



FlowDirector-240



24x 1G//10G SFP/SFP+ Ports Network Fabric Visibility Appliance

FlowDirector Product Family Overview

InfiniCORE Networks FlowDirector product family is purposefully designed to help network administrators to build next generation fabric visibility networks. The FlowDirector makes it easy to tap, aggregate, replicate, tag, strip, filter and load balance traffic from multiple sources to feed visibility networks, empowering network administrators to deploy monitoring devices on the fly without the need for SPAN ports. The industry leading InfiniOS operating system, coupled with its innovative software defined flow domains provides an easy to use, single pane user interface for network administrators.

The FlowDirector-240 leverages state of the art silicon technology to provide 24 SFP/SFP+ ports that are capable of operating at 1G and 10Gbps. The FlowDirector-240 provides line rate 480Gbps operation over all interfaces even for the smallest packet size.

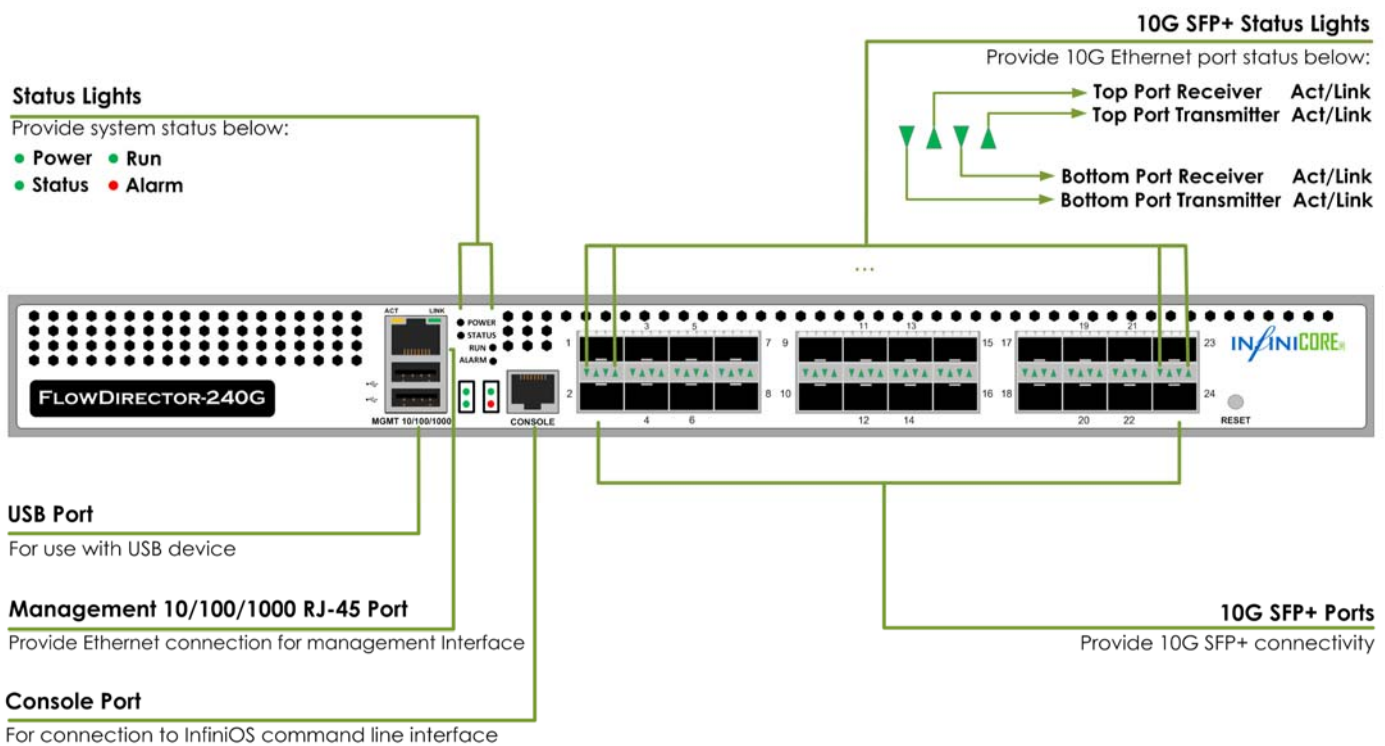
Main Features and Benefits

	Features	Benefits
Unprecedented Line Rate Packet Processing Capability Over 24 Traffic Ports	Up to 480Gbps of hardware ensured line rate packet operation over 24 1G/10G SFP/SFP+ ports.	Provides the best connectivity to wide variety of networks; Abundant network interfaces for future expansion; Worry free line rate operation.
