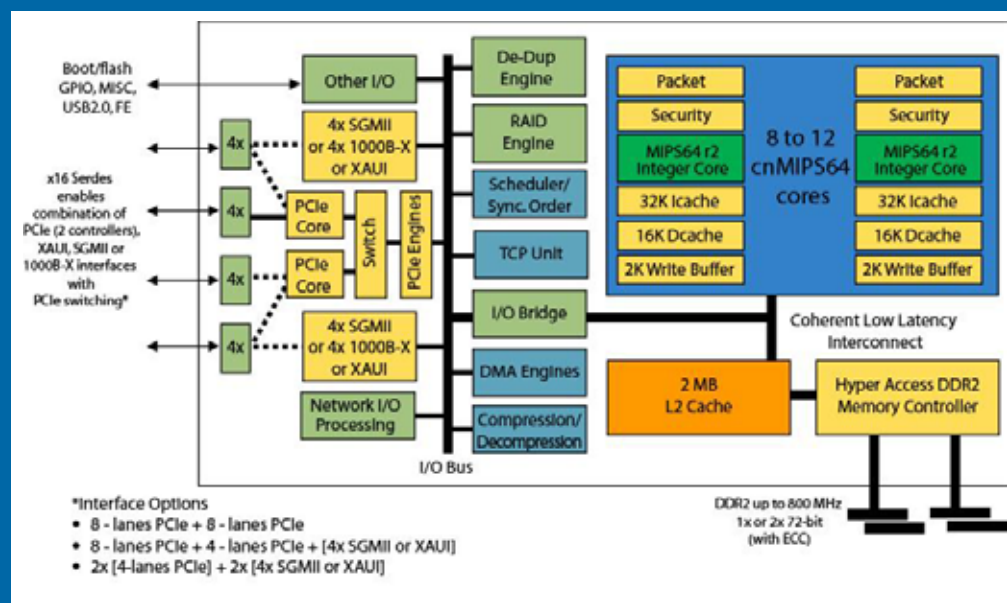
Optimized power consumption: 10W – 30W

- Package: 40 x 40 mm 1217 FCBGA

### BENEFITS

- Powerful DMA engines for maximum I/O and system performance
- Industry leading performance
  - Virtual IOPS up to 3M
  - 40K iSCSI to disk IOPS with just 4 cores
- Dual integrated DDR2 memory controllers up to DDR2-800 with ODT features
  - Increased memory performance with simplified layout and timing
- Standard OS and C/C++ based programming model
- Linux, VxWorks
  - Allows for quick porting and new development
  - No proprietary tools or micro-coding
- Software compatible
  - Single software code based across performance points ranging from 1 Gbps iSCSI/FC to 8 Gbps FC
- Highest performance and integration for next-generation storage equipment requirements

## OCTEON Plus CN57XX - Block Diagram

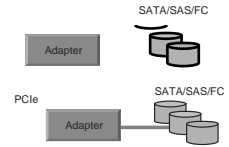


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1 - 8 GE  
or  
10GE  
Network  
Interface



Y Y  
Y Y  
Y Y

### Device Options:

Device Speed Grade (600LP - 600 MHz Low Power, = 600 MHz, 750 = 750 MHz, 800 = 800 MHz)

Option Code for device family listed below:

SSP = Secure Storage Processor: Includes RAID, encryption, compression, networking, TCP acceleration and QoS

SP = Storage Processor: Includes RAID, compression, networking, TCP acceleration and QoS