

Flexcomm FIDS1200 System

The 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, packet inspection and state-checking techniques. In addition to implementing pivotal technologies, such as multi-layer filter and content detection at wire speed, equipment manufacturers must deliver their products that can be easily upgraded in software under stringent time-to-market deadline. 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 and Solidum's PP1200 stream classifier, FIDS 1200 meets these requirements richly. Intel® network processor delivers high-performance and flexibility to value-add services because of its powerful parallel and programmable multi micro-engines. Solidum's stream classifier, PP1200, provides feasibility for Gigabit wire speed content inspection. In conjunction with HW platform-FIDS12MC1/FID12CC1/FIDS12CC2 and FIDS1200 SDK, FIDS1200 can dramatically

meet the requirements 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 and stream classifier
- Platform subsystem include FIDS12MC1 - base card, which is a 6U cPCI card with an Intel Network Processor IXP1200, interface card, and BSP level / Application level software for IDS and Firewall
- I/O options include: FIDS12CC2 POS/ATM interface card, FIDS12CC1 8FE-2GE interface card
- FIDS 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.

FIDS1200 HW System Consist of Three Subsystems

- FIDS12MC1 - base card
- FIDS12CC1 – GE/FE interface card
- FIDS12CC2 – GE/POS interface card

Product Brief

FIDS12MC1 – NPU Base Card

The FIDS12MC1 Network Processor Base Card occupies two 6U slots within the cPCI system. It includes a 200 MHz IXP1200 network processor with 66 MHz IX Bus and a memory subsystem consisting of 8 Mbytes of flash memory (up to 64M), 6 Mbytes of SSRAM, and 128 Mbytes of SDRAM (up to 256M). Other components include a PP1200 stream classifier, a 2Mb TCAM, an Intel 21555 Non-Transparent PCI-to-PCI bridge chip, and an Intel 82559 Fast Ethernet chip.

The front-panel features:

- Two Gigabit Ethernet connectors
- One 10/100 RJ-45 Ethernet connector for the PCI/Ethernet interface
- Eight 10/100 RJ-45 Ethernet connectors, or
- Two Giga Ethernet ports
- One RS232 9-pin D-sub serial port connector
- One recessed master reset switch
- Green/Red- Pass/Fail indicator LEDs

The board features:

- Two IX Bus/slow port 114-pin connectors
- Two PCI Mezzanine connectors
- One SDRAM debug connector (three 38-pin Mictor connectors)
- One SSRAM debug connectors
- Power connector for standalone application without CPCI interface used.

The interface to the Compact-PCI back-plane is via two standard cPCI connectors (J1, J2) providing a standard 64-bit bus at speeds up to 66 MHz.

FIDS12CC1 – FE/GE interface card

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

FIDS12CC2 – GE/POS interface card

Including an Intel IXF1002 Dual-Port Gigabit

FIDS1200 Network Processor Card

Ethernet MAC and an Agilent PM5351, providing two GE interface and four 155M interface.

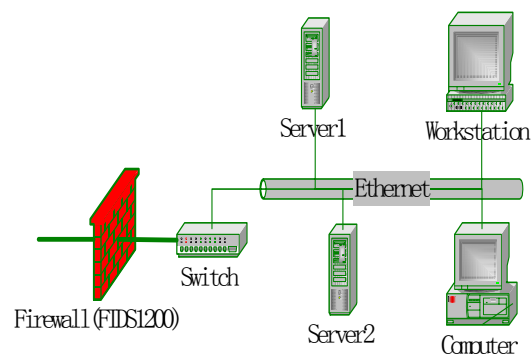
Software Components of FIDS1200 SDK

- BSP and Drivers for LINUX and VxWorks
- PDL template for most RFC, ATM and telecom protocol stacks.
- Reference Design including following functions:
 - 1) MAC and IP binding
 - 2) NAT
 - 3) VLAN
 - 4) ARP/ICMP/IGMP filter under ARM control
 - 5) TCP session state check
 - 6) 5-7 command abstract
 - 7) URL filter under ARM control
 - 8) ActiveX filter under ARM control
 - 9) Java-script filter under ARM control
 - 10) Content filter

Application Example

Firewall with Content filter/ Status checking

Gigabit level Firewall based on FIDS1200 provides content filter and status checking functions. With VLAN function, FIDS1200 supports virtual security area. Because of programming of IXP1200 micro-engine, Firewall based on FIDS1200 support flexible security schema.

