#### NT24k<sup>®</sup> Modular Managed Gigabit Ethernet Switches

- > Hot swappable modules with Fast Ethernet and Gigabit configurations
- > Robust remote monitoring with N-View™ monitoring technology
- > Smart plug-and-play operation
- > DIN-rail and rackmount options
- > Extreme environment specifications



				FAST ETHERNET	GIG	ABIT ETHER	NET	
MODEL NUMBER	ТҮРЕ	POWER OPTIONS	TOTAL PORTS	100 FIBER	10/100/ 1000 COPPER	1000 FIBER	GIG SFP	OPERATING TEMP
NT24k-DC1	Managed	Single 18-49VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 85°C
NT24k-DC2	Managed	Dual 18-49VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 85°C
NT24k-AC1	Managed	Single 90-264VAC/ 90-300VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 85°C
NT24k-AC2	Managed	Dual 90-264VAC/ 90-300VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 85°C
NT24k-AC1-DC1	Managed	Single 90-264VAC/ 90-300VDC & 18-49VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 85°C
NT24k-DR16-DC	Managed	Redundant 18-49VDC	Up to 16	Up to 16	Up to 16	Up to 16	Up to 16	-40° to 75°C
NT24k-DR16-AC	Managed	90-264VAC/ 90-300VDC	Up to 16	Up to 16	Up to 16	Up to 16	Up to 16	-40° to 75°C
NT24k-DR24-DC	Managed	Redundant 18-49VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 75°C
NT24k-DR24-AC	Managed	90-264VAC/ 90-300VDC	Up to 24	Up to 24	Up to 24	Up to 24	Up to 24	-40° to 75°C

SFP ports support 100Base or 1000Base SFP transceivers, which are sold separately. Low-voltage power supplies feature redundant power inputs.

#### **Compact NT24k Managed Switches**

- > Fast Ethernet, Gigabit, fiber and SFP models
- > Robust remote monitoring with N-View monitoring technology
- > Smart plug-and-play operation
- > Extreme environment specifications



			FAST ETHERNET	GIGABIT ETHERNET				
MODEL NUMBER	ТҮРЕ	TOTAL PORTS	100 FIBER	10/100/1000 COPPER	1000 FIBER	GIG SFP	MOUNTING & CASE	OPERATING TEMP
NT24k-8TX	Managed	8	-	8	-	-	DIN-Rail – Metal	-40° to 85°C
NT24K-10FX2	Managed	10	2	8	-	-	DIN-Rail – Metal	-40° to 85°C
NT24k-10GX2	Managed	10	-	8	2	-	DIN-Rail – Metal	-40° to 85°C
NT24k-11FX3	Managed	11	3	8	-	-	DIN-Rail – Metal	-40° to 85°C
NT24k-11GX3	Managed	11	-	8	3	-	DIN-Rail – Metal	-40° to 85°C
NT24k-12FX4	Managed	12	4	8	-	-	DIN-Rail – Metal	-40° to 85°C
NT24k-12GX4	Managed	12	-	8	4	-	DIN-Rail – Metal	-40° to 85°C
NT24k-12SFP-DM4	Managed	12	-	8	-	4	DIN-Rail – Metal	-40° to 85°C
NT24k-14FX6	Managed	14	6	8	-	-	DIN-Rail – Metal	-40° to 85°C
NT24k-14GX6	Managed	14	-	8	6	-	DIN-Rail – Metal	-40° to 85°C
NT24k-16TX	Managed	16	-	16	-	-	DIN-Rail – Metal	-40° to 85°C

SFP ports support 100Base or 1000Base SFP transceivers, which are sold separately.

Multimode and singlemode options available. FX models available with SC or ST connectors; GX models available with SC style connectors.

