

# Synopsys and Cavium Networks

High Quality, Great Support and Latest Feature Set Made DesignWare IP the Right Choice for Cavium



**“Above all we need IP that we can trust, and Synopsys has proven its trustworthiness to us.”**

– Anil Jain, Vice President of IC Engineering, Cavium Networks

## Business

Cavium Networks is a leading provider of highly integrated semiconductor products that enable intelligent processing for networking, communications, storage and security applications.

## Challenges

- Reduce time to market
- Employ top quality, trustworthy IP in designs
- Engage IP supplier with comprehensive high quality portfolio of IP to meet multiple product requirements

## Solution

- Synopsys DesignWare® IP

## Benefits

- Easy integration with high quality IP
- Great support
- Saved six months of internal development time
- Achieved better ROI and resource utilization of Cavium engineers

## Overview

Cavium Networks offers a wide range of multi-core MIPS64-based processors and security processors, along with a wide range of PCI-X™, PCI-Express® acceleration boards and evaluation boards. Cavium Networks' OCTEON Multi-core MIPS64 processor family offers 1 to 16 MIPS64-based cores in a single chip, with integrated high performance networking interfaces, memory controllers and hardware acceleration for packet processing, QoS, TCP, compression/decompression, regular expression and security. Cavium Networks' NITROX security processor family accelerates IPsec, SSL and WLAN security protocols with performance from 100Mbps to 10Gbps and up to 40,000 SSL transactions per second.

Cavium Networks processor and board products are being used by OEM vendors in routers, switches, appliances, application delivery equipment, 3G/4G and WiMax wireless equipment, Triple play gateways, storage equipment and servers.

**“We definitely made the right decision by going with Synopsys as our IP supplier. The integration of the IP went smoothly. We were able to configure and integrate all of the IP in a couple of weeks.”**

*- Anil Jain, Vice President of IC Engineering, Cavium Networks*

**Synopsys – IP Partnership**

When Cavium was looking for an IP partner, they turned to Synopsys to help meet their design challenges. While choosing commercial IP can potentially reduce time-to-market and engineering resources substantially, choosing IP without thorough verification and characterization by the IP vendor can cause latent issues when taking the part to volume production.

By the time it faced its first IP decision, Cavium had already adopted Synopsys front-end design tools and developed confidence in the quality of Synopsys products and support.

**Synopsys – High Quality and Great Support**

Cavium engineers performed extensive due diligence before acquiring their first IP from Synopsys. They conducted their own compliance testing and checked with experienced users of DesignWare IP, making sure to ask about quality. When the results came back, Cavium chose Synopsys for their high quality, latest feature set, and easy to integrate IP.

Even though issues with Synopsys IP were few and far between, Cavium had occasions to summon Synopsys support – all of which went well. “Good support is always important and it’s especially vital in the case of IP,” says Jain. “The support team is just excellent – always knowledgeable, experienced and responsive.”



**“Using Synopsys DesignWare IP saved us 6 months of internal development.”**

*- Anil Jain, Vice President of IC Engineering, Cavium Networks*

**SYNOPSYS®**  
 Predictable Success

Synopsys, Inc.  
 700 East Middlefield Road  
 Mountain View, CA 94043  
[www.synopsys.com](http://www.synopsys.com)