



Automation, Ethernet & Wireless Solutions

Sixnet Industrial Series



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Sixnet Automation Series

Sixnet rugged RTUs and I/O provide a simple yet powerful means to reliably monitor and control remote sites around the clock in the harshest environments. Our compact automation systems can start small and grow as needs increase without requiring hardware replacement. “Best of both worlds” programming combines Windows ease of use with the future-proof security of an embedded Linux OS.



Industrial RTUs VersaTRAK & SixTRAK

- **Rugged environmental ratings**
 - UL, CSA, CE, ABS Marine and Zone 2 rated
 - Supports temperatures ranging from -40 to 70° C
- **Intelligent data logging and control in one device**
 - Combine PLC, data logger, industrial computer and communications gateway functionality
 - Based on non-proprietary industry standards and open Linux operating system
- **Programmable control flexibility**
 - C language
 - ISaGRAF
- **Works with a variety of process quality I/O modules**
 - I/O expansion
 - Peer-to-peer I/O transfer capability
- **Many communication ports**
 - Open protocols enable advanced communication
 - Modbus TCP/UDP/ASCII/RTU, IEC60870-5-101/104, DNP3, SNMP, Sixnet UDR

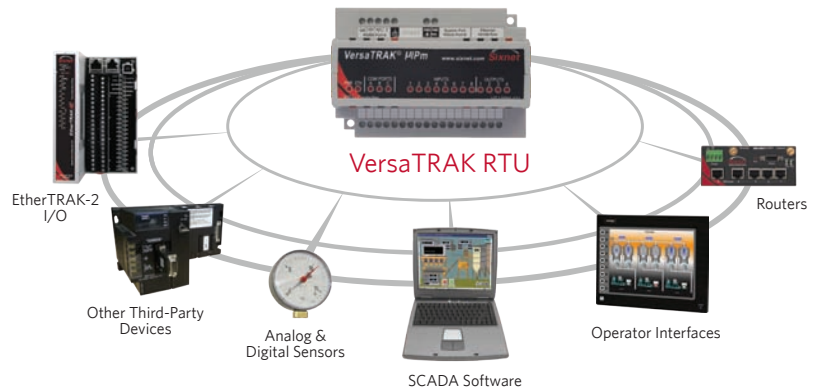


PART NUMBER	PORTS			ON-BOARD I/O				MEMORY		
	ETH	232	485	DI	DO	AI	AO	NVRAM	FLASH	DRAM
ST-IPM-6350	5	2	1	—	—	—	—	2M	128M	64M
VT-MIPM-245-D	1	2	2	12	4	8	2	512K	64M	32M
VT-MIPM-135-D	1	2	1	12	8	6	—	512K	64M	32M
VT-IPM2M-113-D	1	1	1	12	4	8	—	512K	32M	32M
VT-IPM2M-213-D	1	1	1	12	4	8	2	512K	32M	32M
VT-UIPM-431-H	1	2	1	8	4	2	—	512K	16M	16M

Programming & Configuration Software

Sixnet I/O Toolkit & ISaGRAF Open

- **Configure, program and maintain with familiar Windows interfaces**
 - Easy-to-use GUI provides system-wide view
 - Configuration wizards support data logging and alarming
 - Open programming software supports IEC61131-3 languages:
 - Sequential Function Chart
 - Ladder Diagram
 - Structured Text
 - Instruction List
 - Function Block Diagram
 - Flow Chart
- **Linux operating platform**
 - Transparent to users
 - Flexible, open architecture
 - Integrated Application Development Kit (IADK)
 - Web server capabilities



I/O Modules EtherTRAK-2

- **Rugged environmental ratings**
 - UL, CSA, CE, ABS Marine and Zone 2 rated
 - Supports temperatures ranging from -40 to 75° C
- **High-resolution I/O with a space saving design**
 - Up to 34 I/O channels
 - Web browser-based configuration/testing
 - Up to 1 ms I/O polling for fast updates
- **Networking adaptability**
 - Two Ethernet ports provide three communication modes: ring, pass-thru and two network
- **Industry standard protocols offer unparalleled reliability**
 - RS-485 port for polling Modbus devices
 - Support for Sixnet real-time ring
 - Peer-to-peer transfers
- **Hardware Features**
 - Redundant power ensures availability
 - Self-resetting fuses prevent short circuits
 - Hot swap capabilities reduce downtime