#### 700 & 7000 Managed Ethernet Switches

- > Plug-and-play deployment with IGMP auto-configuration
- > N-View monitoring provides real-time switch diagnostics
- > Ideally suited to use as N-Ring or N-Link manager



				FAST ET	HERNET	GIGABIT ETHERNET			
N	IODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	10/100/ 1000 COPPER	GIG SFP	MOUNTING & CASE	OPERATING TEMP
	708TX	Managed	8	8	-	-	-	DIN-Rail – Metal	-40° to 85°C
	708FX2	Managed	8	6	2	-	-	DIN-Rail – Metal	-40° to 85°C
	709FX*	Managed	9	8	1	-	-	DIN-Rail – Metal	-40° to 70°C
7	710FX2*	Managed	10	8	2	-	-	DIN-Rail – Metal	-40° to 70°C
0	711FX3*	Managed	11	8	3	-	-	DIN-Rail – Metal	-40° to 70°C
0	712FX4*	Managed	12	8	4	-	-	DIN-Rail – Metal	-40° to 70°C
	714FX6	Managed	14	8	6	-	-	DIN-Rail – Metal	-40° to 70°C
	716TX	Managed	16	16	-	-	-	DIN-Rail – Metal	-40° to 70°C
	716FX2	Managed	16	14	2	-	-	DIN-Rail – Metal	-40° to 70°C
	7010TX	Managed	10	8	-	-	Up to 2	DIN-Rail – Metal	-40° to 70°C
	7012FX2*	Managed	12	8	2	-	Up to 2	DIN-Rail – Metal	-40° to 70°C
7	7018TX	Managed	18	16	-	-	Up to 2	DIN-Rail – Metal	-40° to 70°C
0	7018FX2	Managed	18	14	2	-	Up to 2	DIN-Rail – Metal	-40° to 70°C
0	7026TX	Managed	26	24	-	-	Up to 2	Rackmount – Metal	-40° to 80°C
	7026TX-AC	Managed	26	24	-	-	Up to 2	Rackmount – Metal	-40° to 80°C
	7506GX2 (All Gigabit)	Managed	6	-	-	4	Up to 2	DIN-Rail – Metal	-40° to 80°C
	7900 (Modular)	Managed	26	Up to 24	Up to 16	-	Up to 2	DIN-Rail – Metal	-20° to 70°C

\*KEMA approved IEC 61850-3 and IEEE 1613 HV models available.

Fiber models available in multimode and singlemode configurations with SC or ST fiber connectors.

SFP ports support 1000Base SFP transceivers, which are sold separately.

#### **SLX Managed Ethernet Switches**

- > Versatile networking solutions with copper and fiber models
- > Real-time Modbus over Ethernet monitoring
- > Fast Ethernet and Gigabit port options
- > DIN-rail or panel mounting options



			FAST ET	FAST ETHERNET GIGABIT ETHERNET				
MODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	10/100/1000 COPPER	GIG SFP	MOUNTING & CASE	OPERATING TEMP
SLX-5MS-1	Managed	5	5	-	-	-	DIN-Rail – Metal	-40° to 75°C
SLX-5MS-4/5	Managed	5	3	2	-	-	DIN-Rail – Metal	-40° to 75°C
SLX-5MS-MDM-1	Managed	5	5	-	-	-	DIN-Rail – Metal	-40° to 75°C
SLX-8MS-1	Managed	8	8	-	-	-	DIN-Rail – Metal	-40° to 75°C
SLX-8MS-4/5/8/9	Managed	8	4 or 6	2 or 4	-	-	DIN-Rail – Metal	-40° to 75°C
SLX-8MG-1 (All Gigabit)	Managed	8	-	-	8	Up to 4 Combo Ports	DIN-Rail – Metal	-40° to 75°C
SLX-10MG-1	Managed	10	7	-	3	Up to 2 Combo Ports	DIN-Rail – Metal	-40° to 75°C
SLX-16MS-1	Managed	16	16	-	-	-	DIN-Rail – Metal	-40° to 75°C
SLX-18MG-1	Managed	18	16	-	2	Up to 2 Combo Ports	DIN-Rail – Metal	-40° to 75°C

Fiber models available in multimode and singlemode configurations with SC or ST fiber connectors. SFP ports support 100Base or 1000Base SFP transceivers, which are sold separately.

