Design Infrastructure Enabled via the SCSL

The **Sun Community Source License** (SCSL) makes the microSPARC™-IIep technology available to developers for no up-front fees.

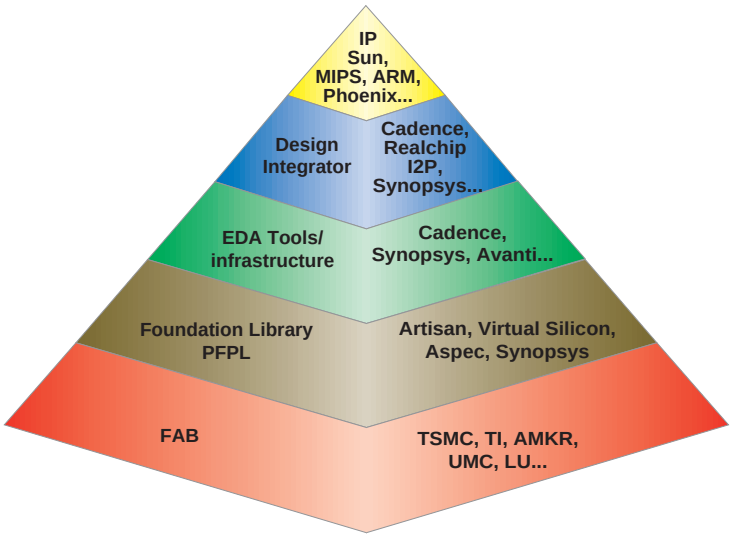
Advantages of the Sun Community Source License program are:

- Immediate open access for commercialization and research
- Increased innovation
- Faster commercialization
- Lower development cost

The goal of the SCSL program for Sun's developer community is to create a "one stop shop" where developers can find everything needed to design a chip, including sources of design tools, design services, EDA tools, libraries, intellectual property (IP) blocks, and manufacturing (fab, test, and assembly) facilities.

A collection of tools is engineered into the microSPARC-IIep architecture and is available to CSL licensees, enabling a complete development environment. The design infrastructure enabled via CSL significantly reduces the development cost and time-to-market, making it possible for the licensees to quickly take their chip level designs from concept (RTL) through manufacturing (tested packaged parts).

As shown in the following figure, a single hardware stack consists of:



The following sections discuss the collection of tools represented in the architecture's hardware stacks.

Intellectual Property (IP)

An IP provider (company) can provide previously designed and tested parts/blocks which end users can use to integrate with their existing design. For example, Sun is an IP provider. End users can take Sun's microSPARc-IIep design and further integrate it with other designs if they choose to.

The microSPARC-IIep implementation also includes IP from Synopsys Inc. (PCI Interface model), Phoenix Technologies Ltd. (PCI core & PCI Interface model), and Meiko Inc. (FPU). Although in some situations the SPARC Community Source Licensees may have to obtain licences for the IP from their IP partner companies as well.

Source of Design / EDA Tools

The companies listed here can provide licensees with all the necessary tools. These include front end tools, such as simulators and synthesis tools, as well as back end tools such as place and route floor planners and timing extractors.

- Cadence
- Synopsys

Design Service Providers

These companies can provide the engineering resource, design know how, and tool expertise to help users realize their designs:

- Cadence,
- Synopsys,
- I2P,
- Real Chip

Library Providers

Library providers, create all the libraries needed for different stages of the design (front and back end)

- Artisan
- Synopsys
- Avant!

Manufacturing Companies

Among the companies which fabricate, test, and assemble the chips are:

- TSMC
- UMC
- Amkor

The following table exemplifies possible stacks. Currently, source files (verilog RTL) are available for the SPARC V8 architecture.

	STACK #1	STACK #2	STACK #3
IP Providers	Sun, Phoenix, Synopsys, Meiko	Sun, Phoenix, Synopsys, Meiko	Sun, Phoenix, Synopsys, Meiko
Tool Providers (Front End)	Synopsys, Cadence, Sun	Synopsys, Cadence, Sun	Synopsys, Cadence, Sun
Tool Providers (Back End)	Cadence	Avanti	Synopsys
Design Service Providers	Cadence	Real Chip	Synopsys
Library Providers	Artisan	Artisan/Avanti	Synopsys
Fab/Manufacturer	TSMC	UMC	Amkor

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