PART NUMBER*	DI	DO	AI	AO	DESCRIPTION
E2- OR EB- MIX24880-D	24	8	8	0	Combination I/O with one isolated input counter**
E2- OR EB- MIX24882-D	24	8	8	2	Combination I/O with two analog outputs**
E2- OR EB- 32DI24-D	32	—	—	—	32 inputs (10-30 VDC) including 16 multifunction counters
E2- OR EB- 16DI24-D	16	—	—	—	16 individually isolated 10-30 VAC/VDC with counters
E2- 16DIAC-D	16	—	—	—	16 individually isolated 120 VAC (nominal) inputs
E2- OR EB- 32DO24-D	—	32	—	—	High density discrete outputs (0.5 Amp each, 8 Amp total)
E2- OR EB- 16DO24-D	—	16	—	—	Individually isolated 1 Amp outputs with self-resetting fuses
E2- OR EB- 32AI20M-D	—	—	32	—	High density 16 bit 4-20 mA inputs with self-resetting fuses
E2- OR EB- 32AI10V-D	—	—	32	—	Voltage inputs (other ranges available as special order)
E2- OR EB- 16AI20M-D	—	—	16	—	16 channels 4-20 mA inputs with self-resetting fuses
E2- OR EB- 8AO20M-D	—	—	—	8	4-20 mA analog outputs
E2- OR EB- 16AI-8AO-D	—	—	16	8	16 4-20 mA analog inputs and 8 4-20 outputs
E2- OR EB- 10RTD-D	—	—	10RTD	—	RTD (100 Ohm platinum), -200 to 850° C plus
E2- OR EB-16ISOTC-D	—	—	16TC	—	Instrumentation thermocouples
E2- OR EB-16ISO20M-D	—	—	16	—	Isolated 4-20mA inputs

*EB part number prefix is for modules that include the optional PoE feature. Standard product part numbers begin with E2.

**24 maximum DIs are listed, 8 of which can be configured as either DI or DO. The discrete outputs are protected by self-resetting fuses.



Sixnet Ethernet Series



Sixnet industrial Ethernet switches combine enterprise-class performance with rugged reliability to provide a “best of both worlds” solution for many of today’s industrial applications. Our hardened switches are ideally suited for harsh and outdoor environments that include oil and gas, water/wastewater, power, transportation and other industries where real-time performance under extreme operating conditions is required.

Advanced ExtremeLine (EL) Layer 2 & 3 Ethernet Switches

- **Innovative enterprise-class networking in a rugged package**
 - Advanced security features prevent unauthorized access
 - QoS traffic classification ensures real-time message delivery
 - Sophisticated multicast controls reduce traffic
 - Built-in redundancy ensures quick failover
 - Powerful network management and plug-and-play functionality simplify deployment
 - DIN-rail and rack mount form factors



LAYER 2 PART NUMBER	TYPE	TOTAL PORTS	FAST ETHERNET		GIGABIT ETHERNET		INGRESS PROTECT	MOUNTING & CASE	OPERATING TEMP
			10 / 100	100 FIBER	10 / 100 / 1000	GIG FIBER			
EL228-AO-1 single universal AC/DC power input	Managed	28	up to 24	up to 26	4	up to 2	IP50	19" rack	-40 to 85° C
EL228-AA-1 dual universal AC/DC power inputs	Managed	28	up to 24	up to 26	4	up to 2	IP50	19" rack	-40 to 85° C
EL228-DO-1 single 18-75 VDC power input	Managed	28	up to 24	up to 26	4	up to 2	IP50	19" rack	-40 to 85° C
EL228-DD-1 dual 18-75 VDC power inputs	Managed	28	up to 24	up to 26	4	up to 2	IP50	19" rack	-40 to 85° C
EL212F-AC-V1 single universal AC/DC power input	Managed	12	up to 8	up to 12	up to 4	up to 4	IP40	DIN rail - metal	-40 to 85° C
EL212F-DC-V1 dual redundant 18-59 VDC power inputs	Managed	12	up to 8	up to 12	up to 4	up to 4	IP40	DIN rail - metal	-40 to 85° C