## **Advanced Managed Ethernet Switches**

Red Lion's advanced managed industrial Ethernet switches offer powerful enterprise-class networking with security options that prevent unauthorized access and enable policy enforcement. These powerful switches provide QoS traffic classification and sophisticated multicast controls, reducing traffic and ensuring real-time message delivery. The flexible industrial design is built to support the harshest environments.



#### **EL Advanced Management Ethernet Switches**

- > Layer 3 functionality with enterprise class networking features
- > Hardened enclosure for harsh industrial applications
- > Up to 10G ports for high-bandwidth backhaul
- > Advanced security control



				GIGABIT ETHERNET			
MODEL NUMBER	ТҮРЕ	POWER OPTIONS	TOTAL PORTS	10/100/1000 COPPER	GIGABIT SFP	10 GIG	OPERATING TEMP
EL326-DO-1*	Managed – Layer 3	Single 18-59 VDC	26	24	Up to 4 SFP (4 Combo)	Up to 2	-35° to 75°C
EL326-DD-1*	Managed – Layer 3	Dual 18-59 VDC	26	24	Up to 4 SFP (4 Combo)	Up to 2	-35° to 75°C
EL326-AO-1*	Managed – Layer 3	Single 85-264 VAC or 90-300 VDC	26	24	Up to 4 SFP (4 Combo)	Up to 2	-35° to 80°C
EL326-AA-1*	Managed – Layer 3	Dual 85-264 VAC or 90-300 VDC	26	24	Up to 4 SFP (4 Combo)	Up to 2	-35° to 80°C

\*Rackmount - Metal

SFP ports support 100Base or 1000Base SFP transceivers, which are sold separately.

# **Monitored Ethernet Switches**

Red Lion's monitored industrial Ethernet switches provide network performance monitoring with Modbus or N-View monitoring technology. These rugged, compact switches are built for mission-critical applications and provide cost-effective network monitoring options that can be integrated directly into any industrial control system.

- > Layer 2 unmanaged industrial switches
- > Network performance monitoring via Modbus or N-View technology
- > Versatile networking solutions
- > Copper and fiber port configurations
- > Hardened for the toughest applications



#### **Monitored Ethernet Switch Comparison**

	HAZARDOUS	IS LOCATION MARITIME		SUBSTATION					
SWITCH MODELS	UL CLASS 1, DIVISION 2	ATEX	ABS	IEEE 1613	MONITORING	ADVANCED FEATURES	16KV SURGE SUPPRESSION	REDUNDANT POWER	HOUSING MATERIAL
500-A Process Control	Х	Х	Х	Х	N-View	Auto IGMP	Х	Х	Metal
500-N Monitored	Х	Х	Х	×	N-View		Х	Х	Metal
300-N Monitored	Х	Х	Х	0	N-View		Х	Х	Metal
SLX Monitored	Х	Х			Modbus	RTR		Х	Metal
SL Monitored	Х	Х			Modbus	RTR		Х	Lexan
Legend: X - All models O - Som		me models	RTR - I	Real-Time Ring					

#### **500-A Monitored Process Control Switches**

- > Advanced management features include IGMP snooping, VLAN, QoS and Port Mirroring
- > N-View monitoring provides real-time switch diagnostics
- > Rugged industrial DIN-rail and rackmount options



