

L7 Content Processors

NITROX® DPI CN17XX L7 Content Processor Family

Preliminary Product Brief



OVERVIEW

The NITROX® DPI CN17XX processor family is the most advanced hardware acceleration co-processor family for Layer 7 content processing. When used with OCTEON® and other general purpose processors, it enables intelligent, deep packet inspection in next-generation networking and wireless applications from 4 to 20 Gbps performance. The CN17XX processor family integrates PCI Express I/Os along with the most advanced deep packet inspection engines, Hyper Finite Automata Thread Engine (HTE), to deliver the highest performance that is deterministic, has low latency and is independent of the pattern rule-set size and traffic flows. NITROX DPI processors are targeted for a wide range of applications including application level firewalls, intrusion prevention (IPS), gateway anti-virus, unified threat management and content-based QoS in routers, switches, appliances and services blades.

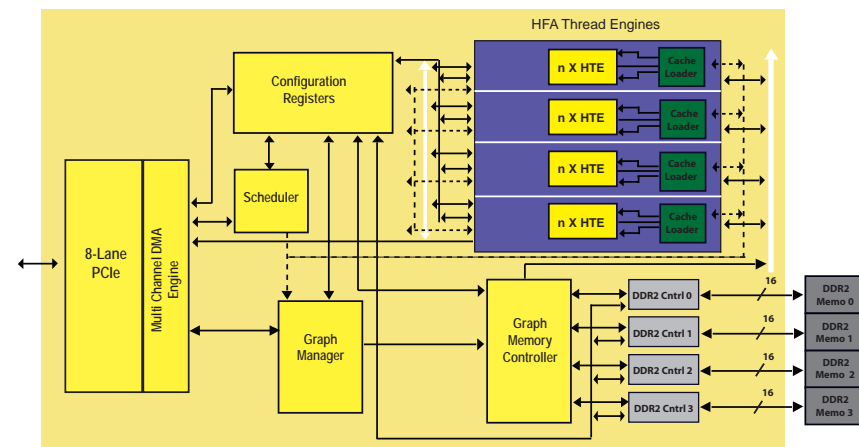
FEATURES

- Performance up to 20Gbps
- Multiple clusters of HTEs (Hyper-Finite-Automata Threading Engine); include both Nondeterministic Finite Automata (NFA) and Deterministic Finite Automata (DFA) capability
- Use on-chip cache for lower latency and higher throughput
- Patent pending new deep packet inspection HFA technology allows commodity memory for patterns
- Architecturally support up to 4GB external pattern memory
- DMA for packet input and match output
- Unique match length reporting
- 15x smaller memory footprint for regular expression patterns
- No limit on number of rule-sets and number of patterns in rule-set
- Small flow state for matching across multiple packets of same flow
- PCIe, DDR2
- Supports Perl Compatible Regular Expression (PCRE) and POSIX Regular Expression Syntax
- Feature rich NITROX DPI CN17XX SDK includes RegEx Compiler, functional simulator, drivers for Linux/Simple Executive on OCTEON Plus and drivers for Linux on x86
- Tested on several tier 1 customer RegEx patterns with excellent performance and rule-set footprint
- 4 to 20 Gbps SNORT application performance with OCTEON Plus

BENEFITS

- High performance for look-aside RegEx processing
- Commodity memory for regular expression pattern rule-sets
- Small memory footprint for regular expression pattern
- Latest interfaces
- Rich regular expression processing Syntax
- Comprehensive development environment
- Tried and tested solution
- Integrated SNORT application

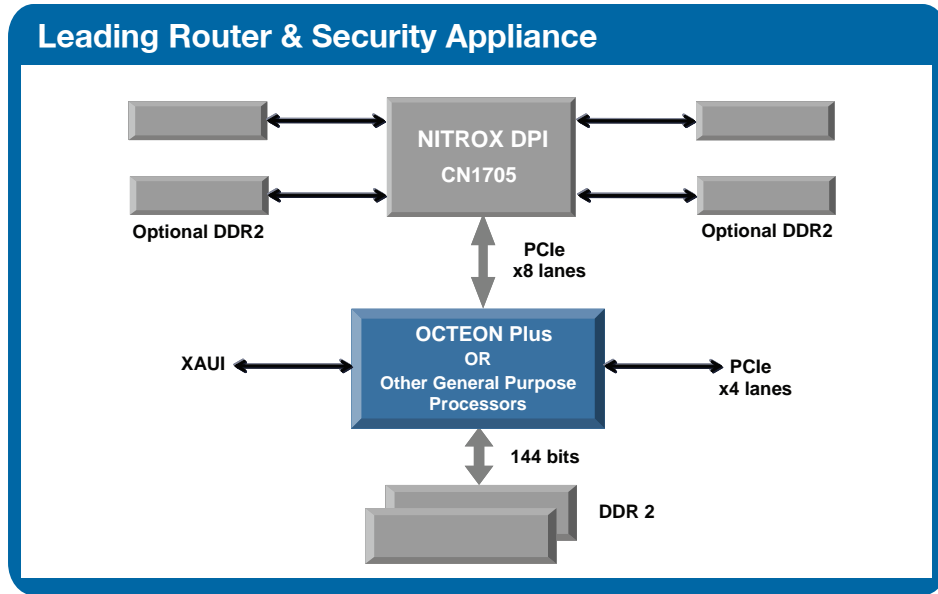
NITROX® DPI CN17XX - Block Diagram



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TARGET APPLICATIONS

Enterprise Routers and Switches

- SME to high end router control, services and Data-plane
- Content security & content QoS

Data Center Networking Appliances

- Content security & content QoS

Integrated Security Appliances

- Next generation SME to high end UTM and DPI appliances

Service Provider Infrastructure

- Content security & content QoS

SOFTWARE SUPPORT

NITROX DPI CN17XX SDK

- Extensive driver support
 - Linux- OCTEON Plus and other host processors
 - Simple Executive-OCTEON Plus
- RegEx Compiler
 - Linux- x86, OCTEON Plus
 - Perl- Compatible Regular Expression (PCRE), POSIX
 - RegEx Syntax and String Signatures
- Functional simulator and profiling tools
- Optimized C libraries/API for regular expression processing offload

Complete production quality SNORT XL toolkit

Comprehensive support for RegEX applications

- Signatures of commercial available IPS device
- Commercially available AV signatures
- Open source IPS, SNORT

NITROX® DPI CN17XX- Product Family

Device	Part Number	Interfaces	Pattern Memory
CN1701	CN1701-XXXBG1738 Option Code	PCI Express x4/x8	DDR2
CN1705	CN1705-XXXBG1738 Option Code	PCI Express x8	DDR2
CN1710	CN1710-XXXBG1738 Option Code	PCI Express x8	DDR2