

# ES2402-16P-2C-V2

## 16-Port Fast Ethernet Web Smart Switch POE-AT with 2 x Gig Uplinks

### Overview

The UTC Fire & Security IFS ES Series of Web Smart PoE+ Switches are designed to be a cost-effective network switch solution for small to mid sized IP camera surveillance systems. The switches are available in 8-, 16- or 24-port Fast Ethernet PoE+ configurations with all versions having two additional GigE RJ45/SFP ports. Allowing for basic management and PoE functionality, the switches meet the basic need of providing Fast Ethernet ports for IP cameras with GigE ports for NVR/Server connections.

The IFS ES Series of Web Smart Switches support basic Layer 2 features, such as VLANs, QoS, Link Aggregation, Port Mirroring, Spanning Tree, IGMP Snooping and basic security. In addition, these switches provide both IEEE802.3-af/at power on each port (up to the maximum total power budget) and offer full PoE management features. With a unique PoE usage LED meter on the front panel, these switches allow users to monitor total power budget usage without having to connect to a PC.



### Details

- 16-Port 10/100Mbps Fast Ethernet ports with PoE-AT
- 2x 10/100/1000Mbps TP combo interfaces and 2 mini-GBIC/SFP slots
- Easy web-based management
- PD Alive Checking
- L-2 : Supports up to 256 VLAN's Groups, Spanning Tree Protocol
- Supports auto-negotiation and half-duplex/full-duplex modes for all 10Base-T/100Base-TX and 1000Base-T ports
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause-frame flow control (full-duplex) groups, out of 4K VLAN IDs
- Security Control: MAC Address binding and TCP & UDP Filtering
- QOS support: Allows to assign low / high priority on each port
- IGMP snooping for better control of multicast streams
- Port mirroring to monitor the incoming or outgoing traffic on a particular port
- Complies with IEEE 802.3at Power over Ethernet
- Supports up to 12 POE-af devices or 7 POE-at devices at full power
- Up to 220W total POE Power

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### Technical specifications

#### General

Storm control	Broadcast
Security	MAC address binding, TCP/UDP filtering
DHCP snooping	No

#### Category

Category	Commercial
Management	Web Smart
Managed	Yes (Layer 2)
PoE	Yes

#### Physical ports

No. of ports	16
Port type	16 Fast 2 Gig (shared with SFP)
Speed	Fast
PoE/PoE+	16 Port PoE/7 Port PoE+
Fiber port	2 (shared)
Supported SFPs	S30/S35 series

#### Switch Performance

Switch fabric	7.2 Gbps
Throughput (Mpps)	5.35
Mac table	16 K

#### Layer 2 Functions

Management interface	Web
IGMP snooping	32 Group, Snooping v1, v2
IGMP query	Without Query supported
VLAN, QoS	256, yes

#### Electrical

PoE power budget	220 W
Redundant power	No
Power supply type	100 to 240 VAC
Power consumption	254 W

#### Physical

Physical dimensions	444 x 203 x 44 mm
Net weight	2.8 kg
Colour	Black
Material	Metal
Mounting type	19" rack
Stackable	No

#### Environmental

Operating temperature	0 to +50°C
Storage temperature	-20 to +70°C
Relative humidity	20 to 95% (non-condensing)
Environment	Indoor

#### Standards & regulation

Compliance	CE, FCC Part 15 Class A
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#### Power over Ethernet

PoE Standard :	IEEE 802.3at PSE (Power Sourcing Equipment)
PoE Power Supply Type :	End-Span

PoE Power Output :	Per port 56V DC, Max. 30.8 watts
Power Pin Assignment :	1/2(+), 3/6(-)
Max. number of Class 2 PD / class 3 PD :	12 / 7

#### Layer 2 Function

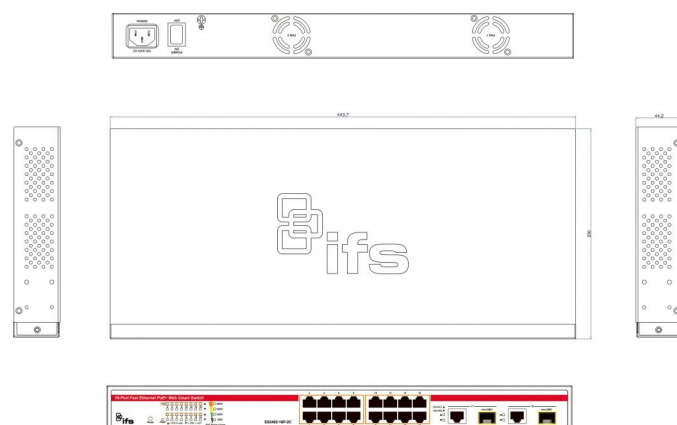
Management Interface :	Web Browser, SNMP v1
Port Configuration :	Port disable/enable. Auto-negotiation 10/100Mbps full- and half-duplex mode selection. Flow control disable/enable. Bandwidth control on each port.
Port Status :	Display each port's speed duplex mode, link status, Flow control status, Auto negotiation status, trunk status
VLAN :	802.1Q tagged-based VLAN, up to 30 VLAN groups, out of 4094 VLAN IDs Port-based VLAN, up to 18 VLAN groups MTU VLAN
Spanning Tree :	IEEE 802.1d Spanning Tree, IEEE 802.1w Rapid Spanning Tree
Link Aggregation :	1 group of 2-Port 10/100/1000Base-T trunk supported
QoS :	Traffic classification based on:- Allow to assign low / high priority on each port First-In-First-Out, All-High-before-Low, Weight-Round-Robin QoS policy
IGMP Snooping :	IGMP (v1/v2) Snooping, up to 32 multicast groups Without Query supported
Port Mirror :	TX/RX/Both; Many to 1 monitoring
Security :	MAC address binding, TCP/UDP filtering

#### Standards Conformance

IEEE 802.3 10Base-T
IEEE 802.3u 100Base-TX
IEEE 802.3z Gigabit SX/LX
IEEE 802.3ab Gigabit 1000Base-T
IEEE 802.3af Power over Ethernet
IEEE 802.3x Flow Control and Back Pressure
IEEE 802.3ad: Port trunk with LACP
IEEE 802.1d Spanning Tree Protocol
IEEE 802.1w Rapid Spanning Tree Protocol
IEEE 802.1p Class of Service
IEEE 802.1Q VLAN Tagging
IEEE 802.1x Port Authentication Network Control
Regulation Compliance : FCC Part 15 Class A, CE

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