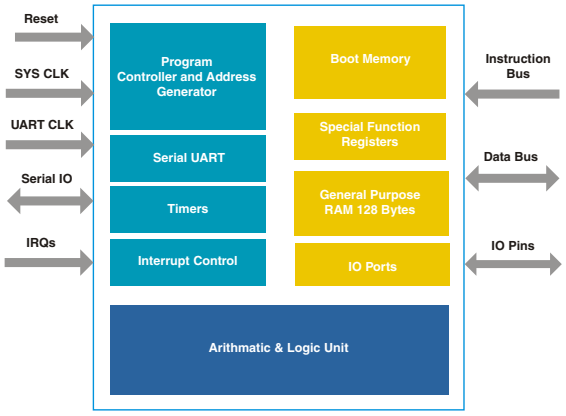
IP Core
8051 Master

SLS System Level Solutions
Designing Through Innovation

The 8051 Master IP Core from SLS implements industry standard 8051 Microcontroller for Altera devices. The core is fully synthesizable and is 10 times faster than industry standard 8051.

The 8051 IDE provided along with the 8051 IP is based on the SDCC compiler, CAS assembler and eclipse IDE. The user friendly interface makes development on 8051 appealing, eventually leading to faster and better codes.

Architecture



Features

- 8051 IP
  - Instruction set is compatible to the industry standard 8051 Micro Controller
  - Up to 10 times faster than industry standard 8051
  - Supports four ports, two separate demultiplexed ports (input, output) and two bidirectional ports
  - Up to 64 Kbytes of External ROM, 4 Kbytes of Internal ROM, 64 Kbytes of External RAM, and 128 bytes of Internal RAM
  - Operates at system clock frequency upto 36 MHz
  - Fully synthesizable design
- 8051 IDE
  - Designing & Compiling 8051 Project
  - Integrates Text editor, SDCC Cross Compiler, CASS Assembler and Emulator for C and Assembly programs

Implementation Results

Supported Family	LEs/ LUTs	Memory Bits
Cyclone	4996	33840
Cyclone II	4937	33840
Cyclone III	4935	33840

Note: The implementation results may change upon core revision

Implementation Results

Contents	Eval	Full
OpenCore Plus Evaluation: One (1) month evaluation license at no cost	✓	
Full: One (1) year development license with full version purchase for single project and single site. Note: Other licensing schemes also available.		✓
Time-limited (4 hours) SOF generation support for ESDK 1C6 board	✓	
Full programming files generation support for ESDK 1C6 board		✓
8051 IDE	✓	✓
Documentation 8051 IP Core user guide 8051 IP Hardware tutorial 8051 IDE tutorials	✓	✓

Licensing

- OpenCore Plus Evaluation: 1 month evaluation license at no cost
- OpenCore : 1 Year development license with full version purchase for single project and single site
- Renewal : OpenCore Plus Evaluation license update at discounted price

Support

- IP integration support available with the purchase of full version
- Additional support on chargeable basis for 3 months or more
- Core modification support available at additional cost

Verification

- 8051 Master IP's functionality is tested on ESDK 1C6 board.

Request Eval Download the evaluation version for the core from http://www.slscorp.com/pages/ip8051idesls.php

System Level Solutions
14100 Murphy Avenue, San Martin, CA 95046
India Office: Plot #32. Phase 1, Zone D/4, G.I.D.C Estate, V. U. Nagar-388 121, Gujarat.
Tel.: 91-2692-232 501 / 502 • Fax: 91-2692-232 503 / 1-408-856 2469
E-mail: info@slscorp.com • Website: www.slscorp.com

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