

market. In addition, developing the IP in-house would have cost us more than twice what we spent with Synopsys. "

~NW Benchmarked against a leading competitor, the DesignWare Logic Library

## Business

Achronix Semiconductor Corporation is a fabless semiconductor corporation based in Santa Clara, California, offering high-end FPGA-based data acceleration solutions, designed to address high-performance, compute-intensive and real-time processing applications. Achronix is the only supplier to offer both high-performance, high-density standalone FPGAs and licensed eFPGA IP solutions. Achronix [Speedster® 7t FPGAs](#) and [Speedcore™ eFPGA IP](#) offerings are further enhanced by the ready-to-use [VectorPath™ accelerator cards](#) targeting AI, machine learning, networking and data center applications. All Achronix products are fully supported by the [Achronix Tool Suite](#) which enables customers to quickly develop their own custom applications.

## Challenges

- Design and deliver high-performance FPGAs on a 7nm process that addresses the fast-moving AI/ML, telecom and data center markets
- Reduce design risk and optimize FPGAs for power, performance, and area
- Meet critical time-to-market objectives while under the pressures of bringing up a new team, using a new process node, and integrating leading-edge interfaces

## DesignWare IP Solution

- Foundation IP: Embedded Memories, Logic Libraries, and Temperature Sensors
- PCIe 5.0 IP
- DDR4 PHY and controller IP

## Benefits

- Accelerated time-to-market by two to three months with high-quality DesignWare IP portfolio
- High-quality PCI Express and DDR IP enabled low latency and high bandwidth
- Rich set of logic library cells improved PPA over competitive offerings
- Broad portfolio of memory compilers, including dual-port, reduced power consumption
- Selecting Synopsys DesignWare IP saved us two to three months in overall time to

considerably better area and an 8% improvement in timing, which is significant for high-speed designs like ours. "

~Namit Varma, Senior Director, India Technology Center, Achronix