High Performance, Flexible, Software Defined Flow Domains	Innovative Flow Domains provides best flow manipulation, function isolation, virtualization for tap, traffic aggregation, traffic replication, filter, tag and load balance applications.	Ideal for enterprise and service provider to create application specific data paths that suited for their network applications. 
Unified Tap/SPAN Based Operation and Inline Operation	In addition to TAP/SPAN functions, FlowDirector provides a powerful Virtual Wire based solution that can be used to process inline traffic easily.	Virtual Wire Technology is ideal to be used in lab automation applications to cross connect ports with different speeds and media types without rewiring the cables.
Innovative, State of the Art, Web Based Management Framework	FlowDirector family has native state-of-the-art HTML 5 Web based user interface that can be accessed from any standard based web browser.	Access the management interface from anywhere any device that is equipped with a modern browsers such as Chrome, Firefox, Safari and Internet Explorer. 
Green, Cost Effective and High Reliability and Availability	Leveraging the processor and switch technologies, FlowDirector is power efficient and equipped with single/redundant power supplies.	<ul style="list-style-type: none"> • Reduce CAPEX and OPEX • High Availability by Design

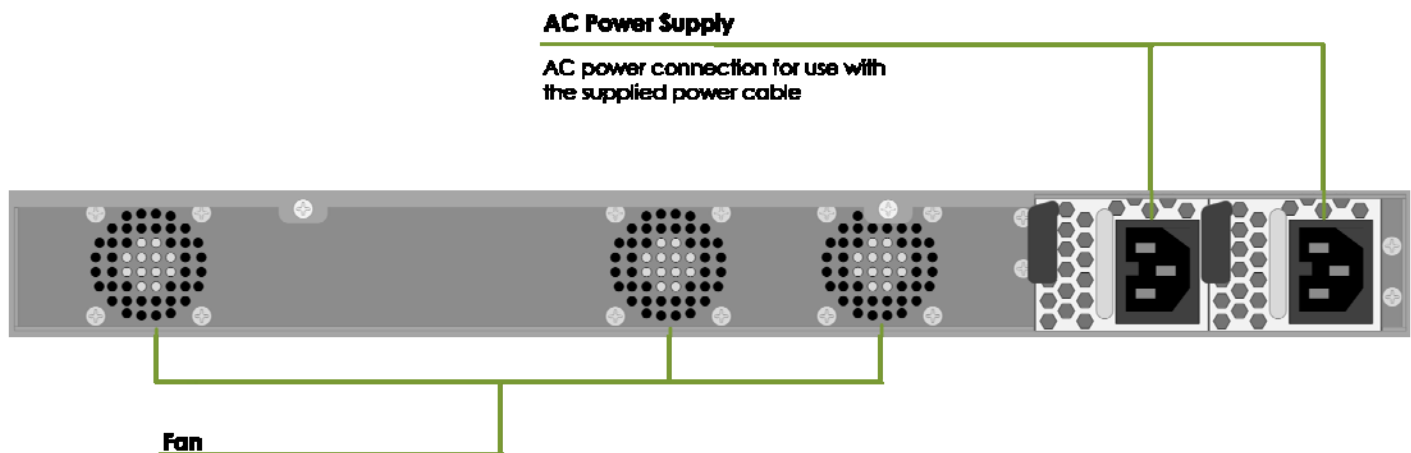
FlowDirector-240 External Interfaces Specification

