

## ES2402-24P-2C

24-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**

- 24-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
- Supports auto-negotiation and half-duplex/fullduplex modes for all 10Base-T/100Base-TX and 1000Base-T ports
- Prevents packet loss with back pressure (halfduplex) and IEEE 802.3x pause-frame flow control (full-duplex)
- 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 24 POE-af devices or 12 POE-at devices at full power
- Up to 380W total POE Power

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## **Technical Specifications**

| Category                       |   |
|--------------------------------|---|
| Category                       | Commercial                                |
| Management                     | Web Smart                                 |
| PoE                            | Yes                                       |
| Managed                        | Yes (Layer 2)                             |
| Physical ports                 |   |
| Speed                          | Fast                                      |
| No. of ports                   | 24  |
| Port type                      | 24 Fast 2 Gig (shared with SFP)           |
| PoE/PoE+                       | 24 Port PoE/12 Port PoE+                  |
| Fiber port                     | 2 (shared)                                |
| SFP speed                      | 100/1000                                  |
| Supported SFP's                | S20/S25 series, S30/S35 series            |
| Switch Performance             |   |
| Throughput (Mpps)              | 6.54                                      |
| Switch fabric                  | 8.8 Gbps                                  |
| Mac table                      | 4 K                                       |
| Layer 2 Functions              |   |
| IGMP snooping                  | 22 Croup Spanning v1 v2                   |
| IGMP query                     | 32 Group, Snooping v1, v2                 |
|                                | Without Query supported                   |
| Management interface VLAN, QoS | Web<br>30, yes                            |
|                                | 30, yes                                   |
| General                        |   |
| Fast ring                      | No  |
| Security                       | MAC address binding, TCP/UDP filtering    |
| DHCP s1oping                   | No  |
| Fault relay output             | No  |
| Physical                       |   |
| Stackable                      | No  |
| Physical dimensions            | 444 x 305 x 44 mm                         |
| Net weight                     | 4.5 kg                                    |
| Colour                         | Black                                     |
| Material                       | Metal                                     |
| Mounting type                  | 19" rack                                  |
| Environmental                  |   |
| Operating temperature          | 0 to +50°C                                |
| Storage temperature            | -20 to +70°C                              |
| Relative humidity              | 20 to 95% (non-condensing)                |
| Environment                    | Indoor                                    |
| Operating:                     | Temperature 0 to +50°C; Relative Humidity |
| . •                            | 20 to 95% (non-condensing)                |
| Storage:                       | Temperature -20 +70°C; Relative Humidity  |
| Storage:                       | ichipciature 20 +70 O, helative humaity   |

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| Power supply type   | 100 to 240 VAC        |
|---------------------|-----------------------|
| Power consumption   | 513 W                 |
| PoE power budget    | 380 W                 |
| Redundant power     | No                    |
| Power Requirement : | 100~240V AC, 50-60 Hz |
| Power Consumption:  | 513 Watts maximum     |

## Hardware Specifications

| Ports:                            | 24x 10/100Base-TX RJ-45 with Auto-         |  |  |
|-----------------------------------|--|--|--|
|                                   | MDI/MDI-X function for each port           |  |  |
| Uplink Ports (RJ45)               | 2x 10/100/1000Base-TX RJ-45 ports          |  |  |
|                                   | (shared with SFP interfaces)               |  |  |
| Uplink Ports (SFP)                | 2x 1000Base-SX/LX/BX SFP/Mini-GBIC         |  |  |
|                                   | interfaces, shared with port-25~Port-26    |  |  |
| Switch Architecture :             | Store-and-Forward                          |  |  |
| Switch Fabric:                    | 8.8Gbps/non-blocking                       |  |  |
| Switch Throughput:                | 6.54Mpps @64Bytes                          |  |  |
| Address Table :                   | 4K entries                                 |  |  |
| Share Data Buffer:                | 2.75Mb embedded memory for packet          |  |  |
|                                   | buffers                                    |  |  |
| Maximum Frame Size :              | 1536Bytes                                  |  |  |
| Flow Control:                     | Back pressure for Half-Duplex and IEEE     |  |  |
|                                   | 802.3x Pause Frame for Full-Duplex         |  |  |
| LED Indicators :                  | Per unit: Power (Green), FAN Alarm         |  |  |
| 24x 10/100: Link/Activity (Green) |  |  |  |
| 2x 1000T: LNK/ACT (Green)         |  |  |  |
| PoE: PoE In-Use (Amber)           |  |  |  |
| Dimensions (W) x (D) x            | 440 x 300 x 44.5mm, 1U height              |  |  |
| (H):                              |  |  |  |
| Weight:                           | 4.5kg                                      |  |  |
| Reset Button:                     | < 5 sec.: System reboot, > 5 sec.: Factory |  |  |
|                                   | Default                                    |  |  |
|                                   |  |  |  |

## Power over Ethernet

| PoE Standard :          | IEEE 802.3at PSE (Power Sourcing |
|-------------------------|----------------------------------|
|                         | Equipment)                       |
| PoE Power Supply Type : | End-Span                         |
| PoE Power Output :      | Per port 54V DC, Max. 30.8 watts |
| Power Pin Assignment :  | 1/2(+), 3/6(-)                   |
| Max. number of Class 2  | 24 / 12                          |
| PD / class 3 PD :       |                                  |
|                         |                                  |
| PoE Power Budget        | 220 watts                        |
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### Standards Conformance

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|-------------------------|--|
|                         | 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                  |
|                         |  |