			FAST ETHERNET			
MODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	MOUNTING & CASE	OPERATING TEMP
508TX-A	Process Control	8	8	-	DIN-Rail – Metal	-40° to 85°C
508FX2-A	Process Control	8	6	2	DIN-Rail – Metal	-40° to 85°C
509FX-A	Process Control	9	8	1	DIN-Rail – Metal	-40° to 85°C
516TX-A	Process Control	16	16	-	DIN-Rail – Metal	-40° to 85°C
517FX-A	Process Control	17	16	1	DIN-Rail – Metal	-40° to 85°C
524TX-A	Process Control	24	24	-	Rackmount – Metal	-40° to 85°C
526FX2-A	Process Control	26	24	2	Rackmount – Metal	-40° to 85°C

#### 300 & 500 Monitored Fast Ethernet Switches

- > High reliability in industrial applications
- > Plug-and-play operation
- > N-View monitoring provides real-time switch diagnostics





				FAST ET	HERNET		
N	IODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	MOUNTING & CASE	OPERATING TEMP
	302MC-N	Monitored	2	1	1	DIN-Rail – Metal	-40° to 70°C
	304TX-N	Monitored	4	4	-	DIN-Rail – Metal	-40° to 70°C
	305FX-N	Monitored	5	4	1	DIN-Rail – Metal	-40° to 70°C
	306TX-N	Monitored	6	6	-	DIN-Rail – Metal	-40° to 70°C
3 0	306FX2-N	Monitored	6	4	2	DIN-Rail – Metal	-40° to 70°C
ŏ	308TX-N	Monitored	8	8	-	DIN-Rail – Metal	-40° to 70°C
	308FX2-N	Monitored	8	6	2	DIN-Rail – Metal	-40° to 85°C
	309FX-N	Monitored	9	8	1	DIN-Rail – Metal	-40° to 85°C
	316TX-N	Monitored	16	16	-	DIN-Rail – Metal	-40° to 85°C
	317FX-N	Monitored	17	16	1	DIN-Rail – Metal	-40° to 85°C
	508TX-N	Monitored	8	8	-	DIN-Rail – Metal	-40° to 85°C
	508FX2-N	Monitored	8	6	2	DIN-Rail – Metal	-40° to 85°C
5	509FX-N	Monitored	9	8	1	DIN-Rail – Metal	-40° to 85°C
0	516TX-N	Monitored	16	16	-	DIN-Rail – Metal	-40° to 85°C
0	517FX-N	Monitored	17	16	1	DIN-Rail – Metal	-40° to 85°C
	524TX-N	Monitored	24	24	-	Rackmount – Metal	-40° to 85°C
	526FX2-N	Monitored	26	24	2	Rackmount – Metal	-40° to 85°C

Fiber models available in multimode and singlemode configurations with SC or ST fiber connectors.

#### **SL & SLX Fast Ethernet Ring Switches**

- > Fast, fault-tolerant Real-Time Ring network redundancy
- > Pre-configured for plug-and-play ring functionality
- > Redundant power inputs
- > Real-time Modbus over Ethernet monitoring



			FAST ET	HERNET		
MODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	MOUNTING & CASE	OPERATING TEMP
SL-6RS-1	Ring	6	6	-	DIN-Rail – Lexan	-40° to 60°C
SL-6RS-4/5	Ring	6	4	2	DIN-Rail – Lexan	-40° to 60°C
SLX-6RS-1	Ring	6	6	-	DIN-Rail – Metal	-40° to 85°C
SLX-6RS-4/5	Ring	6	4	2	DIN-Rail – Metal	-40° to 85°C

### **Unmanaged Ethernet Switches**

Red Lion's industrial unmanaged Ethernet switches offer powerful network performance with plug-and-play functionality. With an endless range of port options, these unmanaged switches are set to tackle the demands of industrial data acquisition, control and Ethernet I/O applications.