Function	Compliance	Type	Quantity
Dual-mode 1Gb/10Gb Traffic Ports	IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.3aq 10GBASE-LRM SFP+ MSA, Revision 4.1 Direct-Attach Copper Cable Support up to 3 meters 10/100/1G SFP with SGMII and Auto Negotiation Support	10G SFP+ Fiber Optics 10G SFP+ Passive DAC Cable 1G SGMII Based SFP for Fiber Optics and RJ-45 Copper	24
Visible LED For the System	LED for Power Indicator LED for System Status LED for Traffic Running Status LED for System Alarm	Green LED Green LED Green LED Red LED	4
Visible LED For SFP+ Traffic Ports	LED for Receiver Link/Activity LED for Transmitter Link/Activity	Green LED Green LED	2 Per Port
10/100/1000Mbps Management Port	10/100/1000BASE-T Category 5, Category 5e, Category 6 UTP	Copper RJ-45	1
Visible LED for RJ-45 Management Port	LED for Link LED for Activity	Green/Amber LED. Green: 1000Mbps Amber: 10/100Mbps Green LED	2 Per Port
Console Port	9600 Baud 8 Bit Data No Parity 1 Stop Bit	Serial	1
USB Port	USB 2.0 High Speed 480Mbps Port	USB Type A	2
Air Flow and Fans	PWM Controlled Long Endurance Fan	Front to Back Air Flow	3
Redundant Power Supply	Dual 280W High Efficiency 90-230V AC 50-60Hz Class I	Single or 1+1 Redundant Power Supply	1 or 2
Rack Mount Kit	19 Inch Rack Mountable	19 Inch Rack Mountable	1
Chassis Dimension	Width x Depth x Height (inches) Width x Depth x Height (millimeters)	19 x 17 x 1.75 483 x 430 x 44	NA

FlowDirector-240 Front Panel Features



FlowDirector-240 Rear Panel Features



FlowDirector-240 Standard Peripherals

Part Name	Quantity
DB-9 to RJ-45 Serial Console Cable	1
UTP Cat 6. Ethernet Cable	1
Rail Mounting Kit	1
CD (User Manual, software package)	0 or 1
USB System Recovery Thumb Drive	0 or 1

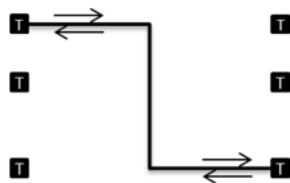
FlowDirector-240 Flow Operation Domains

The data paths through the FlowDirector can be configured through the concept of Virtual Flow Domains. The FlowDirector-240 supports up to 10,240 Virtual Flow Domains which are isolated from each other; each can have its own data path, filter configuration, and load balancing rules, etc. Once activated, the configuration will be mapped and pushed into hardware.

The FlowDirector-240 offers a variety of domains to support traffic tapping, inline processing, aggregation, replication, split & merge, tagging and load balancing.

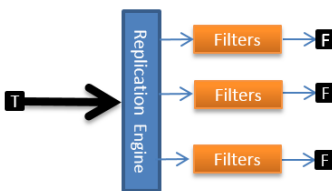
Typical Flow Domains Supported by FlowDirector Flow Domain Designer

Dynamic Virtual Wire



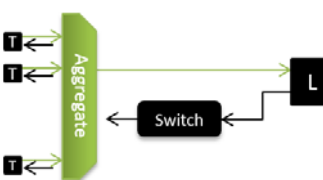
- Zero loss cross connect from any port to any port
- Drag-and-drop
- Ideal for lab automation and remote operation

Traffic Replication with Filters



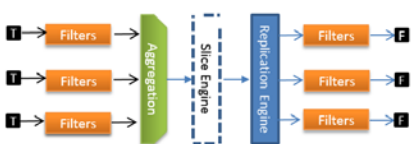
- Replicate traffic with filter support
- Lossless 1-to-N hardware based data path

Traffic Aggregation with Reverse Switching



- Ideal for aggregating multiple switch links to go through a security or visibility point
- The reverse traffic will be switched based on MAC

