

Westell® eSmartES™ ES8100 Series Industrial Managed Switch with SiteVu™



For over 15 years, Westell has been in the business of Ethernet switches and routers, and for over 30 years, Westell has been designing and building hardened transport delivery equipment. Westell has now combined these areas of expertise to develop the new eSmartAccess™ family of products.

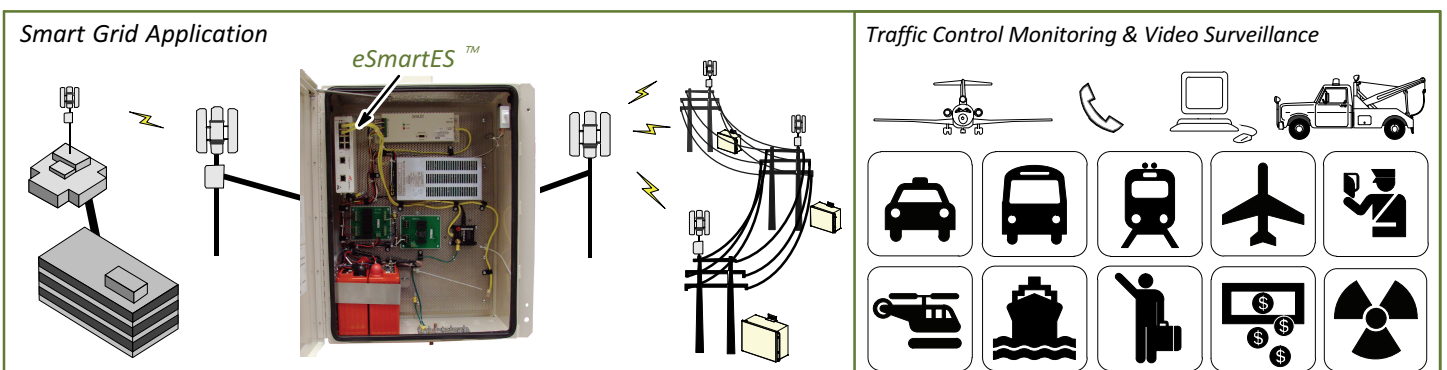
The second platform in the eSmartES™ family is the ES8100 series of Managed Ethernet EdgeSwitches. These managed switches are designed especially for “edge” applications, deploying the latest in reliability and security for harsh environments, on the perimeter of the network where Smart Grid and industrial devices are connected.

The eSmartES's *Westell Edge Operating System (WEOS)* features include SiteVu™, Secure Web Management GUI and CLI interfaces, SNMPv2,v3 management, 802.1p QoS Prioritization, Tag-based VLANs, IGMP Snooping and IGMP-L2 multicast management, port security, Link OAM (EFM 802.3ah), and network redundancy options, including STP, RSTP, and MSTP for fault recovery.

From four to eight 10/100Mb ports can be ordered in the ES8100 series. In the 8 port configuration, ports 7 and 8 are 10/100/1000Mb ports. Ports 7 and 8 can also be configured as optical FE -100FX or GigE ports populated with either a pair of STs, SCs, or LCs interfaces.

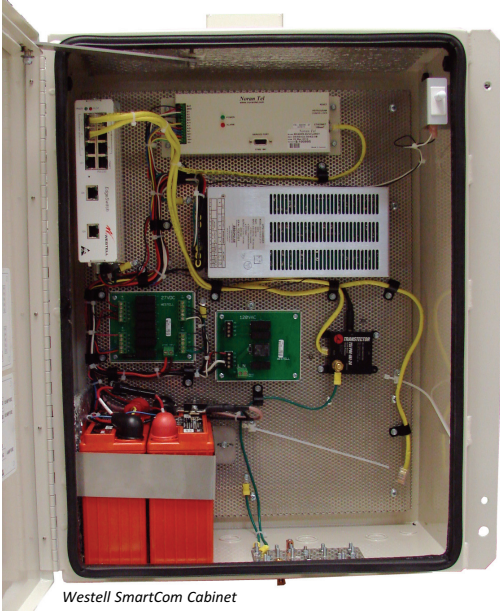
The ES8100 eSmartES switches are ideal for building a switched, hardened, Ethernet network infrastructure, connecting edge devices such as SCADA telemetry radios, Programmable Logic Controllers, and cameras with upstream switches or routers. Designed for use in industrial and heavy-duty outdoor applications such as power utility substations, video surveillance systems, and traffic control monitoring, the hardened ES8100 handles stressful workloads.

