

## Highlights

ReachNXT 100-8t extends the revolutionary ExtremeXOS core-class operating system from Extreme Networks<sup>®</sup> to the network access ExtremeXOS in a highly resilient, modular operating system that helps provide continuous uptime, manageability, and operational efficiency. ReachNXT 100-8t provides users with a consistent ExtremeXOS experience at an affordable price. It is best suited for network access applications where easy network deployment is required.

The compact and quiet ReachNXT 100-8t enterprise port extender provides 8 Fast Ethernet ports plus 1 Gigabit Ethernet combo copper/SFP fiber port. The ReachNXT can be powered via an EXOS Power-over-Ethernet switch or a third party PoE injector.

## Target Applications

- ExtremeXOS port extender providing basic 10/100BASE-T connectivity to the desktop in a network running ExtremeXOS from the core to access
- 10/100BASE-T port extender to aggregate a small department, multiple stand-alone devices or similar applications
- Fanless design for low-noise environments



ReachNXT™ 100-8t is an 8-port 10/100 Fast Ethernet port extender delivering outstanding performance in a simple enterprise-class access solution extending the revolutionary modular operating system, ExtremeXOS<sup>®</sup>.

# ReachNXT 100-8t

Plug and Play Fast Ethernet Port Extender for ExtremeXOS switches

## Ease of Management Supporting Rapid Network Deployment

- Link Layer Discovery Protocol (LLDP) provides information for device management by the upstream switch
- Includes built-in firmware management

## Network Security

- By extending ExtremeXOS, ReachNXT 100-8t can provide the same level of user security over the network as the upstream ExtremeXOS switch
- Automated network login and authentication reduce operator efforts and errors

## Theft Deterrents

- ReachNXT 100-8t will operate only if connected to an upstream ExtremeXOS switch
- Kensington lock slot is built in to the ReachNXT 100-8t for added physical security

## Ease of Management and Operations Lower Network Costs

- The plug-and-play simplicity of ReachNXT 100-8t reduces network operations cost as no configuration is required
- ReachNXT 100-8t provides fiber-to-copper media conversion from its 1000BASE-X SFP port to eight of its 10/100BASE-T ports

## Ease of Management Supporting Rapid Network Deployment

ReachNXT 100-8t connects to an upstream ExtremeXOS switch via plug-and-play. The auto-discovery function allows the ReachNXT 100-8t and the ExtremeXOS switch to recognize each other and appear in EPICenter<sup>®</sup> network management.

## Single Streamlined Operating System across the Entire Enterprise Network

Extreme Networks provides ExtremeXOS based Ethernet switching platforms for the edge, aggregation, and core of the enterprise network. Using one operating system across the network significantly simplifies deployment and operation, as well as ongoing maintenance, to reduce the total cost of ownership. ReachNXT 100-8t connected to an ExtremeXOS switch provides a consistent experience for the user from core to edge to access of the network.

### Link Layer Discovery Protocol

ExtremeXOS supports IEEE 802.1ab standards-based discovery protocol and provides vendor-independent device discovery. LLDP not only simplifies deployment and location of access devices, but can also be used as a troubleshooting and firmware management tool. LLDP is an extensible standard, providing a framework for industry consortiums to define application-specific extensions without causing compatibility issues.

### Efficient and Comprehensive Network Management

Extreme Networks has developed tools that help save time and resources in managing your network. EPICenter provides fault configuration, accounting, performance, and security functions, allowing more effective management of Extreme Networks multilayer switching equipment in a converged network.

## Network Security

The ReachNXT 100-8t does not directly support VLANs; all its ports are untagged and are part of the same broadcast domain. However, by taking advantage of ExtremeXOS NetLogin features on the upstream switch, clients connected to the ReachNXT 100-8t port extender can logically belong to separate VLANs. These ExtremeXOS features include NetLogin, multiple supplicant support and authentication failure VLAN. By implementing these features on the ExtremeXOS switch port that the ReachNXT 100-8t is connected to, clients can be assigned to different VLANs. On the ReachNXT 100-8t the clients are all one network segment, but once the traffic hits the ExtremeXOS switch it can be segregated to different VLANs. Restricted Guest access can also be granted and this traffic segregated on a separate VLAN.

### NetLogin and Multiple Supplicant Support

ExtremeXOS supports NetLogin with multiple clients (supplicants) individually authenticated on the same port. This feature makes it possible for two or more client stations to be connected to the same port. The clients can be assigned to specific VLANs based on a VLAN RADIUS attribute. Authentication can be via 802.1x, MAC-based or via Web (Captive Portal).

### Authentication Failure VLAN

When this feature is enabled on a NetLogin-enabled port and a NetLogin client fails authentication, the client is moved to an authentication failure VLAN. This VLAN can be a "Guest" VLAN with restricted access, such as access only to the public Internet. Restricted access can be enforced using access control lists, routing policies and rate limiting. In this way, the network operator can automate network login and authentication, thereby reducing effort and errors.

