

# Director Network Module

Director Network Module (DNM) is a pluggable, field upgradeable Director module with 12 network ports. Depending on the DNM model, each module provides 6 in-line links or 12 Span ports, supporting Gigabit SX/LX/ZX Fiber or 10/100/1000 Copper media.

Director supports up to 2 modules. Each Director chassis has two DNM slots that may be populated with different models of DNM.

## Virtual Zero Delay (VZD)

VZD is a new, patent-pending technology from Net Optics designed to improve network reliability when using copper taps.

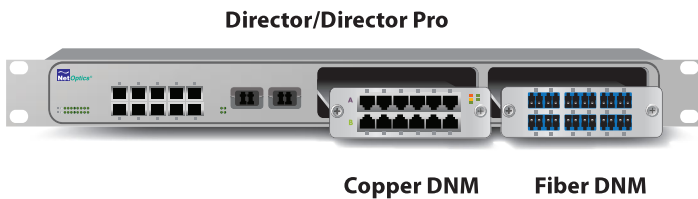
Net Optics' new DNM-101 Module's innovative Virtual Zero Delay circuitry guarantees that Director™ and Director Pro™ in-line copper connections will never lose their links when power goes off for whatever reason—such as power failures or during planned power up and power down events. In the past, link renegotiation has been a major challenge for copper taps, costing precious seconds or minutes of link downtime when Tap power transitions. DNM-101 VZD eliminates those lengthy renegotiation cycles by preserving the link state through power transitions, as if no break existed.



## At a Glance

- Twelve 1Gbps ports
- Fiber and Copper media support
- In-line and SPAN network modules
- Virtual Zero Delay\*
- Passive in-line or span access
- Link fault detect (LFD)
- Status LEDs for each port
- RMON-type statistics
- IEEE 802.3az, SyncE compliant\*
- Compatible with all models of Director and Director Pro

\*Applies to DNM-101 Only



## Specifications

### Performance

Hardware throughput: 12Gbps  
 Network recovery time (DNM-101): Zero Delay at 10mbps, <50µs @ 100mbps, 40ms at 1Gbps  
 RMON statistics: Current utilization, peak utilization, peak time, total packets, total bytes, CRC errors, collision packets, oversize packets, undersize packets. Available via Indigo Management Software.  
 Alarms: Utilization threshold alarm for each network port programmable through Director CLI

### Mechanical

Dimensions: 1.35" high x 10.38" deep x 5.05" wide  
 Weight: 1.5lbs

### Indicators

(All ports) Link LEDs (with speed indication on Copper ports),  
 (All ports) Activity LEDs

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### Copper Interfaces

(12) RJ45 Network Ports 10/100/1000Mbps  
 (6) In-line or (12) SPAN depending on model  
 22-24 AWG unshielded twisted pair cable, CAT5e or better recommended

### Fiber Optic Interfaces

(12) Gigabit SX Network Ports, LC type  
 (6) In-line or (12) SPAN depending on model  
 Fiber Type: Corning Multimode 50 or 62.5/125µm, 850 nm  
 Transceiver: GigaBit SX 850nm, VCSEL, supports 62.5/125µm  
 Transceiver: GigaBit LX 1310nm or 1550nm, VCSEL, supports 8.5/125µm  
 Safety: Class 1, eye-safe, laser emitter type; conforms to the applicable requirements per US 21 CFR (J) and EN 60825-1; also UL 1950 applications

### Certifications

Fully RoHS compliant

### Part Numbers

DNM-100: DNM, CU3, Inline  
 DNM-101: DNM, CU3, Inline, Virtual Zero Delay  
 DNM-110: DNM, CU3, Span  
 DNM-200: DNM, Fiber, MM, Inline, 62.5µm, 850nm, 50:50  
 DNM-202: DNM, Fiber, MM, Inline, 62.5µm, 850nm, 70:30  
 DNM-210: DNM, Fiber, MM, Span, 62.5µm, 850nm  
 DNM-220: DNM, Fiber, MM, Inline, 50µm, 850nm, 50:50  
 DNM-222: DNM, Fiber, MM, Inline, 50µm, 850nm, 70:30  
 DNM-230: DNM, Fiber, MM, Span, 50µm, 850nm  
 DNM-300: DNM, Fiber, SM, Inline, 8.5µm, 1310nm, 50:50  
 DNM-302: DNM, Fiber, SM, Inline, 8.5µm, 1310nm, 70:30  
 DNM-310: DNM, Fiber, SM, Span, 8.5µm, 1310nm  
 DNM-320: DNM, Fiber, SM, Inline, 8.5µm, 1550nm, 50:50  
 DNM-330: DNM, Fiber, SM, Span, 8.5µm, 1550nm

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