



## Introducing the Newest State-of-the-art PRO Network Controller Switch

### Features

- Deep Packet Inspection (DPI)
- Dynamic load balancing of traffic based on flows
- Advanced (TTS) True Timestamping™ using GPS, PTP and NTP at the entry PHY
- Snapshot packet capture
- ProPush™ statistics for real-time, per-second network analytics with rich visualization tools
- Aggregation, regeneration, switching, and L2-L4 filtering
- Bandwidth microburst detection
- Latency measurement with microsecond accuracy
- Expandable stacking options
- Port-based ACL management
- 8 ports offer value-added ProPort™ functionality
- Simple-to-use web GUI
- 24 SFP+ 10G/SFP 1G Ports in a 2U form factor

### Benefits

- Relieve oversubscribed tools by filtering and load balancing
- Improve network visibility and security threat management
- Maximize the value of existing monitoring tool investments
- Optimize network latencies and performance
- Inspect every bit of every packet on the wire
- Speed trouble-shooting of network issues
- Gain compatibility with major monitoring tools and systems
- Meet or exceed compliance requirements

### More Power, Less Energy, Maximum Performance, Minimum Latency 24x10G Monitoring Access 24/7

In response to rising customer needs in the rapidly expanding 10G environment, Net Optics introduces the Director xStream Pro™ Network Controller Switch—a highly functional device that addresses rising link numbers, speeds, and the increased sophistication of 10G deployments.

Network operations today experience heavy demands driven by the need to monitor for increasingly detailed information, guarantee quality of service, and track billing information. This mission-critical activity puts pressure on monitoring tools, which become oversubscribed amid competition for use of tools and access points. Director xStream Pro's high functionality addresses skyrocketing multi-protocol network traffic, proliferating security threats, tightening regulatory compliance.

Director xStream Pro aggregates, regenerates, switches, filters, and dynamically load-balances monitoring traffic flows from network Taps and Span ports to multiple monitoring tools. The device delivers significantly enhanced performance and capabilities, integrating the high speed and port count of Director xStream™ with the advanced features of Director Pro.™ Director xStream Pro performs Dynamic Load Balancing and Deep Packet Inspection (DPI), as well as (TTS) True Timestamping,™ for synchronized precision in analysis; and packet capture, which enables users to see accurate bit-level information.



### ProPorts™ Added Advantage

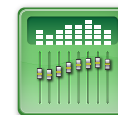
Director xStream Pro is engineered with sixteen standard ports plus eight smart ports called ProPorts,™ sharing the same

non-blocking switching fabric which provide the True Timestamping, Dynamic Load Balancing, DPI, and other intelligent capabilities. Director xStream Pro offers a spectrum of additional innovative features that increase the value of customer infrastructures and extend the reach of monitoring access. Unsurpassed flexibility optimizes customer investment by allowing a main chassis to be populated with 10G SFP+ and 1G SFP transceiver modules for building port density based on chosen interfaces.



### TapFlow™ Filtering Processing Power

Director xStream Pro enables handling of more traffic, links, and protocols by means of TapFlow technology, which filters packets and sends only traffic of interest to each monitoring tool. Processing traffic at full 10Gbps line speeds, you can select traffic by protocols, IP addresses, TCP/IP ports, VLANs and more. DPI extends filtering to examine every bit of the payload to isolate packets with patterns such as "Confidential" or "John Smith."

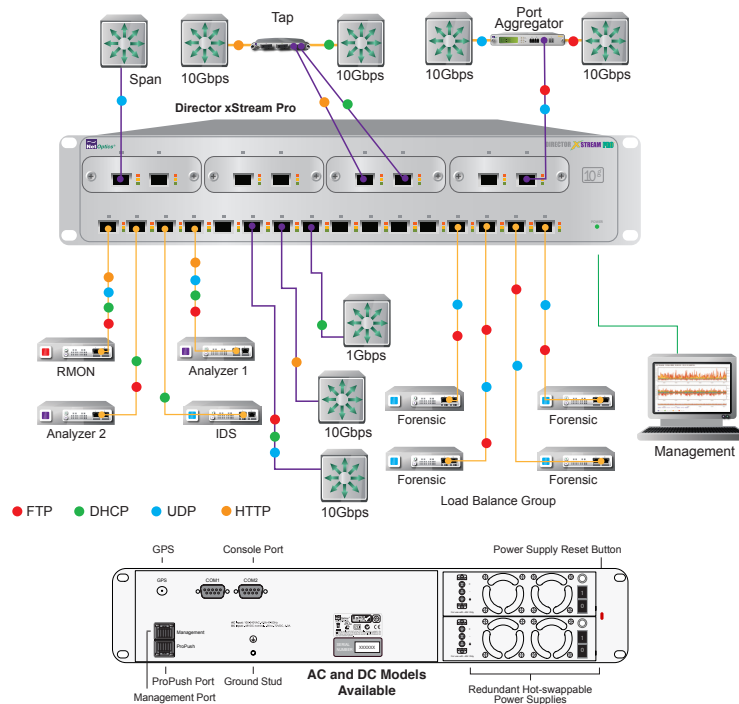
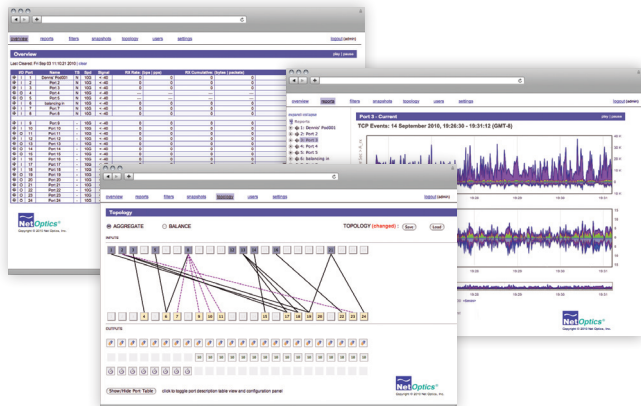


### Dynamic Load Balancing Maximizes Performance, Avoids Overload

By splitting the traffic into multiple streams, the dynamic load balancing function allows data to be processed by 2 to 16 tools, working in parallel, while retaining flow integrity. With four independent dynamic load balancing groups, Director xStream Pro is ideal for load balancing to replicate forensic traffic recorders, intrusion detection systems and protocol analyzers.

