



## > FLEXIBLE, FAST ETHERNET SWITCHING AT AN ATTRACTIVE PRICE

# NORTEL

### Product Brief

## Nortel Ethernet Routing Switch 2500 Series

**Nortel's Ethernet Routing Switch 2500 series combines enterprise-class features, convergence-ready functionality and investment protection in one affordable solution.**

The Nortel Ethernet Routing Switch (ERS) series is a new family of cost-effective 10/100BaseT Ethernet switching products perfectly suited for branch offices of larger enterprises, or the enterprise edge, requiring a low-cost but feature-rich solution in the wiring closet.

Ideal for enterprises with big plans, but not-so-big budgets, the Ethernet Routing Switch 2500 offers the flexibility, high-speed connectivity and cost-effectiveness to deploy next-generation technology today — while providing the high resiliency and performance you need.

### Convergence-ready, for VoIP and more

The Ethernet Routing Switch 2500 series offers outstanding value as a convergence-ready edge switch. It delivers 802.3af standards-based Power over Ethernet (PoE) to support IP Telephony

### Nortel Ethernet Routing Switch 2500 highlights

- > Enterprise-class features, convergence-ready functionality and high performance at a competitive price
- > Power to IP phones, wireless access points, network cameras, security, lighting devices, and access control devices through Power over Ethernet
- > Enterprise-class management with Nortel Command Line Interface, WebUI and Java Device Manager support
- > High-density, flexible connectivity, supporting up to 52 user ports per switch, with 48 10/100BaseT ports and 4 Gigabit Ethernet ports
- > Plug-and-play settings with simplified web-based configurations for data and power settings



**Ethernet Routing  
Switch 2500**

Nortel Ethernet Routing Switch 2500 Series	
Model	Port configurations
ERS2526T	24 x 10/100 ports + 2 combo 10/100/1000BaseT/SFP mini-GBIC ports + 2 1000BaseT RJ-45 ports at the rear
ERS2526T PWR	24 x 10/100 ports (PoE supported on 12 ports) + 2 combo 10/100/1000BaseT/SFP mini-GBIC ports + 2 1000BaseT RJ-45 ports at the rear
ERS2550T	48 x 10/100 ports + 2 combo 10/100/1000BaseT/SFP mini-GBIC ports + 2 1000BaseT RJ-45 ports at the rear
ERS2550T PWR	48 x 10/100 ports (PoE supported on 24 ports) + 2 combo 10/100/1000BaseT/SFP mini-GBIC ports + 2 1000BaseT RJ-45 ports at the rear

With the right mix of PoE and non-PoE ports (1/2 and 1/2), the Ethernet Routing Switch 2500 delivers the performance and convergence-ready features that until now have only been available in higher-priced switches.

and Wireless LAN access points. As not all network devices require Power over Ethernet, the Ethernet Routing Switch 2500 provides the right mix of PoE and non-PoE ports, so you don't have to pay for power capacity that you're never likely to use. This unique design results in a flexible and low-cost, convergence-ready solution that enables you to take advantage of:

- > Economically priced non-PoE ports for devices such as printers, servers and other devices that don't require power from the network
- > The convergence capabilities of PoE to support IP phones, network cameras, wireless access points, security, lighting and access control devices (e.g., badge readers)

Convergence is further supported through Quality of Service (QoS) features. The Ethernet Routing Switch 2500 uses standards-based 802.1p and DSCP priority queuing to prioritize mission-critical traffic such as VoIP. Through this functionality, the Ethernet Routing Switch 2500 can forward packets in priority order on a per-port basis and support four queues for the classification and prioritization of network traffic.

The Ethernet Routing Switch 2500 family also uses IEEE standard 802.1AB for auto discovery of 802.1AB devices,

such as IP phones. Each 802.1AB-supporting device learns the identification, configuration and capabilities of neighboring devices, and provides these details to the network management system. This ensures that the system has the most up-to-date physical view of the network, and can find and correct communication configuration mismatches quickly.

