

# Business Switch

USR-ESF005, USR-ESF008,  
USR-ESG005, USR-ESG008

User Manual



V2.0

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# 1. Introduction

The USR-ES series switches are unmanaged Ethernet switches launched by USR IoT. The ESF series provides a 100Mbps rate while the ESG series provides a 1000Mbps rate, with options for either 5 or 8 ports. The adaptive port technology uses storage and forwarding technology, combined with dynamic memory allocation, to ensure efficient distribution to each port. Flow control ensures that data packets are not lost during transmission and reception. The switches are compatible with three types of network environments: 10Base-T, 100Base-TX, and 1000Base-T, and the port speed is automatically matched at 10/100/1000Mbps. With a high level of integration and a compact and lightweight design, these switches are easy to operate and suitable for small and medium-sized offices and home networks.

## 2. Features

### USR-ESF Series:

- Standards: IEEE802.3、IEEE802.3u、IEEE802.3x
- 5/8 10/100 Mbps RJ45 Ports , support Auto-Negotiation and Auto MDI/MDIX
- All ports have Link/Act indicators to display the working status
- Provides remote serial access over the Internet for embedded UART to ethernet module
- Plug and play, no configuration and installation required
- Low power consumption, fanless, and noiseless design
- Adopted Store-And-Forward transmission method
- External power supply, compact size, and suitable for desktop and rail installation

### USR-ESG Series:

- Standard: IEEE 802.3、IEEE 802.3u、IEEE802.3x、IEEE802.3az、IEEE802.3ab
- Support Full duplex compliant with IEEE 802.3x standard, and half duplex Compliant with Back-pressure standard
- 5/8 10/100/1000 Mbps RJ45 Ports , support Auto-Negotiation and Auto MDI/MDIX
- Support BPDU Frame, EAPOL and QOS WRR queue algorithm
- All ports have Link/Act indicators to display the working status
- Support MAC address learning
- UTP ports support auto-negotiation capability allowing for automatic adjustment of transmission mode and speed
- Green energy saving compliant with IEEE802.3az standard

### 3. Interface

Both USR-ESF and USR-ESG support powered with DC Socket and terminal block.



### 4. Indicators description

| Indicator | Status   | Description   |
|-----------|----------|---|
| Power     | ON       | Power on.   |
|           | OFF      | Power off.  |
| Link/Act  | Blinking | Transmitting/receiving data.  |
|           | ON       | Running at 100Mbps(for USR-ESF005 & USR-ESF008).<br>Running at 1000Mbps(for USR-ESG005 & USR-ESG008).   |
|           | OFF      | 1. No device is linked to the corresponding port.<br>2. The corresponding port is running at 10Mbps(for USR-ESF005 & USR-ESF008).<br>3. The corresponding port is running at 10/100Mbps(for USR-ESG005 & USR-ESG008). |

## 5. Parameters Specifications

| Parameters Specifications |  |              |  |              |
|---------------------------|--|--------------|--|--------------|
| Model                     | USR-ESF005   | USR-ESF008   | USR-ESG005   | USR-ESG008   |
| Data Transfer Rate        | 10/100M<br>Auto Negotiation and Auto<br>MDI/MDIX RJ45  |              | 10/100/1000M<br>Auto Negotiation and Auto<br>MDI/MDIX RJ45           |              |
| Number of Ports           | 5  | 8            | 5  | 8            |
| Switching Modes           | Store and Forward  |              |  |              |
| Switching Capacity        | 1.0G   | 1.6G         | 10G  | 16G          |
| Packet Forwarding Rate    | 10Mbps:14880pps<br>100Mbps:148800pps   |              | 10Mbps:14880pps<br>100Mbps:148800pps<br>1000Mbps:1488000pps          |              |
| MAC Address Table         | 2K   |              |  |              |
| Network Media (Cable)     | 10Base-T: UTP Category 3, 5 cable<br>100Base-TX: UTP Category 5 cable  |              |  |              |
| Standard                  | IEEE 802.3, IEEE 802.3u,<br>IEEE 802.3x, IEEE802.3az   |              | IEEE 802.3, IEEE 802.3u,<br>IEEE 802.3x, IEEE802.3az,<br>IEEE802.3ab |              |
| LED                       | Port: Link/Act Indicator<br>100M Link/ACT: Green<br>POWER: Red   |              | Port: Link/Act Indicator<br>1000M Link/ACT: Green<br>POWER: Red      |              |
| Mounting                  | 35mm DIN Rail Mounting<br>Flat mounting  |              |  |              |
| Dimensions                | 100*77*31<br>mm  | 140*90*31 mm | 100*77*31<br>mm  | 140*90*31 mm |
| Certifications            | CE ROHS FCC WEEE   |              |  |              |
| Operating environment     | Operating temperature: -5°C~45°C<br>Storage temperature: -10°C~70°C<br>Operating humidity: 10%~90% RH non-condensing<br>Storage humidity: 5%~90% RH non-condensing |              |  |              |
| Power & Consumption       | Input: DC 12V / 0.5A,<br>Consumption:<3W   |              | Input: DC 12V / 0.5A,<br>Consumption:<4W                             |              |
| Accessories               | Power adapter (Optional), Terminal Block, Quick Start Guide  |              |  |              |

## 6. Dimensions



## 7. Installation

### 1. Desktop mounting

Please place the switch on a flat surface with the ventilation holes facing upwards. Do not expose it to environments such as water, condensation, dust, etc., in order to avoid product damage.

### 2. DIN rail mounting

Please pull down the red latch on the back of the switch and align it parallel to the standard DIN 35mm rail. Push up the red latch until you hear a 'click' sound and check if it is installed securely.

## 8. Warranty

## 9. Contact Us

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