The ES8100 platform's industrial design features include an extended operating temperature range of -40 to +85°C (-40 to +185°F), redundant DC power of either 24Vdc or -48Vdc power supply inputs for high availability applications requiring dual power inputs, and provides a high level of immunity to electromagnetic interference and heavy electrical surges. The ES8100 is packaged in a rugged, galvanized steel enclosure that allows either backboard, DIN-rail, or wall mounting for efficient use of cabinet space. It can also be rack mounted in the optional 1RU rack mount bracket.



Westell® OSP eSmartES™ ES8100 Series Managed Ethernet Switch with SiteVu™

Product Specifications

Westell Edge Operating System (WEOS) Features		Westell eSmartES Ethernet Edge Switch	
● Simple plug-and-play operation - automatic learning, negotiation, and cross-over detection			
● MSTP (802.1Q) Multiple Spanning Tree network fault recovery			
● RSTP (802.1w) and Enhanced Rapid Spanning Tree network fault recovery (<5ms)			
● Quality of Service (802.1p) for real-time traffic			
● VLAN (802.1Q) with double tagging and GVRP support			
● Link aggregation (802.3ad)			
● Link OAM (802.3ah) EFM			
● IGMP Snooping for multicast filtering			
● Port Rate Limiting and Broadcast Storm Limiting			
Security Features			
● Multi-level user passwords			
● SSH/SSL encryption			
● Enable/disable ports			
● Port based network access control (802.1x)			
● VLAN (802.1Q) to segregate and secure network traffic			
● RADIUS centralized password management			
● SNMPv3 encrypted authentication and access security			
Management Tools		Power Supply Features	
● Web-based, Telnet, CLI management interfaces		● Voltage range: 20-56 Vdc	
● SNMP v1/v2/v3		● Dual (A/B) low voltage DC inputs	
● Remote Monitoring (RMON)		● 420mA max @ 24 Vdc	
● Rich set of diagnostics with logging and alarms		● Power consumption: 10W max	
		● Isolated power supply	
Switch Properties		Operation Environment & Physical Specifications	
● Switching method: Store & Forward		● Immunity to EMI and heavy electrical surges	
● Switching latency: 8 us (100Mbps)		- Meets IEEE 1613 class 1 (electric utility substations)	
● Switching bandwidth: 1.8Gbps		- Exceeds IEC 61850-3 (electric utility substations)	
● MAC addresses available: 8k		- Exceeds IEC 61800-3 (variable speed drive systems)	
● Priority Queues: 4		- Exceeds IEC 61000-6-2 (generic industrial)	
● Frame buffer memory: 1 Mbit		- Exceeds NEMA TS-2 (traffic control equipment)	
● Simultaneous VLANs: 4096		● Hazardous Location Certification: Class 1 Division 2	
● VLAN ID Range: 1 to 4094		● -40°C to +85°C operating temperature (no fans)	
● IGMP multicast groups: 256		● Weight: 1.91 pounds	
● Port rate limiting: From 64Kbps to 900 Mbps		● Dimensions (approx., as shown on front): 1.40" wide x 5.60" deep x 5.92" high	
● No head of line blocking			
Part Numbers & Ordering Information			
Part #	Description		
A90-ES8104	Hardened, 4-Port Managed Switch		
A90-ES8106	Hardened, 6-Port Managed Switch		
A90-ES8108	Hardened, 8-Port Managed Switch		
A90-ES8108G	Hardened, 8-Port Managed Switch with 2 GigE ports		
A90-ES8108G-SC2	Hardened, 8-Port Managed Switch with 2 SC optical GigE SM 1310nm, 20km ports		
A90-ES8108G-LC2	Hardened, 8-Port Managed Switch with 2 LC optical GigE SM 1310nm, 20km ports		
A90-ES8108-SC3	Hardened, 8-Port Managed Switch with 2 SC optical FE-100FX SM 1310nm, 30km ports		
A90-ES8108-LC3	Hardened, 8-Port Managed Switch with 2 LC optical FE-100FX SM 1310nm, 30km ports		



OSPLANT SYSTEMS, a Westell, Inc. Business Unit, is a leading provider of Next Generation Backhaul Systems, Outdoor Cabinets, Connectivity, Enclosures, Power Distribution Panels and Remote Monitoring Solutions.

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