**Enterprise-class management**

The Ethernet Routing Switch 2500 series is managed through Nortel's enterprise-class Command Line Interface (NNCLI). The NNCLI provides a common industry look and feel to CLI commands, helping to reduce training and operational costs. Additionally, use of either the Java Device Manager tool or the web-based user interface makes managing the Ethernet Routing Switch 2500 simple through a graphical management interface.

Support for backup and restoring an ASCII Configuration file provides the network administrator with the ability to quickly deploy the same configuration file among various switches as well as to maintain a backup of the switch configuration for future use.

**Securing access to the network**

The Ethernet Routing Switch 2500 offers high levels of security, ensuring that only authorized personnel gain access to a company's LAN. The Ethernet Routing Switch 2500 supports the IEEE 802.1X-based EAP protocol, which when used in conjunction with a RADIUS server, prevents network connectivity without username and password authorization. Additional supported security features include MAC address-based security as well as destination address filtering for more granular methods of securing access to specific network resources across the network.

**Switch management security**

Secure management of the switch occurs through encryption features such as Secure Shell (SSHv2) for encrypted telnet management access using an SSH client or through the Simple Network Management Protocol (SNMPv3). Additionally, an IP Manager List can be used to specify which management stations can access the switch by specifying up to 10 authorized management station IP addresses.

**Always on. Always available.**

The Ethernet Routing Switch 2500 uses standards-based 802.3ad Link Aggregation for grouping ports together for high-speed trunks. This functionality is designed to provide an added level of resilience by ensuring that if one of the links within the trunks fails, the remaining links enable traffic to get to its destination.

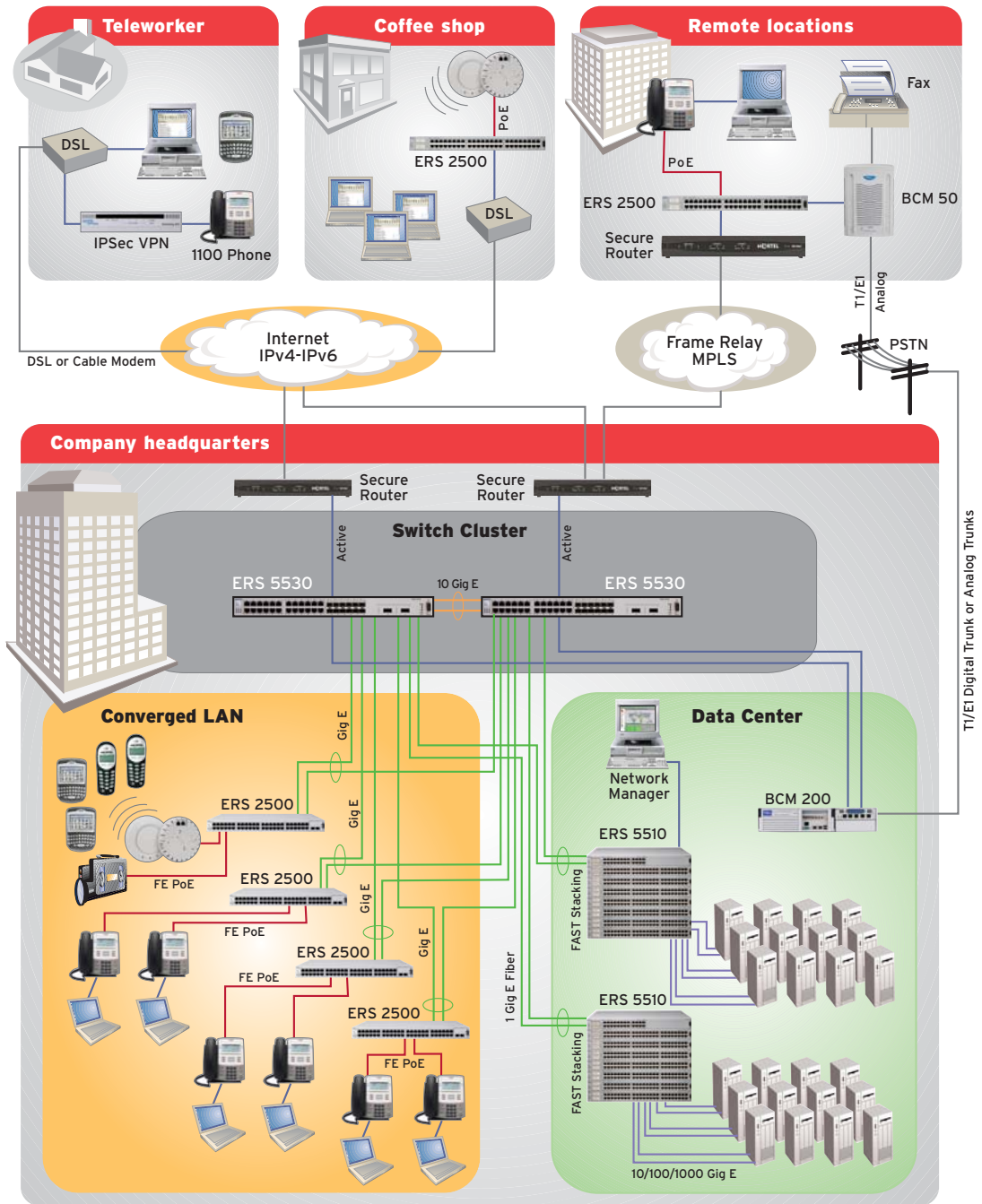
Nortel's Multi-Link Trunking (MLT) enables grouping of links between the Ethernet Routing Switch 2500 and other switches in the network to provide greater bandwidth — complete with active redundant links and connectivity to mission-critical servers and the network center. The Ethernet Routing Switch 2500 supports up to six MLT groups per switch with up to four ports per MLT.

