iES26

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Intelligent 26 Port Managed Ethernet Switch IEC 61850 and IEEE 1613 Compliant

Features

- Suitable for Substation Automation Applications
- Rapid Network Recovery: iRing (recovery time <30ms up to 250 Ethernet Switches)
- iBridge is a unique feature that supports third party ring technologies
- MSTP/RSTP/STP (IEEE 802.1s/w/D)
- Secure ACL supported
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Port Trunking for bandwidth management
- SNMP v1/v2c/v3 support for secure network management
- Supports LLDP (Link Layer Discovery Protocol)
- Port lock to prevent access from unauthorized MAC addresses
- Event notification through Syslog, Email, SNMP trap, and Relay Output
- iManage Software Suite supports centralization management and is configurable via a Webbrowser,Telnet, Console (CLI)
- Isolated Dual Redundant Power Supply Inputs with 12-36VDC or 36-72VDC or 100-240VAC power supply range
- 19 inch rack mountable
- Up to 24x10/100Base-T(X) Ports
- 2 x 100 FX Ports SC or ST

56 BIT ENCRYPTION

RoHS Compliant

iS5 COMMUNICATIONS

SERVICES • SUPPORT • SECURITY • SOLUTIONS • SYSTEMS

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Introduction

The iES26 switch is a 26-port rack mount highly redundant Managed Ethernet Switch, designed for the demanding environments required for power substation and rolling stock applications. The iES26 complies with IEC61850-3 and IEEE1613 standards. With Ethernet Redundancy protocols such as iRing (recovery time <30ms with up to 250 Ethernet switches), iBridge, and MSTP/RSTP/STP (IEEE 802.1s/w/D), the iES26 can protect all mission-critical applications from network interruptions and temporary malfunctions to restore connectivity quickly. The iBridge technology allows these switches to provide a means to complement and inter-operate with most third party proprietary ring technologies. The iES26 switch can be managed centrally and conveniently by our powerful windows utility called the iManage Software Suite.

The iES26 switch provides a multi power, dual input, redundant design providing a combination of DC and/or AC inputs ensuring continuous operation. An IP-40 galvanized steel, fanless enclosure, and a wide operating temperature range of -40oC to +85oC to suit the harshest of environments. An additional relay output is provided for system alarm warning.

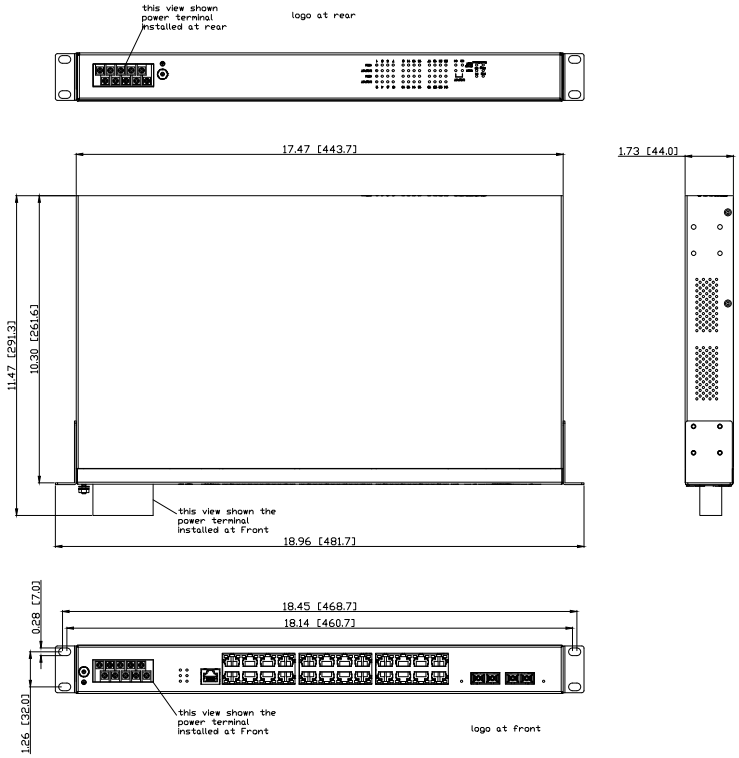
Specifications

Switch Model	iES26
Physical Ports	
10/100 Base-T(X) Ports in RJ45 Auto MDI/MDIX	24
100Base FX Ports	2 SC or ST
RS-232 Serial Console Port in back	RS-232 console cable. 9600bps, 8, N, 1
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control IEEE 802.3ad for LACP (Link Aggregation Control Protocol) IEEE 802.1D for STP (Spanning Tree Protocol) IEEE 802.1p for COS (Class of Service) IEEE 802.1Q for VLAN Tagging IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol) IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol) IEEE 802.1X for Authentication IEEE 802.1AB for LLDP (Link Layer Discovery Protocol)
MAC Table	8192 MAC addresses
Priority Queues	4
Processing	Store-and-Forward
Switch Properties	Switching bandwidth : 8.8Gbps Max. Number of Available VLANs:4096 IGMP multicast groups: 1024 Port rate limiting: User Define
Security Features	Enable/disable ports, MAC based port security ACL supported Port based network access control (802.1x) VLAN (802.1q) to segregate and secure network traffic Radius centralized password management SNMP v1/v2c/v3 encrypted authentication and access security