LAYER 3 PART NUMBER	TYPE	TOTAL PORTS	GIGABIT ETHERNET		OPTIONAL 10 GIG PORTS	INGRESS PROTECT	MOUNTING & CASE	OPERATING TEMP
			10 / 100 / 1000	GIG FIBER				
EL326-AO-1 single universal AC/DC power input	Managed	26	24	up to 4	up to 2	IP40	19" rack	-35 to 75° C
EL326-AA-1 dual universal VAC/VDC power inputs	Managed	26	24	up to 4	up to 2	IP40	19" rack	-35 to 75° C
EL326-DO-1 single 18-59 VDC power input	Managed	26	24	up to 4	up to 2	IP40	19" rack	-35 to 75° C
EL326-DD-1 dual 18-59 VDC power inputs	Managed	26	24	up to 4	up to 2	IP40	19" rack	-35 to 75° C

Standard SlimLine Plus (SLX) Ethernet Switches

- **Versatile networking solutions**
 - Managed, unmanaged, ring and PoE switches
- **Flexible deployment options**
 - 3 to 18 port DIN-rail style
 - Plug-and-play functionality works out of box
 - Fast redundant ring and mesh network support
- **Advanced features and security**
 - Configurable network management
 - Real-time data access and prioritization
 - Modbus monitoring capable
- **Hardened for the toughest applications**
 - Class I, Div 2 and Zone 2 hazardous locations



PART NUMBER	TYPE	TOTAL PORTS	FAST ETHERNET		GIGABIT ETHERNET		INGRESS PROTECT	MOUNTING & CASE	OPERATING TEMP
			10 / 100	100 FIBER	10 / 100 / 1000	GIG FIBER			
SLX-5MS-1	Managed	5	5	—	—	—	IP40	DIN rail - metal	-40 to 75° C
SLX-5MS-4/5	Managed	5	3	2	—	—	IP40	DIN rail - metal	-40 to 75° C
SLX-5MS-MDM-1	Managed	5	5	—	—	—	IP40	DIN rail - metal	-40 to 75° C
SLX-8MS-1	Managed	8	8	—	—	—	IP40	DIN rail - metal	-40 to 75° C
SLX-8MS-4/5/8/9	Managed	8	4 or 6	2 or 4	—	—	IP40	DIN rail - metal	-40 to 75° C
SLX-8MG-1	Managed	8	—	up to 4	8	up to 4	IP40	DIN rail - metal	-40 to 75° C
SLX-10MG-1	Managed	10	7	up to 2	3	up to 2	IP40	DIN rail - metal	-40 to 75° C
SLX-16MS-1	Managed	16	16	—	—	—	IP40	DIN rail - metal	-40 to 75° C
SLX-18MG-1	Managed	18	16	up to 2	2	up to 2	IP40	DIN rail - metal	-40 to 75° C
EB-5ES-PSE-1	Unmanaged	5	5 (4 PoE)	—	—	—	IP40	DIN rail - Lexan	-40 to 75° C
SLX-3ES-2/3	Unmanaged	3	2	1	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-3EG-1SFP	Unmanaged	3	—	—	2	1	IP40	DIN rail - metal	-40 to 85° C
SLX-5EG-1	Unmanaged	5	—	—	5	—	IP40	DIN rail - metal	-40 to 85° C
SLX-5ES-1	Unmanaged	5	5	—	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-5ES-2/3	Unmanaged	5	4	1	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-6ES-4/5	Unmanaged	6	4	2	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-8ES-1	Unmanaged	8	8	—	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-8ES-6/7	Unmanaged	8	5	3	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-9ES-2/3	Unmanaged	9	8	1	—	—	IP40	DIN rail - metal	-40 to 85° C
SLX-6RS-1	Ring	6	6	—	—	—	IP40	DIN rail - metal	-40 to 85° C

Light SlimLine (SL) Ethernet Switches

- **Trouble-free operation**
 - Ultra-reliable 1,000,000+ hours MTBF
 - Dual power inputs with industrial spike protection
- **Industrial indoor rated**
 - Class I, Div 2 and Zone 2 hazardous locations
- **Robust-edge devices**
 - Unmanaged and ring switches
- **Flexible deployment options**
 - 2 to 9 port DIN-rail or panel mount
 - Plug-and-play functionality works out of box