**Summary**

When it come to deploying converged solutions for the network edge, Nortel is uniquely positioned to help your business reduce costs by combining voice and data into an integrated system. Let us show you how the Ethernet Routing Switch 2500, along with other Nortel products, can help increase your profitability, streamline your business operations, increase productivity and help you gain the competitive edge.

**Figure 1. End to End Nortel Enterprise Solutions**

Deployments of end to end solutions are made simple by allowing customers to choose the products that best fit their network requirements. From Voice over IP to wireless connections, the Ethernet Routing Switch 2500 supports the features to help ensure seamless interconnectivity of products from a single vendor.



## Technical specifications

**Height:** 4.45 cm (1.75 in)

**Width:** 43.82 cm (17.25 in)

### Depth

- > 2526T/PWR: 30.7 cm (12.13 in)
- > 2550T/PWR: 36.7 cm (14.56 in)

### Physical security

- > Kensington Lock (K-Lock) slot (at rear)

### Performance specifications

- > Switching capacity: 12.8 Gbps for 2526T and 15.6 Gbps for 2550T switches
- > Maximum throughput:  
9.523 Mpps (million packets per second) for the ERS2526T models, and 11.606 Mpps for the ERS2550T models
- > 1 RU high

### Port forwarding performance

- > For 10 Mbps: 14,880 pps maximum (64-byte packets)
- > For 100 Mbps: 148,810 pps maximum
- > For 1000 Mbps: 1,488,100 pps maximum

### Forwarding database size

- > 16,000 entries

### Frame length

- > 64 to 1518 bytes (IEEE 802.1q Untagged)
- > 64 to 1522 bytes (IEEE 802.1q Tagged)

### Multi-Link Trunks (and 802.3ad)

- > Up to six trunks, four link members per trunk

### VLANs

- > Up to 256 port-based; per VLAN Tagging option

### Multiple Spanning Tree Groups

- > Up to eight 8 (802.1w/s)

### Interface Options

- > 10BASE-T/100BASE-TX/1000BASE-T RJ-45 (8-pin modular) connectors for Auto MDI/MDI-X interface

### Environmental specifications

- > Operating temperature: 0° to 45°C (32° to 113°F)
- > Storage temperature: -25° to +70°C (-13° to 158°F)
- > Operating humidity: 85% maximum relative humidity, non-condensing
- > Storage humidity: 95% maximum relative humidity, non-condensing
- > Operating altitude: Up to 3,024 m (10,000 ft.) above sea level
- > Storage altitude: Up to 3,024 m (10,000 ft.) above sea level

