**Achronix**®

Accelerated Networking
Infrastructure Code
## Modular SmartNIC IP

## Key Highlights

**Unparalleled Speed** – Line-rate application performance.

**Accelerated Time to Market** – Pre-verified IP blocks combined with partial reconfiguration enable rapid solution development and deployment.

**Custom IP Support** – Accelerate custom applications.

## Key Features

**High-Performance FPGA Acceleration** – Optimized for Speedster7t FPGAs, ANIC accelerates network applications such as security, packet inspection, machine learning, and data analytics to boost overall performance by offloading specific tasks.

**Advanced Network Processing** – ANIC's dedicated IP blocks for packet processing ensure efficient classification, filtering, and forwarding at line speeds, reducing CPU resource usage, and optimizing data traffic management.

**Low Latency Data Processing** – FPGA-based acceleration and the Speedster7t 2D network on chip (2D NoC) reduce data processing latency, making ANIC ideal for lightning-fast performance in real-time applications.

**Dynamic Reconfiguration** – ANIC's FPGA reconfigurability enables real-time updates to acceleration functions and protocols, empowering data center operators to adapt quickly to changing demands and industry standards.

**Development and Management Tools** – Achronix offers a complete suite of development tools, simplifying the creation and deployment of custom FPGA-accelerated applications with libraries, compilers, and APIs.

## High-Performance Networking with Modular Pipeline on Speedster7t FPGAs

The Achronix Accelerated Networking Infrastructure Code (ANIC) is a modular suite of SmartNIC IP blocks optimized for Speedster®7t FPGAs and the VectorPath® Accelerator Card, offering high-performance networking for application acceleration. The ANIC provides exceptional networking and compute acceleration capability for data centers, cloud providers, and enterprises while leveraging Achronix FPGA expertise to enhance data processing, reduce latency, and boost network efficiency for peak performance.

### 400GbE
unparalled speed

### 5.0 ×16
performance

### FPGA
acceleration

### Modular
SmartNIC pipeline

## Use Cases

**Modular SmartNIC Pipeline** – ANIC's modular construction lets users choose which SmartNIC elements to pipeline for their needs, allowing for optimum performance while leveraging only what is needed for the application.

**Network Function Virtualization (NFV)** – Accelerate virtualized network functions to improve network efficiency and reduce latency.

**Deep Learning Inference** – Accelerate machine learning by offloading AI inference tasks to the FPGA.

**Real-Time Analytics** – Process and analyze data streams in real-time to extract actionable insights.

**Security Appliances** – Boost security by offloading encryption, decryption, and intrusion detection tasks. to ANIC.

ANIC provides a modular SmartNIC data pipeline that empowers data centers, cloud providers, and enterprises to accelerate high-performance network applications.
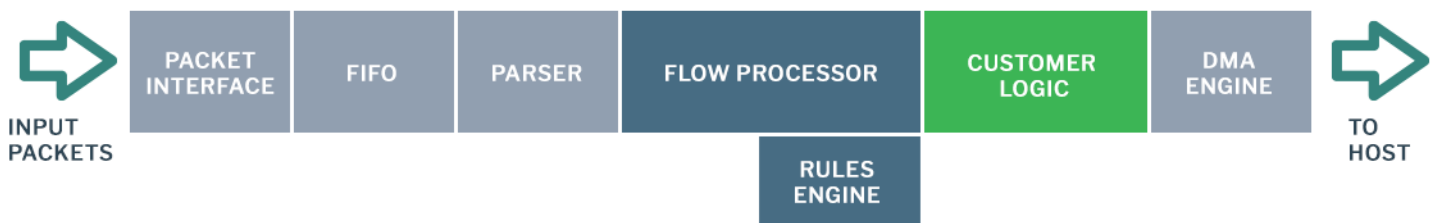
## Summary

The Achronix ANIC leads in SmartNIC technology, delivering unparalleled networking and computational performance. Offering network speeds up to 400 GbE, modularity, and room for custom IP, ANIC enables unmatched speed, efficiency, and adaptability in network infrastructure. Whether in data centers, the cloud, or enterprises, ANIC unlocks limitless network performance potential. Accelerate your network with Achronix ANIC today!

## About Achronix

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 have both high-performance, high-density stand-alone FPGAs and licensed eFPGA IP solutions. Achronix Speedster7t FPGA and Speedcore™ eFPGA IP offerings are further enhanced by 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.

*ANIC SmartNIC/DPU Modular Pipeline*