## Theft Deterrents

Implementing a secure network means providing protection at the network perimeter as well as the core. In addition, physical removal of equipment is another situation the network operator must address. The ReachNXT 100-8t extends the hardened network ExtremeXOS infrastructure for network security. For physical security, the ReachNXT 100-8t has deterrents built in its design.

### Monitoring Connectivity through Link Layer Discovery Protocol

As mentioned previously, LLDP not only simplifies deployment and location of access devices, but can also be used for troubleshooting and monitoring. LLDP allows the ReachNXT 100-8t and the ExtremeXOS switch to communicate with each other for connectivity and status information.

### Monitoring ReachNXT 100-8t on EPICenter

Through an upstream ExtremeXOS switch such as a member of the Summit<sup>®</sup> product family, EPICenter is able to "see" the ReachNXT 100-8t in an Extreme Networks based network. The network operator can customize EPICenter so that alerts will appear if ReachNXT 100-8t is removed from the network.

### Kensington Slot for Physical Security

ReachNXT 100-8t has a Kensington slot so that it can be attached to a hard-to-move object.

## Ease of Management and Operations Lower Network Costs

The plug-and-play nature of ReachNXT 100-8t with an ExtremeXOS switch reduces network management and operational costs. Since ReachNXT 100-8t and the ExtremeXOS switches use LLDP to establish connectivity, the network operator does not have to configure the ReachNXT 100-8t to be deployed in the network. Thus, little or no cost is incurred in deploying ReachNXT 100-8t. Also, since an ExtremeXOS switch passes device attachment information to EPICenter, monitoring of ReachNXT 100-8t is made much easier. If ReachNXT 100-8t is disconnected from the network, EPICenter can notify the network operator to take action.

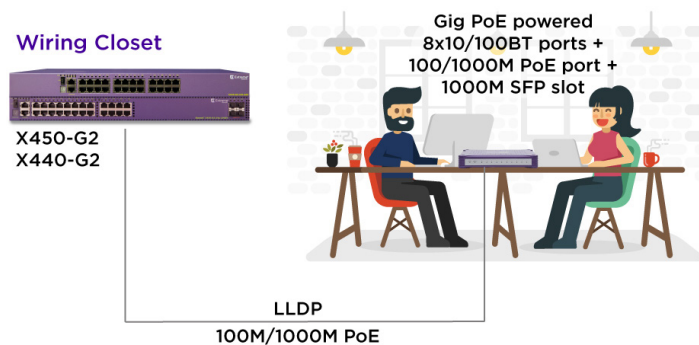
Another feature of the combo 1000M port is that the ReachNXT 100-8t can perform media conversion from optical signals to electrical signals through its 1000BASE-X SFP port to eight of its 10/100BASE-T ports. This feature is very useful for distances greater than 100m—which exceeds the limits of copper cabling—extending the reach of the network.

## Target Applications

The ReachNXT 100-8t ExtremeXOS port extender provides intelligent 10/100BASE-T connectivity to the desktop in a network running ExtremeXOS from the core to access. It connects directly to any ExtremeXOS switch via either a PoE or non-PoE 100/1000M interface.

### Access Connectivity

ReachNXT 100-8t is deployed as a Fast Ethernet ExtremeXOS port extender, extending the benefits of the ExtremeXOS operating system. This uniformity allows consistent quality and performance throughout your converged network while minimizing operational inefficiencies.



## General Specifications

### Performance

- 5.6 Gbps switch fabric bandwidth
- 4.1 Mpps frame forwarding rate (based on 64-byte packets)
- 2,048 byte maximum packet size

### Ports

- 8 ports 10/100BASE-T with autospeed and auto-polarity
- 1-port 10/100/1000BASE-T with autospeed and auto-polarity (PoE input)
- 1-port 1000BASE-X SFP (shared PHY with 1 10/100/1000BASE-T port)
- Per-port status LED including management status

## Physical Specifications

### Dimensions

- Height: 1.34 inches/34 mm
- Width: 8.7 inches/220 mm
- Depth: 5.9 inches/150 mm
- Weight: 1.1 lbs/0.5 kg
- Kensington lock hole

## Operating Specifications

### Temperature

- Operating Temperature Range: 0° C to 40° C (32° F to 104° F)
- Operating Humidity: 10% to 93% relative humidity, non-condensing

### Storage and Transportation Conditions (Packaged)

- Transportation Temperature: -40° C to 70° C (-40° F to 158° F)
- Storage and Transportation Humidity: 60% to 95% RH, non-condensing