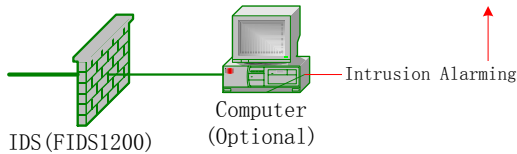


Product Brief

**FIDS1200
 Network Processor Card**

Intrusion Detect System

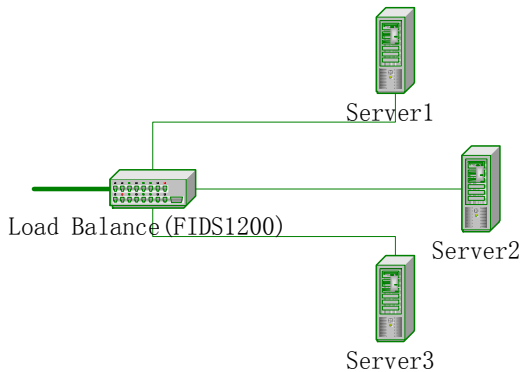
IDS based on FIDS1200 collects information for intrusion detection analysis engine running on HOST computer or on FIDS1200. Information type can be defined by intrusion detection analysis engine flexibly.



Load Balance

Load Balance equipment distributes traffic to different server based on MAC/ IP/ connection/ content. At the same time FIDS1200 can finish pre-processing function to decrease the working load of backend server. For example, FIDS1200 can differentiate server cared strings in received packet.

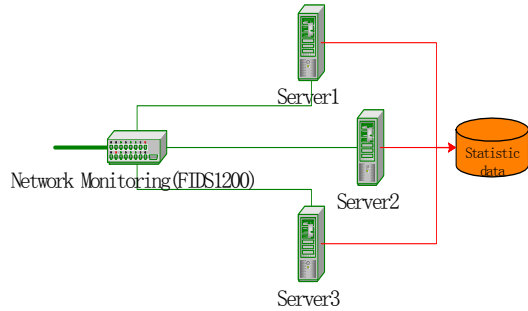
FIDS1200 provide ATM or POS interface for uplink.



Network Monitoring

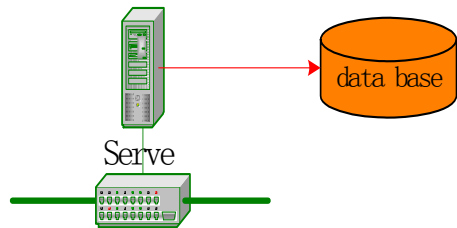
Monitor equipment differentiate, filter or deliver different packet to backend server, based on packet every protocol field or packet content. At the same time FIDS1200 can finish some

pre-processing function to decrease the working load of backend server.



Traffic Accounting

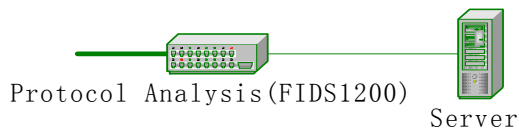
FIDS1200 differentiates different traffic for accounting server. The traffic classification standard can be defined flexibly.



Traffic Accounting (FIDS1200)

Protocol Analysis

With PP1200, FIDS1200 provide powerful protocol analysis function. Using PDL language user can define any protocol packet format for protocol analysis.



Physical Description

Description	Specification
Dimensions	15.75"W x 9.2"H x 11.7"D
Power	32 Watts (max.)
Operating Tem	0° to 50° C
Storage Tem	-20° to 60° C

Mainboard Features and Benefits

Feature	Benefits
FIDS12MM1 - Network Processor PMC Card	
Intel IXP1200 network processor	A flexible, 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 Intel IXP1200 network processor