

# iES10G



www.iS5com.com

## Intelligent 10 Port Managed Gigabit Ethernet Switch

### Features

- Rapid Network Recovery: iRing recovery time < 20ms up to 250 ethernet switches
- iBridge is a unique feature that supports third party ring technologies
- Supports STP/RSTP/MSTP
- Supports PTP Client (Precision Time Protocol) clock synchronization
- IGMP v2/v3 (IGMP snooping support) for filtering multicast traffic
- Port Trunking for easy bandwidth management
- SNMP v1/v2c/v3 support for network management
- Supports RMON traffic monitoring
- Supports DDM (Digital Diagnostic Monitoring) function for SFP modules
- Supports LLDP (Link Layer Discovery Protocol)
- Port lock to prevent access from unauthorized MAC address
- Event notifications via Syslog, Email, SNMP trap, and Relay Output
- iManage Software Suite (iMSS) supports centralized management and configurable by Web-based, Telnet, Console(CLI), Windows NT/2000/XP/2003/VISTA/7
- IP-40 Galvanized Steel Housing
- DIN-Rail and wall mount



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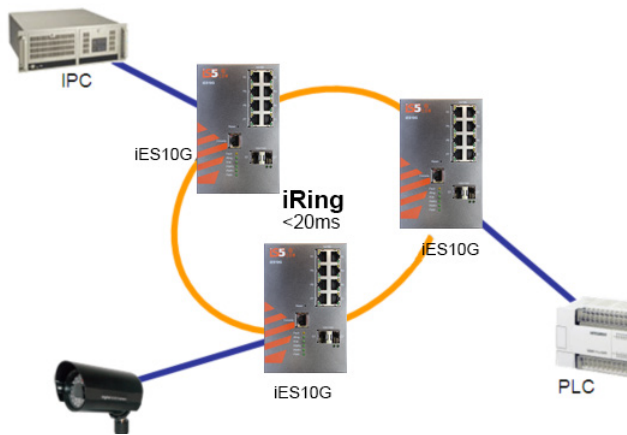
#3-7490 Pacific Circle, Mississauga, Ontario, L5T 2A3



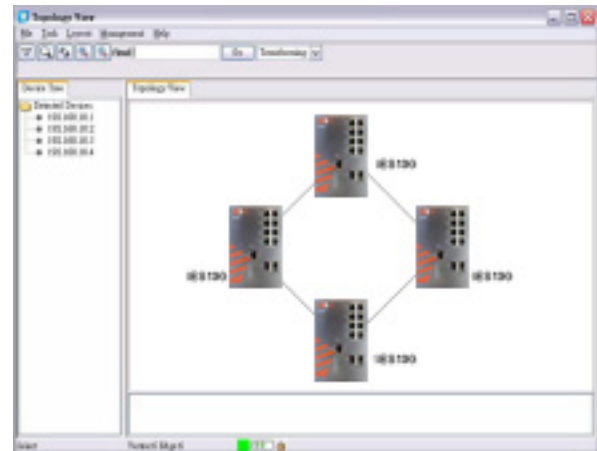
# Introduction

The iES10G is an intelligent managed Gigabit Ethernet Switch. The Intelligent Operating System (iOS) offers many powerful features including iRing delivering a total recovery time <20ms with up to 250 ethernet switches. The iBridge technology, and MSTP/RSTP/STP (IEEE 802.1s/w/D) feature set ensures that the best redundancy options are available to protect mission critical applications from network interruptions. Every function of the iES10G can be managed conveniently using the iManage Software Suite. The iES10G switch supports DDM (Digital Diagnostic Monitoring), which instantly monitors the status of electrical voltage, current, and temperature of the SFP module. The product is made from galvanized steel and has a wide operating temperature range from -40°C to +85°C suitable for the harshest of environments without the use of fans.