Software Features	STP/RSTP/MSTP (IEEE 802.1D/w/s) Redundant Ring (iRing) with recovery time less than 30ms over 250 Ethernet Switches TOS/Diffserv supported Quality of Service (802.1p) for real-time traffic VLAN (802.1Q) with VLAN tagging and GVRP supported IGMP Snooping for multicast filtering Port configuration, status, statistics, monitoring, security SNTP for synchronizing of clocks over network Support PTP Client (Precision Time Protocol) clock synchronization DHCP Server / Client support Port Trunk support MVR (Multicast VLAN Registration) support		
Network Redundancy	iRing iBridge STP RSTP MSTP		
Warning / Monitoring System	Relay output for fault event alarming Syslog server / client to record and view events Include SMTP for event warning notification via email Event selection support		
Fault Contact			
Relay	Relay output to carry capacity of 1A at 24VDC		
Power			
Redundant Input power	12 ~ 36VDC power inputs	36 ~ 72VDC power inputs	88 ~300VDC/100 ~ 240VAC power inputs
Power consumption (Typ.)	TBD	TBD	18 Watts
Overload current protection	Present	Present	Present on terminal block
Physical Characteristic			
Dimension (W x D x H)	443.7(W) x 262.7(D) x 44(H) mm (17.46 x 10.34 x 1.73 inch)		
Enclosure	IP-40 Galvanized Steel Housing		
Weight (g)	4 Kg		
Environmental			
Storage Temperature	-40oC to 85oC (-40oF to 185oF)		
Operating Temperature	-40oC to 85oC (-40oF to 185oF) No fans		
Operating Humidity	5% to 95% Non-condensing		
Regulatory Approvals			
Power Automation	IEC 61850-3, IEEE 1613		
EMI	FCC Part 15, CISPR (EN55022) class A, EN50155 (EN50121-3-2, EN55011, EN50121-4)		
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-11		
Warranty			
Warranty	5 Years		

Dimensions

All Dimensions are in Inches



Ordering Information

Base	Power Supply 1	Power Supply 2	Mount	Ethernet Port 1-8	Ethernet Port 9-16	Ethernet Port 17-24	Ethernet Port 25	Ethernet Port 26	Description
iES26	LV	LV	RF	8RJ45	8RJ45	8RJ45	1MMSC	1MMSC	
iES26	|	|	|	|	|	|	|	|	Core assembly and packaging
	|	XX	|	|	|	|	|	|	None
	LV	LV	|	|	|	|	|	|	12-36VDC
	MV	MV	|	|	|	|	|	|	36-72VDC
	HV	HV	|	|	|	|	|	|	88-300VDC or 100-240VAC
			RF	|	|	|	|	|	Rack Mount Power Terminals in the Front/Display Rear
			RR	|	|	|	|	|	Rack Mount Power Terminals in the Rear/Display Front
			P	|	|	|	|	|	Panel Mounting
			N	|	|	|	|	|	No Mounting Hardware
				|	XX	XX	|	|	None
				8RJ45	8RJ45	8RJ45	|	|	8 X 10/100Base TX RJ45
							XX	XX	None
							1MMSC	1MMSC	100FX Multimode SC, 1310nm, 2Km
							1MMST	1MMST	100FX Multimode ST, 1310nm, 2Km
							1SSC15	1SSC15	100FX Singlemode SC, 1310nm, 15km
							1SST15	1SST15	100FX Singlemode ST, 1310nm, 15km
							1SSC40	1SSC40	100FX Singlemode SC, 1310nm, 40km
							1SST40	1SST40	100FX Singlemode ST, 1310nm, 40km
							1SSC60	1SSC60	100FX Singlemode SC, 1310nm, 60km
							1SST60	1SST60	100FX Singlemode ST, 1310nm, 60km
							1SSC80	1SSC80	100FX Singlemode SC, 1550nm, 80km
							1SST80	1SST80	100FX Singlemode ST, 1550nm, 80km
							1SSC100	1SSC100	100FX Singlemode SC, 1550nm, 100km
							1SST100	1SST100	100FX Singlemode SC, 1550nm, 100km

Example order code: iES26-LV-LV-R-8RJ45-8RJ45-8RJ45-1MMSC-1MMSC
Description: 26 Port Ethernet Switch, Power Supply 1: 12-36VDC
Input Power Supply 2: 12-36VDC, Rack Mount, 8-10/100Base-T(X) Ports,
8-10/100Base-T(X) Ports, 8-10/100Base-T(X) Ports
1x100Base-FX Multimode SC port, 1x100Base-FX Multimode SC port
C1 – Add for conformal coating
FW – Leave blank for latest firmware