

ALGO-LOGIC

ALGO-LOGIC SYSTEMS

ALGORITHMS IN LOGIC

Founded by a professor and PhD researchers from Stanford University and Washington University.

Team has extensive experience building routers, data center switches, and network processing circuits in ASICs and FPGA logic.

Company uses open-source (BSD-licensed) NetFPGA hardware technology developed at Stanford University.

Engineers specialize in mapping network algorithms into hardware logic.

Founders are experts in developing, protecting, and analyzing claims of intellectual property.

Past projects are documented in patents and in over 100 articles in top journals and technical conference proceedings.

John W. Lockwood,
CEO

WE PROVIDE

Architectures for Next-Generation Networks

- Data-center networks
- Network security
- Content-aware networks

Implementations of Network Algorithms in Logic

- System-level software in C and C++
- High-level hardware descriptions
- Low-level logic in synthesizable Verilog and VHDL

Performance Analyses

- Mathematical system modeling
- Real and synthetic trace simulation
- Live measurements in hardware prototypes

Systems Architecture and Development

- Verification and test bench development
- Integration and customization of IP cores
- FPGA, ASIC, and multi-core CPU implementations

L2-L7 Packet Processing

- Longest prefix matching
- Multi-field packet classification
- Deep packet inspection
- DDoS-resistant TCP reassembly
- Semantic processing

Network Processing

- Memory subsystem and caching architectures
- Conflict-free DRAM access scheduling
- Near perfect hash tables for associative lookups
- On-chip interconnection networks
- Traffic management and fair queuing algorithms for QoS

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