

Flexcomm FIDS1200S System

Uniform Platform for Firewall / IDS / Network Monitor / Load Balance etc.



Product Overview

Next-generation multi-service network products must meet the growing user demand for the integrated solution of packet filter and state-check techniques. In addition to implementing pivotal technologies, such as multi-layer filter and content detection at wire speed, under stringent time-to-market deadline, equipment manufacturers must deliver their products that can be easily upgraded in software. This capability is important because it can facilitate the cost-effective deployment of new services without extensive hardware replacement.

Based on Intel IXP1200 network processor, FIDS 1200S meets these requirements richly. Intel 's network processor delivers high-performance and flexibility to value-add services because of its powerful parallel and programmable multi micro-engines. In conjunction with HW platform-FIDSMM1/ FIDS12CC3/FIDS12CP1 and FIDS1200S SDK, FIDS1200S can dramatically meet the requirement of next generation Firewall, IDS, Network monitoring, Load balance, Content filter etc, Traffic statistics/ accounting, Protocol analysis.

Product Highlights

- Accelerates time-to-market of security products based on IXP1200, IXF1002/ IXF440/ IXF6012
- Platform subsystem include FIDS12MM1 - base card, which is a card with Intel Network Processor IXP1200, interface card, and BSP-level / Application level software for IDS and Firewall
- FIDS12CC3 8FE-2GE cPCI interface card, FIDS12CP1 8FE-2GE PCI interface card or other customized interface card
- FIDS 1200S SDK 1.0 include:
 1. BSP/ Drivers for RT Linux and VxWorks
 2. Reference designs.
 3. Documents of system structure/ software structure/ interface spec.
- Hardware, software, document and tools form a total platform.

FIDS1200S HW System

- FIDS12MM1 - base card
- FIDS12CC3 –8FE-2GE cPCI interface card

FIDS12MM1 – NPU Base Card



The FIDS12MM1 Network Processor Base Card is a PMC interface card that will be connected to FIDS12CC3 or FIDS12CP1. It includes a 200 MHz IXP1200 network processor

with 66 MHz IX Bus and a memory subsystem consisting of 16 Mbytes of flash memory, 8 Mbytes of SSRAM, and 256 Mbytes of SDRAM.

FIDS12CC3 cPCI interface card

Including an Intel IXF440 Dual-Speed Multi-port Ethernet MAC and an Intel IXF1002 Dual-Port Gigabit Ethernet MAC, FIDS12CC3 provides eight 10BASE-T or 100BASE-T connectors and 2 GE connectors.

The front-panel features:

- Eight 10/100 RJ-45 Ethernet connectors, or
- Two Gigabit Ethernet connectors

- One recessed master reset switch
- Green and red pass and fail indicator LEDs

Physical Description

Description	Specification
Power	32 Watts (max.)
Operating Tem	0° to 50° C
Storage Tem	-20° to 60° C

Benchmarking (RFC2544)

Testing environment:

- 1) SmartBits 600
- 2) FIDS1200 Micro-engine finishes Ethernet frame RX/TX
- 3) Testing setting

Test duration (sec):	10	Number of pairs:	1
Minimum frame size (bytes):	64	Initial rate (%):	100.00
Maximum frame size (bytes):	1518	Step rate (%):	10.00
Step frame size (bytes):	Custom	Resolution rate (%):	None

4) Testing Result

	64	128	256	512	1024	1280	1518
Throughput	100.00	99.24	98.24	98.01	98.55	99.12	99.54
Latency (uS)	8.30	10.50	16.20	23.90	22.30	27.10	23.50
Frame Loss Rate (Packet)	0.000	0.000	0.000	0.000	0.000	0.000	0.0001
Back-to-Back frames	14880950	7621950	4222970	2185310	1108160	895420	752110

Features and Benefits

Features	Benefits
FIDS12MM1 – Network Processor PMC card	
Intel®IXP1200 network processor	A flexible and intelligent network processor
Memory subsystem - 256 MB SDRAM, 6MB SSRAM	Fast table-lookup support
16 MB FLASH	Hardware platform to meet various requirement
IX Bus connector	Flexibility to connect a wide range of I/O devices to the Intel®IXP1200 network processor IX Bus interface
PMC connector	Additional flexibility to connect a wide range of industry standard I/O modules to the Intel IXP1200 network processor
FIDS12CC3 - Gigabit Ethernet and Fast Ethernet cPCI Interface card	
Intel 21555 Non-Transparent PCI-to-PCI Bridge	Enables connection to an embedded CompactPCI controller board
IXF1002 Dual Port Gigabit Ethernet Controller (MAC)	Provides two Gigabit Ethernet ports
IXF440 Dual-Speed Multi-port Ethernet Controller (MAC)	Eight direct 10/100 Ethernet ports

Two LXT9763 10/100 Base-T Ethernet PHYs	Eight direct 10/100 Ethernet connections
FIDS12CP1 –Gigabit Ethernet and FE PCI interface card	
Intel 21555 Non-Transparent PCI-to-PCI Bridge	Enables connection to an embedded CompactPCI controller board
IXF1002 Dual Port Gigabit Ethernet Controller (MAC)	Provides two Gigabit Ethernet ports
IXF440 Dual-Speed Multi-port Ethernet Controller (MAC)	Eight direct 10/100 Ethernet ports
Two LXT9763 10/100 Base-T Ethernet PHYs	Eight direct 10/100 Ethernet connections
FIDS1200S SDK 1.0	
Software libraries and micro-code macros	Accelerated software development to speed time-to-market, efficient using of control stores
Firewall and IDS reference design	
Sample applications code, boot code, and Diagnostics function	
Device drivers	
BSP for VxWorks, Linux	

Flexcomm Access

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