



## Key Features

- High-performance Gigabit NetFlow v5/v9/IPFIX probe
- Standard (1-port) and Accelerated (2-port) models
- 75,000 flows per second
- Capture 1 million packets/sec in standard model
- Up to 3 million packets/sec in accelerated model
- Supports IPv4 and IPv6 traffic
- VoIP (SIP and RTP) traffic analysis
- Fully interoperable with commercial NetFlow collectors from all major vendors

## Catapult NetFlow Probe from nPulse Networks

Do you know who is using your network? What types of traffic are consuming most of your bandwidth? Where are the trouble spots? Find out with Catapult nProbe from nPulse Networks. Take the pulse of your network. Monitor all of its vital signs.

Catapult nProbe is a fast and simple way to monitor all the activity on your network or to add a low-cost extension of coverage for your existing management system. Our high-performance NetFlow probe is the only IPFIX-compliant probe on the market today and is certified to work with network analysis solutions from all of the leading vendors.

Catapult nProbe comes in an entry-level configuration, or as a high-performance probe utilizing dedicated hardware acceleration, and providing unprecedented power and cost-effectiveness.

Benefits and potential applications for network operators and managers include:

- |                            |                            |
|----------------------------|----------------------------|
| • Traffic Measurements     | • Security                 |
| • Traffic Characterization | • Capacity Planning        |
| • Traffic Engineering      | • Accounting & Billing     |
| • Traffic Interception     | • SLA Analysis & Reporting |
| • Network Monitoring       | • Internet Use Monitoring  |
| • Network Inventory        | • User Monitoring          |
| • Network Utilization      | • Application Monitoring   |
| • Network Optimization     | • Cost Allocation          |

## Using the Catapult Probe

In commercial environments, NetFlow has become the de-facto standard for network traffic monitoring. Many network devices, such as routers, have an embedded NetFlow probe functionality. However, since the router's CPU by design must focus on routing packets, the NetFlow function is generally low-performance, and degrades further as traffic levels increase.

In contrast, Catapult nProbe is a dedicated NetFlow v5/v9/IPFIX probe that can be used to capture and analyze network traffic and generate NetFlow flow records at full line-rate on up to two Gigabit links simultaneously.

Catapult nProbe can capture mirrored traffic (from a VLAN or mirror port) or tap directly into a link at a point where most or all of the traffic passes (for example, at an edge router on an enterprise network to monitor incoming and outgoing traffic flows). Once activated, Catapult nProbe will collect traffic data and generate NetFlow v5/v9/IPFIX flow records.

Catapult nProbe sends flow data towards one or more collectors, which could be either nTop, an open-source application supported by nPulse, or any NetFlow/IPFIX compliant commercial collector or monitoring system (for example, Cisco NetFlow Collector or HP-OpenView). Catapult Probe can also stream those flows to storage for later analysis in depth.

Once installed, and initially set-up, Catapult nProbe is available for use with no further configuration.

## Performance

Catapult nProbe performance depends on the probe configuration used, and on the traffic type and flow mix on the monitored link. Here are some typical numbers for the standard single-port Catapult nProbe configuration, monitoring a 1 gigabit link, and set to capture and process all traffic.

Packet Size	Catapult nProbe Throughput (Pkt/sec)
64 bytes	1.124M [~755 Mbit/sec]
576 bytes	209,730 [~1000 Mbit/sec]
1500 bytes	82,236 [~1000 Mbit/sec]

Our 2-port, hardware-accelerated Catapult nProbe model can capture up to 3 million packets per second, equivalent to a full 2Gbps of traffic.

## nPulse “Catapult” Appliances

Catapult is nPulse Networks' high-performance platform for network monitoring or security applications. We use Catapult for our own open-source-based solutions, such as Catapult nProbe, and also make its exceptional performance and configurability available to our customers and partners.

By adopting Catapult as your appliance platform, you can focus on the design of your software application, confident that all possible packet handling tasks, including analysis and filtering, can be easily off-loaded to nPulse hardware, and that regardless of network speed or loading, all of the power of the appliance CPU is available for the optimal performance of your application.

## Technical Specifications

- 1U rack height
- Standard model: 1 x 1000Base-T, RJ-45 port
- Accelerated model: 2 x 1000Base-T ports **or** 2 x 1000Base-SX optical, LC ports
- Wire-speed capture on one or more Gigabit Ethernet links
  - > 1.0 Mpps on standard Probe
  - > 3.0 Mpps on accelerated Probe
- Over 75,000 Flows per second
- Support for IPv4, IPv6, and MPLS
- Support for NetFlow v5, v9, Row Data formats
- NetFlow v9 extensions and Flow Template Support
  - Application Latency, Network Latency, First Payload Packets, Host Fingerprints
- Support of IPFIX (draft 3) over SCTP/TCP/UDP
- Easy customization and extensions
- Full flow capture or sampling models
- Export flow filtering and buffering to manage collector loading
  - selected packet types, TCP sizes, addresses, etc.
- Multiple Collector mode for load balancing or redundancy
- Management Access flexibility
  - Console, Telnet, SSH, SNMP, Syslog and Embedded Web GUI
- Tested and fully interoperable with many NetFlow Collectors including Cisco FlowCollector, HP OpenView, etc.

Ordering Information	
Model	Description
NP-1210	Standard Catapult nProbe with one Gigabit Ethernet (1000Base-T, copper, RJ-45) port for data capture and one for management
NP-1410	Hardware-accelerated Catapult nProbe, with two high-performance gigabit data-capture (1000Base-T) ports and 1 management port
NP-1412SX	Replace gigabit copper ports on NP-1410 with gigabit optical (1000Base-SX, Duplex LC, SR)

Contact Details
nPulse Network Systems, LLC Reston Town Center 11921 Freedom Drive, Suite 550 Reston, VA 20190 USA  Phone/FAX: +1 (703) 673-0044 Email: <a href="mailto:sales@npulsenetworks.com">sales@npulsenetworks.com</a> Web: <a href="http://www.npulsenetworks.com">www.npulsenetworks.com</a>