- > Compact IEEE 802.3 Layer 2 industrial switches
- > Automatic speed, duplex and cable sensing
- > Designed for use in mission-critical applications
- > Plug-and-play functionality

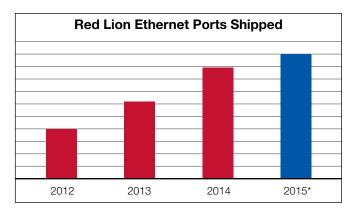


#### **Unmanaged Ethernet Switch Comparison**

	HAZARDOUS	LOCATION	MAR	TIME	SUBSTATION	RAIL	TRAFFIC			
SWITCH MODELS	UL CLASS 1, DIVISION 2	ATEX	ABS	DNV	IEEE 1613	EN 50155	NEMA TS1/TS2	JUMBO FRAME	M12 CONNECTORS	HOUSING MATERIAL
100 Unmanaged	Х	Х	Х	0		0			0	Metal
300 Unmanaged	Х	Х	Х		0					Metal
500 Unmanaged	Х	Х	Х		Х					Metal
1000 Unmanaged	Х	0	Х	0	0	Х	0	0		Metal
SLX Unmanaged	Х	Х	Х					0		Metal
SL Unmanaged	Х	Х	Х							Lexan
Legend:	X - All models	0 -	Some models							

### **Industrial Ethernet & the IIoT**

Building on the foundation of the Internet of Things, the Industrial Internet of Things (IIoT) promises significant returns for businesses looking to better connect and share data between disparate devices. With potential returns achieved through greater efficiency, process improvements and preventative maintenance, Red Lion offers an array of rugged, reliable industrial Ethernet switches to meet varying IIoT requirements. And the number of Ethernet ports shipped continues to grow year over year as more and more organizations turn to Red Lion.



\*2015 data is forecasted

### 100, 300 & 500 Unmanaged Fast Ethernet Switches

- > Compact, rugged, all-metal enclosure
- > Wide operating temperature range
- > Redundant power inputs





				FAST ET	HERNET		
N	IODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	MOUNTING & CASE	OPERATING TEMP
	102MC	Unmanaged	2	1	1	DIN-Rail – Metal	-40° to 80°C
	104TX	Unmanaged	4	4	-	DIN-Rail – Metal	-40° to 80°C
	105TX	Unmanaged	5	5	-	DIN-Rail – Metal	-40° to 80°C
	105TX-SL	Unmanaged	5	5	-	DIN-Rail – Metal	-40° to 85°C
	105FX	Unmanaged	5	4	1	DIN-Rail – Metal	-40° to 70°C
1	106FX2	Unmanaged	6	4	2	DIN-Rail – Metal	-40° to 70°C
ŏ	108TX	Unmanaged	8	8	-	DIN-Rail – Metal	-40° to 70°C
	110FX2	Unmanaged	10	8	2	DIN-Rail – Metal	-40° to 80°C
	111FX3	Unmanaged	11	8	3	DIN-Rail – Metal	-40° to 80°C
	112FX4	Unmanaged	12	8	4	DIN-Rail – Metal	-40° to 80°C
	114FX6	Unmanaged	14	8	6	DIN-Rail – Metal	-40° to 80°C
	116TX	Unmanaged	16	16	-	DIN-Rail – Metal	-40° to 85°C
	302MC	Unmanaged	2	1	1	DIN-Rail – Metal	-40° to 70°C
	304TX	Unmanaged	4	4	-	DIN-Rail – Metal	-40° to 70°C
	305FX	Unmanaged	5	4	1	DIN-Rail – Metal	-40° to 70°C
	306TX	Unmanaged	6	6	-	DIN-Rail – Metal	-40° to 70°C
3 0	306FX2	Unmanaged	6	4	2	DIN-Rail – Metal	-40° to 70°C
0	308TX	Unmanaged	8	8	-	DIN-Rail – Metal	-40° to 70°C
	308FX2	Unmanaged	8	6	2	DIN-Rail – Metal	-40° to 85°C
	309FX	Unmanaged	9	8	1	DIN-Rail – Metal	-40° to 85°C
	316TX	Unmanaged	16	16	-	DIN-Rail – Metal	-40° to 85°C
	317FX	Unmanaged	17	16	1	DIN-Rail – Metal	-40° to 85°C
	508TX	Unmanaged	8	8	-	DIN-Rail – Metal	-40° to 85°C
	508FX2	Unmanaged	8	6	2	DIN-Rail – Metal	-40° to 85°C
5	509FX	Unmanaged	9	8	1	DIN-Rail – Metal	-40° to 85°C
0	516TX	Unmanaged	16	16	-	DIN-Rail – Metal	-40° to 85°C
0	517FX	Unmanaged	17	16	1	DIN-Rail – Metal	-40° to 85°C
	524TX	Unmanaged	24	24	-	Rackmount – Metal	-40° to 85°C
	526FX2	Unmanaged	26	24	2	Rackmount – Metal	-40° to 85°C

