

# Programmer Studio-6

## SOFTWARE DEVELOPMENT KIT

Netronome's software development kit (SDK-6) accelerates solution time-to-market by providing engineering teams with powerful design and development tools for software customization for the dataplane of Netronome's intelligent server adapters (ISAs). The programmer Studio in SDK-6 is the industry's first P4 and C GUI-based IDE for dynamically programming new and innovative networking capabilities on the Agilio™ CX and LX family of ISAs. Designs will benefit from an intuitive software development environment including tools for P4 development and a C-compiler both optimized for Netronome's Flow Processors (NFPS) offering a cycle-accurate simulator and extensive profiling capability for rapid debugging and prototyping.



### Details

#### Programmer Studio IDE

- Supports Netronome Agilio CX and LX ISAs
- Project Creation
- Incorporation of all project components
  - Sources (P4, C and Assembly)
  - Headers
  - Macros
  - Standard Libraries
  - Scripts

#### Code Development Tools

- P4 Compiler
- Network Flow C Compiler (NFCC)
- Network Flow Assembler (NFAS)

#### Optional Flow Processing software

- Software Application Kits
- Software Building Blocks
- Sample Code (example applications)
- MicroC and Assembly Libraries
- Standard packet processing APIs

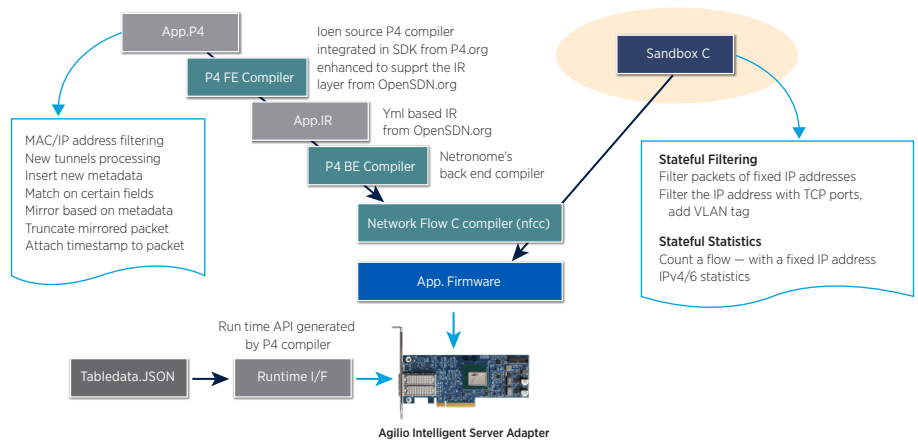
### KEY FEATURES

- Optimized language processors designed to combine P4 or C-level abstraction and assembly level bare metal control and performance
- Cycle-accurate chip simulation presented in an intuitive graphical format, enabling efficient software development efforts
- Hardware debugger for Netronome Agilio ISAs using Programmer Studio
- Board support package (BSP) API integration for simplified and easier board bring up with Agilio ISAs
- User-friendly work environment with project-based source, header, macro, and script collection and tracking
- Throughput, code coverage and event profiling tools for precise optimization
- Reference applications for the Agilio-CX and Agilio-LX ISAs for project creation and simulations

- Linux Simulator and tool chain with Compiler, Assembler and Linker

### Precision Flow Modeler Simulation

- Debug
  - Cycle-accurate data history
  - Cycle-accurate core execution history
  - Cycle-accurate event and queue history
- Profiling
  - Per-thread performance statistics
  - FIFO space coverage
  - Per-thread execution coverage profiling
  - Per-port frame and byte performance
  - Bandwidth estimates



*Netronome's fully Integrated Development Environment (IDE) enables developers to speed the time-to-market for their products and applications.*

### Hardware Debug

- Debug Server enables direct connection between Programmer Studio IDE and HW targets
  - Netronome Agilio Intelligent Server Adapters (ISAs)
- Debug Server runs from host of off PCIe bus

### Accessories

- Linker
- Loader
- BSP with system access API and Linux kernel host layer for Agilio ISA platforms.

### Specifications

- Included in the SDK:
  - Programmer Studio IDE
  - P4 Compiler
  - C Compiler (NFCC)
  - MicroC Libraries
  - Assembly Libraries
  - Precision Flow Monitor Simulation
  - Assembler (NFAS)
  - Linux Boards Support Package
  - Detailed documentation and user guides

### Requirements

- 2.2 GHz (x86) with 8GB RAM and 2 GB of available hard drive space. 64 bit Windows 7 or Windows 8/8.1.
- Linux – Quad core i7 with CentOS 6 64-bit or Ubuntu 12.04.2/14.04.x 64-bit LTS with 8GB RAM.

## NETRONOME

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