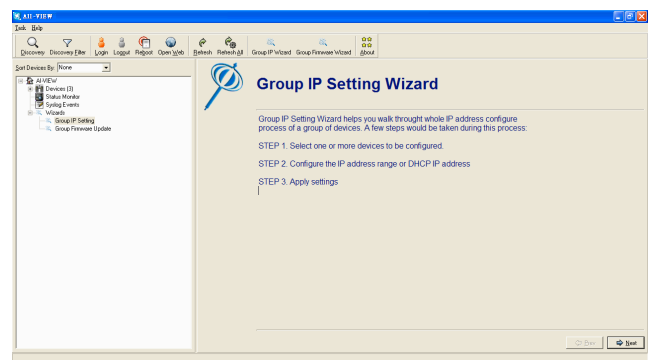
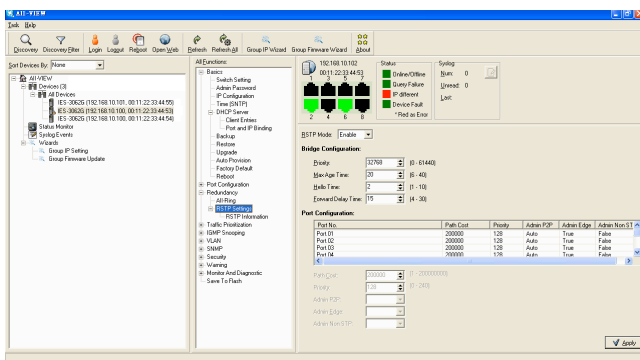
# iManaged Software Suite



IP Connectivity and Configuration Management



Network Snapshot



Monitoring and Configuration interface



# Specifications

Model Number iES10G	
Physical Ports	
10/100Base-T(X) RJ45 Ports Auto MDI/MDIX	7
Combo Ports with 10/100/1000Base-T(X) RJ45 Ports and 100/1000Base-X SFP Ports	2
10/100/1000Base-T(X) RJ45 Ports Auto MDI/MDIX	3
100/1000Base-X SFP Ports	3
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX and 100Base-FX IEEE 802.3z for 1000Base-X IEEE 802.3ab for 1000Base-T 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 latency: 7 us Switching bandwidth: 7.4Gbps Max. Number of Available VLANs: 4096 IGMP multicast groups: 1024 Port rate limiting: User Defined
Security Features	Enable/disable ports, MAC based port security Port based network access control (802.1x) VLAN (802.1Q) to segregate and secure network traffic Supports Q-in-Q VLAN for performance & security to expand the VLAN space 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 10ms up to 250 units 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 Supports 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 SMTP for event warning notification via email Event selection support
RS-232 Serial Console Port	RS-232 in RJ45 connector with console cable. 9600bps, 8, N, 1



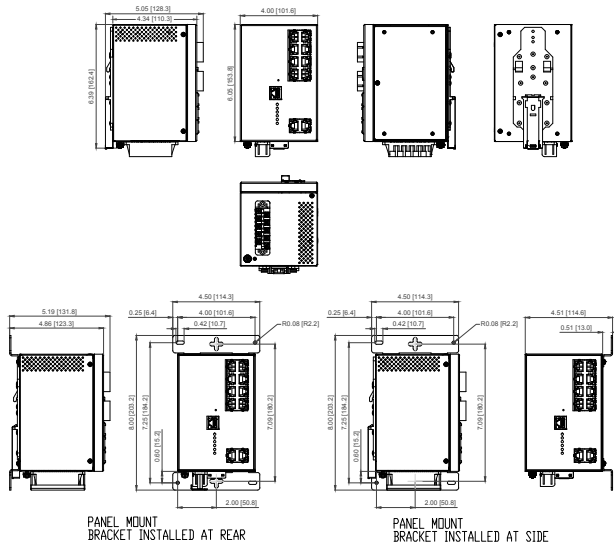
Fault Contact	
Relay	Relay output capacity: 1A at 24VDC
Power	
Input Power	Dual DC Inputs 10-48VDC, Single Input 36-72VDC with Single 10-48VDC Backup, or Single Input universal supply 88-370VDC or 85-264VAC with a Single 10-48VDC Backup
Power Consumption (Typ.)	12 Watts
Overload Current Protection	Present
Reverse Polarity Protection	Internal
Physical Characteristics	
Enclosure	IP-40 Galvanized Steel
Dimension (W x D x H) – iES10G	101.8 (W) x 111.2 (D) x 154.1 (H) mm (4.01 x 4.38 x 6.07 inches)
Weight (g)	~2500 g
Dimension (W x D x H) – iES10G-S	65.13 (W) x 150.63 (D) x 168.66 (H) mm (2.56 x 5.93 x 6.64 inches)
Weight (g)	~2500 g
Environmental	
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Operating Temperature	-40°C to +85°C (-40°F to +185°F) No Fans
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC60068-2-27
Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Safety	EN60950-1
Warranty	
Warranty	5 Years