# Indigo Pro™ Software Simplifies Network Management

Director xStream Pro's easy-to-use GUI management tool can be accessed from any Web browser (Firefox 3.5 and above recommended). Its rich, intuitive interface lets you easily configure one or more devices, monitor link status, chart RMON statistics, and set up filters with a few mouse clicks, significantly lowering the learning curve for this sophisticated appliance.



## Specifications

### Environmental

Operating Temperature: 0°C to 40°C  
Storage Temperature: -10°C to 70°C  
Relative Humidity: 10% min, 95% max, non-condensing

### Mechanical

Dimensions: 3.5" high x 17.5" wide x 23.6" deep  
Mounting: Surface or 19" rack mount (2U)  
Weight: 25.5 lbs (11.5)

### Connectors

SFP+ slots: 24 (8 ProPorts, 16 standard ports)  
Management Port: (1) RJ45 10/100/1000 Copper  
Network Console Port: (2) RJ45 RS232 (COM B is unused)  
GPS: (1) BNC pulse-per-second for timestamp clock synchronization  
Power: (2) AC universal or (2) -48V DC depending on model  
DC Receptacle: Terminal peak, 12-14 gauge wire

### Electrical Specifications

AC Input: 100-240VAC, 5A, 47-63Hz (Japan: 100125VAC, ~500 VA, 50-60Hz)  
DC Input: -48VDC nominal, -36 to -72VDC, 10A  
Power Consumption: 500W

### Indicators

Each port has a Link LED and an Activity LED  
ProPorts have a warning LED indicating CRC and framing errors  
Power-on LED on front panel  
Power-on LEDs on power supply modules

### Indigo™ Management Software

CLI—local RS232 console for setting initial IP address  
Director xStream Pro Web GUI—compatible with Firefox 3.5 and higher Web browsers  
Net Optics Indigo Pro management platform appliance

### Performance

Hardware throughput: 240 Gbps; no packets dropped as long as monitor traffic does not exceed monitor port bandwidth  
Port mapping: Aggregation, any number of ports in; regeneration, any number of ports out; any-to-any, any-to-many, many-to-any, and many-to-many port connections; any port can be used as a network input or a monitor output (but not both simultaneously)  
Dynamic load balancing: 4 independent load balancing groups; each: 10Gbps aggregated throughput, 1 to 16 outputs, four balance modes: flow (IP address pair), flow (IP source address), flow (IP destination address), packet-by-packet round-robin  
DPI: Pattern matching in complete packet payload L4-L7; each DPI policy contains up to three patterns matched sequentially; 64 byte pattern length; ASCII, hex, byte-wise don't-cares; optional case sensitivity, anchored or unanchored search, independent offsets for each pattern and filter  
TapFlow: (ProPorts only): Filter by IP source address, IP destination address, MAC source address, MAC destination address, source port, destination port, protocol, network port or port group, VLAN, MPLS label, flags (URG, ACK, PSH, RST SYN, FIN); count, pass, drop, balance actions  
Snapshot packet capture: 8-second capture of any filter output to exportable pcap (packet capture) file  
RMON statistics: Bits per second, packets per second, total bytes, total packets, CRC errors, framing errors, light intensity, protocol breakdown (IPv4, IPv6, TCP, UDP, ICMP, ARP, and NOT\_IPv4\_IPv6), TCP events (SYN, SYN\_ACK, FIN, and RST), frame size distribution; updated every second for microburst detection

### Certifications

Safety: UL, CE  
EMC: FCC, VCCI, C-Tick  
Environmental: RoHS, WEEE  
Protocol: Fully IEEE 802.3 compliant

### Warranty and Maintenance

All Net Optics products come standard with a 1 year manufacturer's warranty. Additional Maintenance Plan options are available for purchase; visit [www.netoptics.com](http://www.netoptics.com) for details.

### Available Models

**Director xStream Pro DIR-2400XP**  
Director xStream Pro Main Chassis with 24 SFP+ ports  
**DIR-2400XP-DC**  
Director xStream Pro Main Chassis with 24 SFP+ ports, -48VDC SFP+ or SFP modules are required for operation and are sold separately

### SFP+ kits – 10G (for ProPorts and standard ports)

SFP+KT-SR Fiber SR SFP+ Transceiver with cable  
SFP+KT-LR Fiber LR SFP+ Transceiver with cable  
SFP+KT-50SR Fiber SR 50µm SFP+ Transceiver with cable

### SFP kits – 1G (for standard ports only)

SFPKT-SX GigaBit Fiber SX SFP with cable  
SFPKT-50SX GigaBit Fiber SX 50µm SFP with cable  
SFPKT-LX GigaBit Fiber LX SFP with cable  
SFPKT-CU3 10/100/1000 Copper SFP with cable (operates only at 1000 Mbps in Director xStream Pro)  
All SFP+ and SFP kits include a 3-meter cable.

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