

Overview

SoCtronics is a customer-focused VLSI design and embedded software service company operating since 2003. The company has operating entities in Hyderabad, India and Santa Clara, California. SoCtronics offers complete spec-to-silicon turnkey solutions that include embedded systems and software/firmware co-development. The company has over 500 employees world-wide and is privately owned and operated.

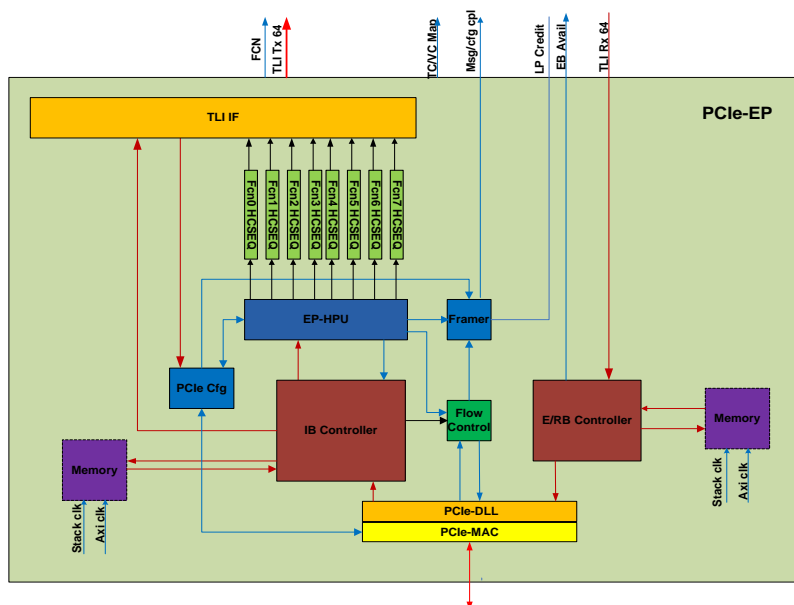
PCI Express End Point IP Description

PCI Express End Point IP implements the Transactions Layer(TL), Data link(DL) and Mac layers of a PCIe Gen2 upstream port. Mac Layer can interface with a PHY that be configured to be X1, X2 or X4. An optional ECRC feature is also supported by the PCI Express IP. The IP supports a maximum of 8 different functions each function can be configured for up to 8 different Virtual Channels (VC).

PCI Express End Point IP Features:

- PCI Express Base Specification 2.1 compliant.
- Supports x1/x2/x4 link widths at Gen 2 speed.
- Support upto 8 functions.
- Supports upto eight Virtual Channels.
- Supports MSI/MSI-X capability.
- Supports Advanced Error Reporting (AER) capability.
- Support (ECRC) generation and checking support.
- Support upto 4kB max data payload size.
- Supports Multiple Programmable BAR registers per function.
- Support L0s/L1 and L2 low power states.
- Support multi function VC arbitration capability.
- Internal clock and reset blocks to generate the corresponding clocks and resets to all the blocks of the IP.
- Integrates seamlessly with our AXI/AHB application layer IP.

PCI Express End Point IP Block Diagram



Configurable Features:

The IP provides various configurable options

- Configurable ECRC Checks.
- Configurable size for Ingress Buffer of (1/4, 1/2, 1, 2, 4 or 16 KB).
- Configurable size for the egress/retry buffers (1/4, 1/2, 1, 2, 4, 16 KB).
- Configurable max lane width X4, X2 and X1.
- Support Configurable max lane speed Gen2.
- Support Configurable BAR size per function.
- Configurable function numbers in the range of 0 to 7.
- Configurable Virtual Channel in the range of 0 to 7.

India's Soctronics claims 28-nm design win

Peter Clarke

10/19/2011 8:19 AM EDT

EE Times

SoCtronics Quick Facts

- Started operations in 2003
- Privately owned and operated
- Design centers and sales offices in Santa Clara, California and Hyderabad, India
- 500+ employees world wide

Engagement Models

- Point task and augmentation
- Turnkey with Spec to SOW to Deliverables
- Off-shore Design Center with Experts On Demand benefits
 - Staff and facilities in India
 - Operated by SoCtronics
 - Directed by client

SoCtronics specializes in

- Complex designs with one or more embedded CPUs
- Integrated standard protocol IPs such as PCIe, DDRx, USB, GbE, SATA, etc.
- Multiple embedded memories
- Embedded ADC / DAC
- High speed IOs
- Hardware and software co-development

<http://www.soctronics.com/>

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