# Dimensions

All Dimensions are in Inches

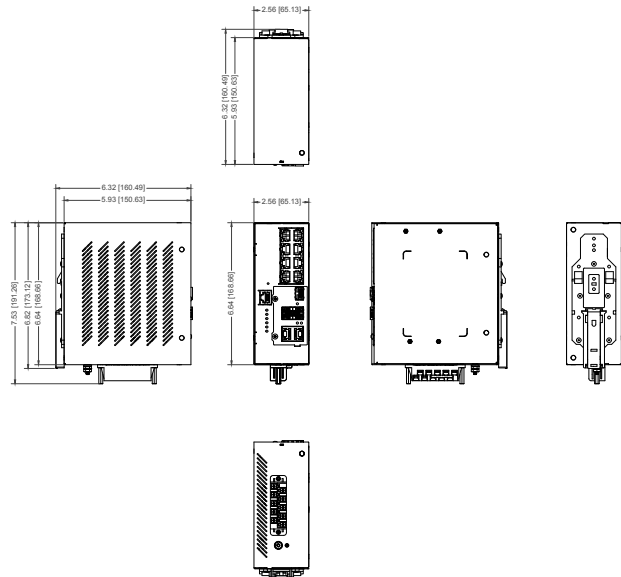
## iES10G



PANEL MOUNT BRACKET INSTALLED AT REAR

PANEL MOUNT BRACKET INSTALLED AT SIDE

## iES10G-S (Slim Version)



# Ordering Information

Base	Power Supply	Mount	Ethernet Port 1-7(8)	Ethernet Port 8†	Ethernet Port 9 & 10‡	Description
iES10G	LV	D	7RJ45&1GRJ45	1GSFP	XX	
iES10G						Managed core assembly and packaging
iES10G-S						Slim Line Core assembly and packaging
	LV					Dual Input (10-48VDC)
	MV					Single Input (36-72VDC) with Single 10-48VDC Backup
	HV					Single Input 88-370VDC or 85-264VAC with Single 10-48VDC Backup
		D				DIN Rail Mounting
		P				Panel Mounting
		N				No Mounting Hardware
			7RJ45&1GRJ45			7 X 10/100Base-T(X) RJ45 and 1 X 10/100/1000Base-T(X) RJ45
				1GSFP		1 X 100/1000Base-X SFP (Blank no optical transceivers**)
					XX	None
					2GRJ45	2 X 10/100/1000Base-T(X) RJ45
					2GSFP	2 X 100/1000Base-X SFP (Blank no optical transceivers**)
					2GCX	Combo*** 2 X 10/100/1000Base-T(X) RJ45 and 2 X 100/1000Base-X SFP (Blank no optical transceivers**)

†Port 8 Default Port Type is GRJ45

‡Port 9 & 10 - 2GCX (Combo\*\*\*) of the 2 Ports available, only 1 Port can be used in combination

Example Order Code: iES10G-LV-D-7RJ45&1GRJ45-1GSFP-XX-C1-F3.07

Description: 10 Port Gigabit Switch, (Power Supply) Dual Input (10-48VDC), DIN Rail Mounting, 7 x 10/100Base-T(X) RJ45 Ports, 1 x 10/100/1000Base-T(X) RJ45 Port, 1 x 100/1000Base-X SFP Port, (Port 9-10) None, Conformal Coating, Firmware version 3.07