PART NUMBER	TYPE	TOTAL PORTS	FAST ETHERNET		GIGABIT ETHERNET		INGRESS PROTECT	MOUNTING & CASE	OPERATING TEMP
			10 / 100	100 FIBER	10 / 100 / 1000	GIG FIBER			
SL-2ES-2/3	Unmanaged	2	1	1	—	—	IP30	DIN rail - Lexan	-10 to 60° C
SL-5ES-1	Unmanaged	5	5	—	—	—	IP30	DIN rail - Lexan	-40 to 60° C
SL-5ES-2/3	Unmanaged	5	4	1	—	—	IP30	DIN rail - Lexan	-40 to 60° C
SL-6ES-4/5	Unmanaged	6	4	2	—	—	IP30	DIN rail - Lexan	-40 to 60° C
SL-8ES-1	Unmanaged	8	8	—	—	—	IP30	DIN rail - Lexan	-40 to 60° C
SL-9ES-2/3	Unmanaged	9	8	1	—	—	IP30	DIN rail - Lexan	-40 to 60° C
SL-6RS-1	Ring	6	6	—	—	—	IP30	DIN rail - Lexan	-40 to 60° C

Sixnet Wireless Series

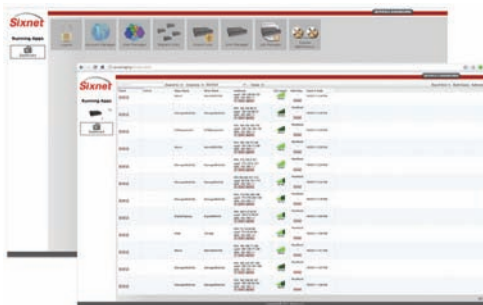
With a feature-rich suite of industrial wireless products, Red Lion offers the broadest range of M2M routers available on the market today. These solutions take advantage of low monthly cellular rates to provide remote site monitoring for a range of industrial applications. Wireless monitoring and control provides a simple, reliable and cost-effective alternative to conventional land line or WAN connectivity solutions. Additionally, standards-based, enterprise-class functionality enables secure, reliable wireless data access, anywhere, anytime.



Enterprise-Class Device Management & Monitoring

SixView Manager Web-Based Device Management Software

- **Remote device management and administration**
Helps reduce deployment cost
 - Configuration changes
 - Remote reboot
- **Mass configuration and auto provisioning tools**
Improves security and enables efficient, consistent updates
 - Firmware updates
 - VPN configuration
 - Firewall policy enforcement
- **Remote monitoring and reporting of key metrics**
Provides visibility and control to speed troubleshooting
 - Uptime
 - Utilization
 - Signal strength (RSSI)
 - Firmware version
 - ESN, MDN or IMEI
 - IP address



"Customers are able to manage a number of these devices at once, all from a single point of contact, by using Sixnet's enterprise-asset management software, SixView Manager."

— M2M Magazine

Industrial M2M Cellular IndustrialPro™ 6000 Routers

- **Uninterrupted, cost-effective communication for remote sites**
 - Rugged compact design optimizes space
 - Fully configurable router and firewall
 - Local web-based management and administration
 - Remote access from SCADA to PLCs and RTUs