### Safety Agency Approvals

- > UL EN60950 (UL Listed or CSA 22.2 No. 60950 (CUL))
- > IEC 60950/EN 60950, CB report and certificate with all national deviations
- > C22.2 No. 950 (CUL) with all national deviations
- > UL-94-V1 flammability requirements for PC board
- > NOM-019 (NOM)

### Environmental standards

- > European Union Environmental Directive (EUED) for Reduction of Hazardous Substances (RoHS), 6/6 compliant

## Ordering information

### Switch versions

Order code	Description
AL2500?01-E6	Ethernet Routing Switch 2526T – 24 port 10/100BaseT and 2 combo 10/100/1000BaseT or SFP ports (not shared, 26 front ports total), plus 2 1000BaseT rear ports. [NO PC].
AL2500?02-E6	Ethernet Routing Switch 2550T – 48 port 10/100BaseT and 2 combo 10/100/1000BaseT or SFP ports (not shared, 50 front ports total), plus 2 1000BaseT rear ports. [NO PC].
AL2500?11-E6	Ethernet Routing Switch 2526T-PWR – 24 port 10/100BaseT (of which 12 ports support 802.3af PoE) and 2 combo 10/100/1000BaseT or SFP ports (not shared, 26 front ports total), plus 2 1000BaseT rear ports. [NO PC].
AL2500?12-E6	Ethernet Routing Switch 2550T-PWR – 48 port 10/100BaseT (of which 24 ports support 802.3af PoE) and 2 combo 10/100/1000BaseT or SFP ports (not shared, 50 front ports total), plus 2 1000BaseT rear ports. [NO PC].

"?" - The seventh character (?) of the switch order number must be replaced with the proper code to indicate desired product nationalization:

"A" - No power cord included

"B" - Includes European "Schuko" power cord common in Austria, Belgium, Finland, France, Germany, The Netherlands, Norway, and Sweden

"C" - Includes power cord commonly used in the United Kingdom and Ireland

"D" - Includes power cord commonly used in Japan

"E" - Includes North American power cord

"F" - Includes Australian power cord, also commonly used in New Zealand and the People's Republic of China

### Maintenance Services

Order number	Description
GE5300xxx	Technical Support Service
GL5300xxx	Return & Replace Service
GF5300xxx	Managed Spares Services Pack - Next Business Day
GG5300xxx	Managed Spares Second Business Day
GH5300xxx	Managed Spares Services Pack - 4 Hour 7x24
GJ5300xxx	Managed On-Site with Spares Services Pack - Next Business Day
GK5300xxx	Managed Onsite with Spares SBD Svc Pack
GN5300xxx	Managed On-Site with Spares Services Pack - 4 Hour 7x24

### SFPs

Order code	Description
AA1419013-E5	1-port 1000Base-SX Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC).
AA1419014-E5	1-port 1000Base-SX Small Form Factor Pluggable GBIC (mini-GBIC, connector type: MT-RJ).
AA1419015-E5	1-port 1000Base-LX Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC).
AA1419025-E5	1-port 1000BaseCWDM Small Form Factor Pluggable Transceiver (mini-GBIC, connector type: LC) - 1470nm Wavelength, 40km.
AA1419026-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1490nm Wavelength, 40km.
AA1419027-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1510nm Wavelength, 40km.
AA1419028-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1530nm Wavelength, 40km.
AA1419029-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1550nm Wavelength, 40km.
AA1419030-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1570nm Wavelength, 40km.
AA1419031-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1590nm Wavelength, 40km.
AA1419032-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1610nm Wavelength, 40km.
AA1419033-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1470nm Wavelength, 70km.
AA1419034-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1490nm Wavelength, 70km.
AA1419035-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1510nm Wavelength, 70km.
AA1419036-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1530nm Wavelength, 70km.
AA1419037-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1550nm Wavelength, 70km.
AA1419038-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1570nm Wavelength, 70km.
AA1419039-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1590nm Wavelength, 70km.
AA1419040-E5	1-port 1000BaseCWDM Small Form Factor Pluggable GBIC (mini-GBIC, connector type: LC) - 1610nm Wavelength, 70km.
AL2511001-E6	Ethernet Routing Switch 2500 Rack Mount Kit (Spare).

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