### Power and Acoustic Sound

- Noise: None (Fanless)
- Power Consumption
  - 8.2W for 48V – DC PoE

# Regulatory/Safety Standards

## North American Safety of ITE

- UL 60950-1:2003 1st Ed., Listed Device (U.S.)
- CSA 22.2#60950-1-03 1st Ed.(Canada)
- Complies with FCC 21CFR 1040.10 (U.S. Laser Safety)
- CDRH Letter of Approval (U.S. FDA Approval)
- European Safety of ITE
- EN 60950-1+A11:2001 TUV-R GS Mark by German Notified Body
- EN 60825-1+A2:2001 (Lasers Safety)
- 2006/95/EC Low Voltage Directive International Safety of ITE
- CB Report and Certificate per IEC 60950- 1:2001+All Country Deviations
- AS/NZS 60950-1 (Australia/New Zealand)

## EMI/EMC Standards

- North America EMC for ITE
- FCC CFR 47 part 15 Class B (U.S.A.)
- ICES-003 Class B (Canada)
- European EMC standards
- EN 55022 2006 Class B
- EN 55024 A2:2003 Class B
- EN61000-3-2 8-2006 (Harmonics)
- EN61000-3-3 1995+A2:2005 (Flicker)
- 93/68/EEC EMC Directive

## International EMC Certifications

- CISPR 22:2006 Ed 5.2 Class B (International Emissions)
- CISPR 24:2003 (International Immunity)
- IEC/EN 61000-4-2:2001 Electrostatic Discharge, 8kV Contact, 15kV Air, Criteria A
- IEC/EN 61000-4-3:2006 Radiated Immunity
- 10V/m, 30 to 2GHz Criteria A
- EC/EN 61000-4-4 Transient Burst, 1kV, I/O Criteria A
- IEC/EN 61000-4-5 Surge, 2kV L-L, 2kV L-G, Level 3, Criteria A (power supply only)
- IEC/EN 61000-4-6 Conducted Immunity, 0.15 – 80MHz, 10V/m unmod. RMS, Criteria A
- IEC/EN 61000-4-11 Power Dips and Interruptions, >30%, 25 periods, Criteria C (power supply only)

## Country Specific

- VCCI Class B (Japan Emissions)
- ACMA (C-Tick) via CISPR22:2006 (Australia and New Zealand)
- BSMI, CNS 13438:1997 Class B (Taiwan)
- KCC Mark, KN22, KN24 (Korea) Class B
- ANATEL, (Brazil) Certificate of Homologation in accordance with General Requirements Resolution 242 Nov. 2000 for Category 3 equipment, Resolution 442 Nov. 2006 (EMC) and Resolution 238 Nov. 2000 (Safety)

## Telecom Standards

- ETSI EN 300 386:2001 (EMC Telecommunications)
- ETSI EN 300 019 (Environmental for Telecommunications)
- IEEE 802.3 Media Access Standards
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3af PoE/PD
- IEEE 802.3z 1000BASE-X
- IEEE 802.1ab – Link Layer Discovery Protocol (LLDP)

## Environmental Standards

- EN/ETSI 300 019-2-1 v2.1.2 (2000-09) – Storage, Class 1.2
- EN/ETSI 300 019-2-2 v2.1.2 (1999-09) – Public Transportation, Class 2.3
- EN/ETSI 300 019-2-3 v2.1.2 (2003-04) – Stationary Use, Class 3.1e
- EN/ETSI 300 753 (1997-10) – Acoustic Noise ASTM D3580 Random Vibration Unpackaged 1.5G

## Warranty

- Ltd. Lifetime with express Advanced Hardware Replacement (for products shipped from Extreme Networks on or after June 29, 2009)
- For warranty details, visit <http://www.extremenetworks.com/support/policies>

## Technical Specifications

Management LED	Description
Blinking Amber	Firmware upgrade in progress
Blinking Green	Diagnostics in progress
Solid Amber	Diagnostics failed
Solid Green	ReachNXT is initialized and connected to an ExtremeXOS switch
Off	ReachNXT is not connected to an ExtremeXOS switch

Power LED	Description
Green	AC power
Amber	Power over Ethernet
Off	No power

Port LED	Description
Steady Green	Link OK
Blinking Green	Port is transmitting
Off	Link is not present

## Ordering Information

Part Number	Name	Description
12101	ReachNXT 100-8t	8 10/100BASE-T ports, 1 Gigabit combo port (1 unpopulated Gigabit SFP and 10/100/1000BASE-T, PoE input)
12103	ReachNXT 100-8t Mounting Kit	1 pair of magnets and 1 metal mounting plate for placing the ReachNXT 100-8t product underneath a table or on a wall
10051	SX SFP	1000BASE-SX SFP, LC Connector
10052	LX SFP	1000BASE-LX SFP, LC Connector
10056	1000BX SFP BX-D	1000BASE-BX-D SFP, SMF (1310-nm TX/1490-nm RX Wavelength), LC Connector
10057	1000BX SFP BX-U	1000BASE-BX-U SFP, SMF (1310-nm TX/1490-nm RX Wavelength), LC Connector



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