C1 – Add for conformal coating

FW – Leave blank for latest firmware

**NOTE: When selecting 1GSFP, 2GSFP or 2GCX (Blank no optical transceivers\*\*) \*\*SFP's to be ordered separately.**



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SFP Module #	Description
SFP100-MM-05	SFP 100Mbps Multimode LC Transceiver 550m, 850nm, -40°C to +85°C
SFP100-MM-2	SFP 100Mbps Multimode LC Transceiver 2km, 1310nm, -40°C to +85°C
SFP100-SM-10	SFP 100Mbps Singlemode LC Transceiver 10km, 1310nm, -40°C to +85°C
SFP100-SM-30	SFP 100Mbps Singlemode LC Transceiver 30km, 1310nm, -40°C to +85°C
SFP100-SM-60	SFP 100Mbps Singlemode LC Transceiver 60km, 1310nm, -40°C to +85°C
SFP100-SM-100	SFP 100Mbps Singlemode LC Transceiver 100km, 1550nm, -40°C to +85°C
SFP100-SM-120	SFP 100Mbps Singlemode LC Transceiver 120km, 1550nm, -40°C to +85°C
SFP100BIDI1-SM-20	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 20km, TX1310nm, RX1550nm, -40°C to +85°C
SFP100BIDI2-SM-20	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 20km, TX1550nm, RX1310nm, -40°C to +85°C
SFP100BIDI1-SM-40	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 40km, TX1310nm, RX1550nm, -40°C to +85°C
SFP100BIDI2-SM-40	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 40km, TX1550nm, RX1310nm, -40°C to +85°C
SFP100BIDI1-SM-60	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 60km, TX1310nm, RX1550nm, -40°C to +85°C
SFP100BIDI2-SM-60	SFP 100Mbps Bi-Directional Singlemode LC Transceiver 60km, TX1550nm, RX1310nm, -40°C to +85°C
SFP1000-TX	SFP 10/100/1000Mbps TX RJ45 Transceiver 100m, -40°C to +85°C
SFP1000-MM-05	SFP 1Gbps Multimode LC Transceiver 550m, 850nm, -40°C to +85°C
SFP1000-MM-2	SFP 1Gbps Multimode LC Transceiver 2km, 1310nm, -40°C to +85°C
SFP1000-SM-10	SFP 1Gbps Singlemode LC Transceiver 10km, 1310nm, -40°C to +85°C
SFP1000-SM-20	SFP 1Gbps Singlemode LC Transceiver 20km, 1310nm, -40°C to +85°C
SFP1000-SM-30	SFP 1Gbps Singlemode LC Transceiver 30km, 1310nm, -40°C to +85°C
SFP1000-SM-40	SFP 1Gbps Singlemode LC Transceiver 40km, 1310nm, -40°C to +85°C
SFP1000-SM-50	SFP 1Gbps Singlemode LC Transceiver 50km, 1550nm, -40°C to +85°C
SFP1000-SM-70	SFP 1Gbps Singlemode LC Transceiver 70km, 1550nm, -40°C to +85°C
SFP1000-SM-80	SFP 1Gbps Singlemode LC Transceiver 80km, 1550nm, -40°C to +85°C
SFP1000BIDI1-SM-10	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 10km, TX1310nm, RX1550nm, -40°C to +85°C
SFP1000BIDI2-SM-10	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 10km, TX1550nm, RX1310nm, -40°C to +85°C
SFP1000BIDI1-SM-20	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 20km, TX1310nm, RX1550nm, -40°C to +85°C
SFP1000BIDI2-SM-20	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 20km, TX1550nm, RX1310nm, -40°C to +85°C
SFP1000BIDI1-SM-40	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 40km, TX1310nm, RX1550nm, -40°C to +85°C
SFP1000BIDI2-SM-40	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 40km, TX1550nm, RX1310nm, -40°C to +85°C
SFP1000BIDI1-SM-60	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 60km, TX1310nm, RX1550nm, -40°C to +85°C
SFP1000BIDI2-SM-60	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 60km, TX1550nm, RX1310nm, -40°C to +85°C
SFP1000BIDI1-SM-80	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 80km, TX1310nm, RX1550nm, -40°C to +85°C
SFP1000BIDI2-SM-80	SFP 1Gbps Bi-Directional Singlemode LC Transceiver 80km, TX1550nm, RX1310nm, -40°C to +85°C