#### **1000 & SLX Unmanaged Gigabit Ethernet Switches**

- > Plug-and-play unmanaged operation
- > Gigabit-speed port options
- > Compact, rugged, all-metal enclosures



			GIGABIT ETHERNET			
MODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100/1000 COPPER	GIG SFP	MOUNTING & CASE	OPERATING TEMP
1002MC	Unmanaged	2	1	1 SFP	DIN-Rail – Metal	-40° to 85°C
1003GX2	Unmanaged	3	1	2 SFP	DIN-Rail – Metal	-40° to 85°C
1005TX	Unmanaged	5	5	-	DIN-Rail – Metal	-40° to 85°C
1008TX	Unmanaged	8	8	-	DIN-Rail – Metal	-40° to 85°C
SLX-3EG-1SFP	Unmanaged	3	2	1 SFP	DIN-Rail – Metal	-40° to 85°C
SLX-5EG-1	Unmanaged	5	5 (4 PoE)	-	DIN-Rail – Metal	-40° to 85°C
SLX-5EG-2SFP	Unmanaged	5	3 PoE	2 SFP	DIN-Rail – Metal	-40° to 85°C

SFP transceivers sold separately.

#### **SL & SLX Unmanaged Fast Ethernet Switches**

- > Mixed copper and fiber port options
- > Compact lightweight Lexan or all-metal housing
- > Redundant power inputs



				FAST ETHERNET			
r	IODEL NUMBER	ТҮРЕ	TOTAL PORTS	10/100 COPPER	100 FIBER	MOUNTING & CASE	OPERATING TEMP
SL	SL-2ES-2/3	Unmanaged	2	1	1	DIN-Rail – Lexan	-10° to 60°C
	SL-5ES-1	Unmanaged	5	5	-	DIN-Rail – Lexan	-40° to 60°C
	SL-5ES-2/3	Unmanaged	5	4	1	DIN-Rail – Lexan	-40° to 60°C
	SL-6ES-4/5	Unmanaged	6	4	2	DIN-Rail – Lexan	-40° to 60°C
	SL-8ES-1	Unmanaged	8	8	-	DIN-Rail – Lexan	-40° to 60°C
	SL-9ES-2/3	Unmanaged	9	8	1	DIN-Rail – Lexan	-40° to 60°C
SLX	SLX-3ES-2/3	Unmanaged	3	2	1	DIN-Rail – Metal	-40° to 85°C
	SLX-5ES-1	Unmanaged	5	5	-	DIN-Rail – Metal	-40° to 85°C
	SLX-5ES-2/3	Unmanaged	5	4	1	DIN-Rail – Metal	-40° to 85°C
	SLX-6ES-4/5	Unmanaged	6	4	2	DIN-Rail – Metal	-40° to 85°C
	SLX-8ES-1	Unmanaged	8	8	-	DIN-Rail – Metal	-40° to 85°C
	SLX-8ES-6/7	Unmanaged	8	5	3	DIN-Rail – Metal	-40° to 85°C
	SLX-9ES-2/3	Unmanaged	9	8	1	DIN-Rail – Metal	-40° to 85°C