



PartnerDirect

# Campus LAN switching

## Quick reference guide



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### Small business and campus edge (Layer 2 switching)

Series	2800 series				3500 series				N2000 series			
Overview	Quiet and simple to manage for small offices connecting PCs and peripherals at faster Gigabit speeds.				Entry-level switch connectivity where full management capabilities and PoE are priority over speed.				Powerful and economical 1/10GbE switches providing efficient Layer 2+ access for personal computers, entry-level servers and network devices.			
Models (all sized 1RU)	2808	2816	2824	2848	3524	3548	3524P	3548P	N2024	N2048	N2024P	N2048P
<b>Performance</b>												
Switch capacity (Gbps)	16	32	48	96	13	18	13	18	172	220	172	220
Forwarding capacity (Mbps)	12	24	36	71	9	13	9	13	128	164	128	164
Buffer size	128KB				128KB				4MB	4MB	4MB	4MB
<b>Ports</b>												
10/100/1000 BASE-T	8	16	24	48	24 or 48 (10/100 only) and 2 (1000 only)				24	48	24	48
1GbE (SFP)	-	-	2	4	2				-			
10GbE	-				-				2 SFP+ (auto-negotiate 1/10Gb)			
Expansion module slots	-				-				-			
Power-over-Ethernet ports	-				-	-	24 PoE	48 PoE	-	-	24 PoE+	48 PoE+
<b>Power and cooling</b>												
Power consumption (watts)	7	9	14	24	15	19	33	38	42.9	53.9	913	1738
AC power supplies	One				One				One			
Redundant power	N/A				External RPS-600		External EPS-470		External RPS-720		External MPS-1000	
Airflow	Fanless		IO panel to PSU		IO panel to PSU				IO panel to PSU			
<b>Features</b>												
Stacking	N/A				Up to 8 using SFP port				Up to 12 using dedicated ports			
VLANs	64				256				4094			
VLAN support	Voice VLAN, Private Edge VLAN, GVRP				Voice VLAN, Private Edge VLAN, GVRP				Voice VLAN, Private Edge VLAN, Protocol-based VLANs, Guest VLANs, GVRP, 802.1x Auto VLAN			
Layer 2 and 3	Layer 2 only				Layer 2 only				Layer 2+ with static routes and RIPv1/v2			
IPv4/IPv6 routing	IPv4 only, no routing				IPv4 only, no routing				IPv4/IPv6, static routes only			
Multicast support	IGMP v2 snooping				IGMP v2 snooping				IGMP v1/2/3 snooping and querier			
Rapid deployment	N/A				N/A				Deploy switch configuration files, stacking commands, and firmware updates by simply inserting a USB device into the port.			
iSCSI optimisation	N/A				N/A				N/A			
<b>Management and security</b>												
Switch security	Switch access password protection. Restricted IP address. RADIUS support, 802.1x port-based authentication				Strong passwords, password masking, management access control-privilege levels. RADIUS and TACACS+ support, 802.1x port-based authentication							
SNMP support	SNMPv1/2				SNMPv1/2/3							
sFlow	N/A				N/A				Yes			
Management	Web-managed switch with limited CLI				GUI access via http/https. CLI via console, Telnet, SSH							



When we say "Lifetime," we mean it.

All the switches in this guide are backed by an industry-leading, Lifetime Warranty which guarantees Basic Hardware Service (hardware repair or replacement) for as long as your customers own the product.\*

\*Repair or replacement does not include configuration or other advanced service and support provided by Dell ProSupport Services. Details: [Dell.com/LifetimeWarranty](http://Dell.com/LifetimeWarranty)

### Network management

As your customers' infrastructures get larger and more complex, it can be a real headache to keep track of every device in their networks. They need to know the status of those devices, how they are performing, and have the ability to manage their configuration for optimal performance. **OpenManage Network Manager** allows your customers to view complete physical and logical inventories of their networks, get detailed connectivity information of each device and automate network functions. **Let them try it free.** [Dell.com/networkmanager](http://Dell.com/networkmanager)

### Network services

Most organisations benefit from additional levels of support to protect their IT investment and maximise productivity. Choose:

- Consulting services
- Deployment services
- Managed services
- Support services

Whether your customers are seeking basic product support or complete IT outsourcing, Dell can deliver services based on their needs. Offer them a free business consultation at [Dell.com/networkconsulting](http://Dell.com/networkconsulting)

	1/10GbE (Layer 2 and 3 switching)					10/40GbE			
Series	N3000 series					N4000 series			
Overview	Power efficient and resilient 1/10GbE switches with advanced Layer 3 distribution and dense PoE+ for small to medium-sized businesses and office wiring closets.					High-density, power-efficient and flexible 1/10/40GbE switches for large enterprise campus distribution and small network cores.			
Models (all sized 1RU)	N3024	N3048	N3024F	N3024P	N3048P	N4032	N4032F	N4064	N4064F
<b>Performance</b>									
Switch capacity (Gbps)	212	260	212	212	260	640		1280	
Forwarding capacity (Mpps)	158	193	158	158	193	476		952	
Buffer size	4MB					9MB			
<b>Ports</b>									
10/100/1000 BASE-T	24	48	2 combo	24	48	–	–	–	–
1GbE (SFP)	2 combo	2 combo	24	2 combo	2 combo	–	–	–	–
10GbE	2 fixed SFP+ and 2 modular (auto-negotiate 1/10Gb)					24 (up to 32 using 2 QSFP ports and cables)		48 (up to 64 using 4 QSFP ports and cables)	
40GbE (QSFP+)	–					2 using module		2 built-in (up to 4 using module)	
Expansion module slots	1 slot with 2 optional modules: 2 port SFP+, 2 port 10GBASE-T					1 slot with 3 optional modules: 2 port QSFP+, 4 port SFP+, 4 port 10GBASE-T			
Power-over-Ethernet ports	–			24 PoE+	48 PoE+	–			
<b>Power and cooling</b>									
Power consumption (watts)	52.8	74.8	67.1	1287	2145	240	176	395	220
AC power supplies	2 hot-swappable power supply bays, 1 PSU included					2 hot-swappable power supply bays, 2 PSUs included			
Redundant power	Optional (internal)			Yes, dependent upon configuration		Yes, built-in			
Airflow	IO panel to PSU								
<b>Features</b>									
Stacking	Stacks up to 12 using dedicated ports					Stacks up to 12 using 10Gb or 40Gb user ports			
VLANs	4094								
VLAN support	Voice VLAN, Private Edge, Protocol and MAC-based, GVRP								
Layer 2 and 3	Layer 2 and 3 with RIPv1/v2, OSPFv1/v2/v3, VRRP, LLDP-Med, static routes								
IPv4/IPv6 routing	Yes								
Multicast support	IGMP v1/v2/v3, IGMP proxy, IGMP snooping and querier, DVMRP, PIM-DM, PIM-SM								
Rapid deployment	Ready rails, deploy switch configuration files, stacking commands and firmware updates by simply inserting a USB device into the port.								
iSCSI optimisation	iSCSI aware (detect and prioritise iSCSI traffic into pre-defined QoS); iSCSI auto-configuration (switch configuration routine automatically sets up and optimises performance with Dell EqualLogic storage arrays)								
<b>Management and security</b>									
Switch security	Strong passwords, password masking, management access control - privilege levels RADIUS and TACACS+ support, 802.1x port-based authentication								
SNMP support	SNMPv1/2/3								
sFlow	Yes								
Management	GUI access via http/https. CLI via console, Telnet, SSH								

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