Traffic Aggregation with Replication

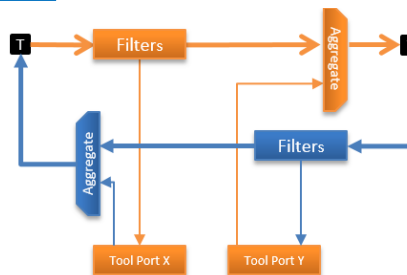


- Aggregate and replicate traffic
- Filter and slice traffic

Wide Variety of Protocols Support

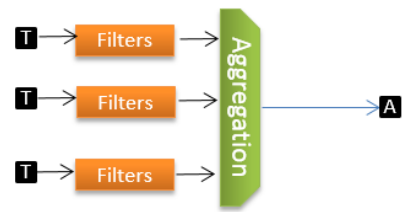
FlowDirector-240 supports wide variety of protocols including the following: TRILL, MPLS, VPWS, Q-in-Q, MAC-in-MAC, IPv4, IPv6, GRE, ECMP, TCP, UDP, IGMPv1, IGMPv2, IGMPv3, VEPA+

Inline Traffic Split and Merge



- Selectively redirect/drop traffic at line rate
- Merge traffic at line rate
- Ideal for DDoS defense or on demand traffic processing

Traffic Aggregation with Filters



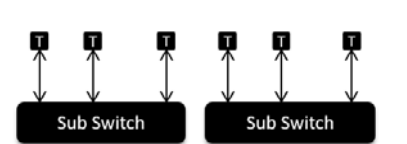
- Aggregate traffic to save downstream device ports
- Line rate filtering

Traffic Aggregation And Load Balancing



- Aggregate traffic and load balance to downstream devices
- Line rate filtering
- Option to slice packets

L2/L3 Switch Mode



- Select sub set of ports and use as regular L2/L3 switch
- Line rate forwarding across all ports
- Jumbo frame support

FlowDirector-240 Package and Environmental Specification

Item	Description
Dimension (Width x Depth x Height)	19 x 17 x 1.75 (inches) 483 x 430 x 44 (millimeters)
Net Weight	14 (pounds) / 6.5 (kilograms) for FDS-240G-R2 12 (pounds) / 5.5 (kilograms) for FDS-240G-R1
Environment	Operating Temperature: 0° ~ 40° C (32° ~ 104° F) Non Operating Temperature: -40° ~ 70° C (-40° ~ 158° F) Humidity: 20 ~ 90% (Non-condensing)

FlowDirector-240 Ordering Information

Please contact InfiniCORE regional distributors/resellers or InfiniCORE sales for further information.

Part Number	Traffic Ports	Port Specification	Software Package
FDS-240G-R1 (Single PSU)	24 SFP/SFP+ + 0 QSFP+	24x 1G/10G SFP/SFP+ Ports with DAC Support	Standard InfiniOS Software Package
FDS-240G-R2 (2 Redundant PSUs)	24 SFP/SFP+ + 0 QSFP+	24x 1G/10G SFP/SFP+ Ports with DAC Support	Standard InfiniOS Software Package

Other Products in the FlowDirector Product Family

Part Number	Traffic Ports	Port Specification	Software Package
FDS-640-R2	48 SFP/SFP+ + 4 QSFP+	48x 1G/2.5G/10G SFP/SFP+ Ports with DAC Support; 4x QSFP+	Standard InfiniOS Software Package
FDS-640Plus-R2	48 SFP/SFP+/SFP28 + 6 QSFP+/QSFP28	48x 1G/10G/25G SFP/SFP+/SFP28 Ports with DAC Support; 6x 40G/100G QSFP+/QSFP28	Standard InfiniOS Software Package
FDS-3200-R2	32 QSFP+/QSFP28	32x 40G/100G QSFP+/QSFP28 Ports	Standard InfiniOS Software Package

Accessories

Part Number	Port Specification
SFP-AC-8522	10/100/1G Active Copper SFP 1000BASE-T Copper SFP Transceiver
SFP-FO-1	1.25Gbps Fiber Optic SFP, SR
SFP-FO-10	10.3125Gbps Fiber Optic SFP+, SR
SFP-FO-10-LR	10.3125Gbps Fiber Optic SFP+, LR
SFP-AC-3m	3 Meter 10.3125Gbps Passive Direct Attach Cable