

8-Port Unmanaged Ethernet Switches with 4-Port PoE-af Injector

# **OVERVIEW**

The IFS® line of economy series (ES) Ethernet switches provide either Fast Ethernet (10/100Mbps) or Gigabit Ethernet (10/100/1000Mbps) transmission combined with a built-in 4-Port PoE injector providing up to 15.4w per port with a total PoE power budget of 55 watts.

The IFS ES2000 and ES3000 Series are cost-effective switches for smaller independent networks. These switches are designed to provide non-blocking wire-speed performance and easy plug-andplay installation for desktop deployment of IP cameras, IP intercom, wireless access points (WAP) and other Ethernet applications.

The IFS ES Series switches utilize an internal power supply versus an external wall-mount transformer thus providing more reliable PoE performance and a higher total PoE power budget than other similar switches on the market.

In addition, the ES3001-4P-1T utilizes energy saving technology that reduces energy usage by up to 40% more than other standard comparable PoE switches.

The ES3001-4P-1T incorporates two advanced Green Networking technologies:

- The Idle Mode Link Down Power Saving feature complies with the IEEE 802.3az Energy Efficient Ethernet (EEE) standard to automatically lower power for a given port when it is not connected.
- The Intelligent Power Scaling Technology actively determines the appropriate power level based on the cable length.

These two green features can substantially reduce overall power consumption, which makes a significant contribution to energy savings.



# STANDARD FEATURES

#### **RJ-45 Ports**

- Auto MDI/MDI-X
- Auto-negotiation

#### ES2001-4P-4T

- 4-ports 10/100Mbps Ethernet (PoE-af)
- 4-ports 10/100Mbps Ethernet (non-PoE)

#### ES3001-4P-4T

- 4-ports 10/100M/1000Mbps Ethernet (PoE-af)
- 4-ports 10/100/1000Mbps Ethernet (non-PoE)

#### **High Performance Architecture**

- Unmanaged plug and play installation requires no programming
- Store-and-Forward switching architecture with wire-speed filtering and forwarding rates
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x PAUSE frame-flow control (full-duplex)
- Integrated address-lookup engine supports 1K absolute MAC addresses
- Supports CSMA/CD Protocol
- Automatic source-address learning and aging
- Support to handle Jumbo Packets (9K Bytes ES3001-4P/4T only)

#### Power over Ethernet (PoE)

- Up to 4 IEEE 802.3af devices powered
- Complies with IEEE 802.3af Power over Ethernet End-Span PSE
- Supports up to 15.4 watts (13.75w per port @ full budget)
- Auto detect powered device (PD)
- Circuit protection prevents power interference between ports
- Remote power feeding up to 328 ft. (100m)
- 55 watts total power budget

#### **Designed for Efficient Operation**

- Metal enclosure
- Built-in 65 watt power supply
- Advanced Green Networking technologies (ES3001-4P-4T only): —Idle Mode Link Down Power Saving
  - -Intelligent Power Scaling technology
- One silent fan to provide stable and efficient power performance
- 0~50°C operating environment

#### Warranty

3-year limited warranty



# ES2001-4P-4T ES3001-4P-4T

8-Port Unmanaged Ethernet Switches with 4-Port PoE-af Injector

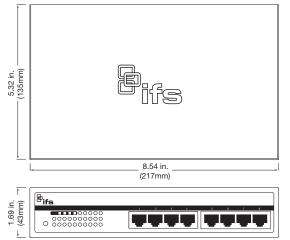
## **Specifications**

RJ45 Ports	ES2001-4P-4T	ES3001-4P-4T
10/100Base-TX Connectors	RJ-45 (4) PoE and (4) no	n-PoE (8 total)
Port Configuration	Auto MDI/MDI-X	
Port Speed	Auto-negotiate	
Energy-saving Technology	N/A N/A	Link down power saving Intelligently scales power based on cable length
PoE		
PoE Standard	IEEE 802.3af Power over Ethernet / PSE	
PoE Power Supply Type	End-Span	
PoE Power Output	Per Port 48VDC, 350mA . max. 15.4 watts	
Power Pin Assignment	1/2(+), 3/6(-)	
PoE Power Budget	55 watts	
Switch Performance		
Switch Architecture	Store-and-Forward	
Switch Fabric (non-blocking)	1.6Gbps	16Gbps
Throughput (Packet per second)	1.19Mpps@64bytes	11.9Mpps@64bytes
Address Table	1K entry	8K entries
Maximum Frame Size	1522 Bytes	9K Bytes
Flow Control	Back pressure for Half-Duplex, IEEE 802.3x PAUSE Frame for Full-Duplex	
LED Indicators		
Power	Power On	
Ports 1-8	LNK/ACT	
Ports 1-4	PoE In-use, LNK/ACT	
Fan Alert	On if fan is non-operational	
Electrical & Mechanical		
Supply Voltage	AC 100 to 240V, 50/60Hz, 1.5A	
Power Consumption	65 watts max./221 BTU max.	
Enclosure	Metal	
Dimensions (in/mm) (W x D x H)	8.54 x 5.32 x 1.69 in. (217 x 135 x 43mm)	
Weight (lbs./kg)	1.96 lbs./0.89kg	
Environmental		
	> 100,000 Hrs @ 25°C	
MTBF	> 100,000 Hrs @ 25°C	
MTBF Operating Temperature	> 100,000 Hrs @ 25°C 0°C~50°C	
Operating Temperature	0°C~50°C	ng)
Operating Temperature Storage Temperature Relative Humidity	0°C~50°C -40°C~70°C	ng)
Operating Temperature Storage Temperature	0°C~50°C -40°C~70°C	K hernet (ES3001 only) and Back pressure
Operating Temperature Storage Temperature Relative Humidity Standards Compliance	0°C~50°C -40°C~70°C 0%~95% (non-condensi IEEE 802.3 10Base-T IEEE 802.3u 100Base-T IEEE 802.3u Gigabit Ett IEEE 802.3ab Gigabit Ett	K nernet (ES3001 only) ol and Back pressure W)

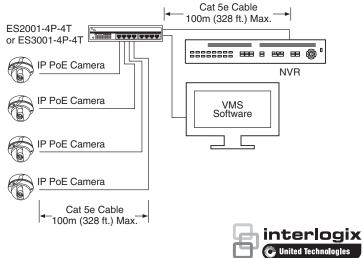
## **Ordering Information**

ES2001-4P-4T	8-Port Unmanaged Fast Ethernet Switch w/4-Port PoE-af Injector
ES3001-4P-4T	8-Port Unmanaged Gigabit Ethernet Switch w/4-Port PoE-af Injector
Included Accessories	User's Manual, AC Power Cord

## **Dimensional Diagram**



# **Typical Application**



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Specifications subject to change without notice.

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