PART NUMBER	PRODUCT LINE	SERIAL	ETHERNET	CELLULAR	POWER CONNECTOR
SN-6401-XX*	IndustrialPro	1	1	GSM EDGE/GPRS	DC powered
SN-6401EB-XX*	IndustrialPro	1	1	GSM EDGE/GPRS	PoE
SN-6401-XX-AC*	IndustrialPro	1	1	GSM EDGE/GPRS	AC adaptor
SN-6421-XX*	IndustrialPro	1	5	GSM EDGE/GPRS	DC adaptor
SN-6421-XX-AC*	IndustrialPro	1	5	GSM EDGE/GPRS	AC adaptor
SN-6600-XX**	IndustrialPro	1	1	CDMA EVDO REV A	Molex end connector cable
SN-6600-XX-AC**	IndustrialPro	1	1	CDMA EVDO REV A	AC adaptor
SN-6600-XX-MX**	IndustrialPro	1	1	CDMA EVDO REV A	AC adaptor with Molex end connector
SN-6601-XX**	IndustrialPro	1	1	CDMA EVDO REV A	DC powered
SN-6601EB-XX**	IndustrialPro	1	1	CDMA EVDO REV A	PoE
SN-6621-XX**	IndustrialPro	1	5	CDMA EVDO REV A	DC powered
SN-6621-XX-AC**	IndustrialPro	1	5	CDMA EVDO REV A	AC adaptor
SN-6800-XX***	IndustrialPro	1	1	HSPA/GSM	Molex end connector cable
SN-6800-XX-AC***	IndustrialPro	1	1	HSPA/GSM	AC adaptor
SN-6800-XX-MX***	IndustrialPro	1	1	HSPA/GSM	AC adaptor with Molex end connector
SN-6801-XX***	IndustrialPro	1	1	HSPA/GSM	DC powered
SN-6801EB-XX***	IndustrialPro	1	1	HSPA/GSM	PoE
SN-6821-XX***	IndustrialPro	1	5	HSPA/GSM	DC powered
SN-6821-XX-AC***	IndustrialPro	1	5	HSPA/GSM	AC adaptor

Industrial M2M Cellular RAM™ 6000 Routers

- **Secure, reliable Modbus communication for remote sites**
 - Modbus gateway
 - Enhanced security
 - I/O concentrator
 - Remote manageability



PART NUMBER	PRODUCT LINE	SERIAL	ETHERNET	CELLULAR	POWER CONNECTOR
RAM-6401-XX*	RAM	1	1	GSM EDGE/GPRS	DC powered
RAM-6401EB-XX*	RAM	1	1	GSM EDGE/GPRS	PoE
RAM-6401-XX-AC*	RAM	1	1	GSM EDGE/GPRS	AC adaptor
RAM-6421-XX*	RAM	1	5	GSM EDGE/GPRS	DC powered
RAM-6421-XX-AC*	RAM	1	5	GSM EDGE/GPRS	AC adaptor
RAM-6600-XX**	RAM	1	1	CDMA EVDO REV A	Molex end connector cable
RAM-6600-XX-AC**	RAM	1	1	CDMA EVDO REV A	AC adaptor
RAM-6600-XX-MX**	RAM	1	1	CDMA EVDO REV A	AC adaptor with Molex end connector
RAM-6601-XX**	RAM	1	1	CDMA EVDO REV A	DC powered
RAM-6601EB-XX**	RAM	1	1	CDMA EVDO REV A	PoE
RAM-6621-XX**	RAM	1	5	CDMA EVDO REV A	DC powered
RAM-6621-XX-AC**	RAM	1	5	CDMA EVDO REV A	AC adaptor
RAM-6800-XX***	RAM	1	1	HSPA/GSM	Molex end connector cable
RAM-6800-XX-AC***	RAM	1	1	HSPA/GSM	AC adaptor
RAM-6800-XX-MX***	RAM	1	1	HSPA/GSM	AC adaptor with Molex end connector
RAM-6801-XX***	RAM	1	1	HSPA/GSM	DC powered
RAM-6801EB-XX***	RAM	1	1	HSPA/GSM	PoE
RAM-6821-XX***	RAM	1	5	HSPA/GSM	DC powered
RAM-6821-XX-AC***	RAM	1	5	HSPA/GSM	AC adaptor

*XX supports any of the following: AT&T, Rogers or other GSM carriers **XX specify (BM) Bell Mobility, (ST) SaskTel, (SP) Sprint, (TE) TELUS, (VZ) Verizon

***XX specify (BM) Bell Mobility, (MTS) MTS Allstream, (ST) SaskTel, (TE) TELUS or (XX) which supports AT&T, Rogers or other GSM carriers



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CONNECT. MONITOR. CONTROL.

About

As the global experts in communication, monitoring and control for industrial automation, Red Lion has been delivering innovative solutions to customers for forty years. Our award-winning technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, Sixnet and N-Tron. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is a Spectris company.



TO LEARN MORE >>

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