LevelOne

FSW-1621

FSW-2421

16/24-port 10/100BASE-TX
Fast Ethernet Switch

User Manual

1. Introduction

Congratulations on your purchase of FSW-1621/2421.

The FSW-1621/2421, 16/24-port 10/100Base-TX Switch, is a multi-port Switch that can be used to build high-performance switched workgroup networks. This switch is a store-and-forward device that offers low latency for high-speed networking. The Switch is targeted at workgroup, department or backbone computing environment at SME (small, medium enterprise) business.

The 16/24-port 10/100Base-TX Switch features a "store-and-forward "switching scheme. This allows the switch to auto-learn and store source address on 8K/4K-entry MAC address table.

Features

- ■ Conforms to IEEE 802.3, 802.3u and 802.3x
- ■ 16/24 10/100 Base-TX RJ-45 Ethernet ports
- ■ Auto-MDIX on all ports
- ■ IEEE 802.3x flow control support
  - ➢ Flow control on full-duplex
  - ➢ Back pressure on half-duplex
- ■ N-Way Auto-Negotiation supported
- ■ Store-and-Forward switching architecture and no-blocking full wire speed
- ■ Back plane Bandwidth 4.8 Gbps for FSW-2421
- ■ Back plane Bandwidth 3.2 Gbps for FSW-1621
- ■ 8K/4K MAC address table for FSW-1621/2421
- ■ 10" size

Package Contents

Unpack the contents of the 16/24-port 10/100Base-TX Switch and verify them against the checklist below.

- ■ FSW-1621/2421 X 1
- ■ User Manual
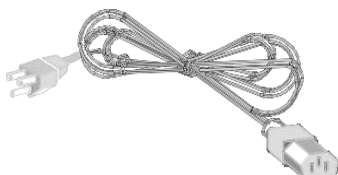- ■ 19" Rack Mount kit
- ■ Power Cord
- ■ Four Rubber Feet

16/24-port 10/100Base-TX Switch   **User Guide**   **19" Rack-Mount Kits**

Power Cord   **Rubber Feet**

Figure 1-2. Package Contents

Compare the contents of your FSW-1621/2421 10/100Base-TX Switch package with the standard checklist above. If any item is missing or damaged, please contact your local dealer for service.

2. Hardware Description

This Section mainly describes the hardware of the 16/24-port 10/100Base-TX Switch, and gives a physical and functional overview of this Switch.

The physical dimensions of the FSW-1621/2421 is:

 250mmx 133 mm x 37mm (L x W x H)

Front Panel

FSW-1621/2421 consists of 16/24 x 10/100Base-TX RJ-45 ports. The LED Indicators are also located on the front panel of the Switch.

Figure 2-1. The Front view of FSW-1621/2421

RJ-45 ports (Auto MDI/MDIX): 16/24x 10/100Mbps auto-sensing port for 10Base-T or 100Base-TX devices connection.

[In general, **MDI** means connecting to another Hub or Switch while **MDIX** means connecting to a workstation or PC. Therefore, **Auto MDI/MDIX** means that you can connect to another Switch or workstation without changing non-crossover or crossover cabling.]

LED Indicators

The LED Indicators gives real-time information of systematic operation status. The following table provides descriptions of LEDs status and their meaning.
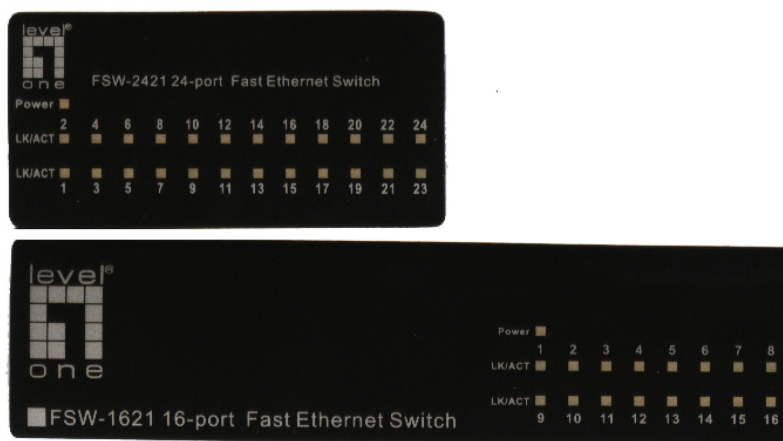

Figure 2-2. LED Indicators

LED	Status	Description
Power	Green	Power On
	Off	Power is not connected
LK/ACT	Green	The port is connecting with the device
	Blinks	The port is receiving or transmitting data
	Off	No device attached

Table 2-1. The Descriptions of LED Indicators

Rear Panel

The 3-pronged power plug is located at the rear panel of the 16/24-port 10/100Base-TX Switch as show in the Figure 2-3. The Switch will work with AC in the range 100-240V AC, 50-60Hz.

Figure 2-3. The Rear Panel of FSW-1621/2421

Desktop Installation

Attaching Rubber Feet

A. Make sure mounting surface on the bottom of the Switch is grease and dust free.
B. Remove adhesive backing from your Rubber Feet.
C. Apply the Rubber Feet to each corner on the bottom of the Switch. These footpads can prevent the Switch from shock/vibration.

Rack-mounted Installation

FSW-1621/2421 10/100Base-TX Switch comes with a long rack-mounted kit and can be mounted in an EIA standard size, 19-inch Rack. The Switch can be placed in a wiring closet with other equipment.

Perform the following steps to rack mount the switch:

A. Position one bracket to align with the holes on one side of the switch and secure it with the smaller bracket screws. Then attach the remaining bracket to the other side of the Switch.
B. After attached both mounting brackets, position FSW-1621/2421 in the rack by lining up the holes in the brackets with the appropriate holes on the rack. Secure the Switch to the rack with a screwdriver and the rack-mounting screws.

Power On

Connect the power cord to the power socket on the rear panel of the Switch. The other side of power cord connects to the power outlet. The external power supply in the Switch works with AC in the voltage range 100-240VAC, frequency 50~60Hz.Check the power indicator on the front panel to see if power is properly supplied.

3.Network Application

This section provides you a few samples of network topology in which the Switch is used. In general, FSW-1621/2421 is designed as a segment switch. That is, with its large address table and high performance, it is ideal for interconnecting networking segments.

You can use the FSW-1621/2421 to connect PCs, workstations, and servers to each other by connecting these devices directly to the Switch. The switch automatically learns nodes address, which are subsequently used to filter and forward all traffic based on the destination address. By using Uplink port, the Switch can connect with another switch or hub to interconnect each of your small-switched workgroups to form a larger switched network.

Small Workgroup

The 16/24-port 10/100Base-TX Switch can be used as a standalone switch to which personal computers, server, printer server, are directly connect to form small workgroup.
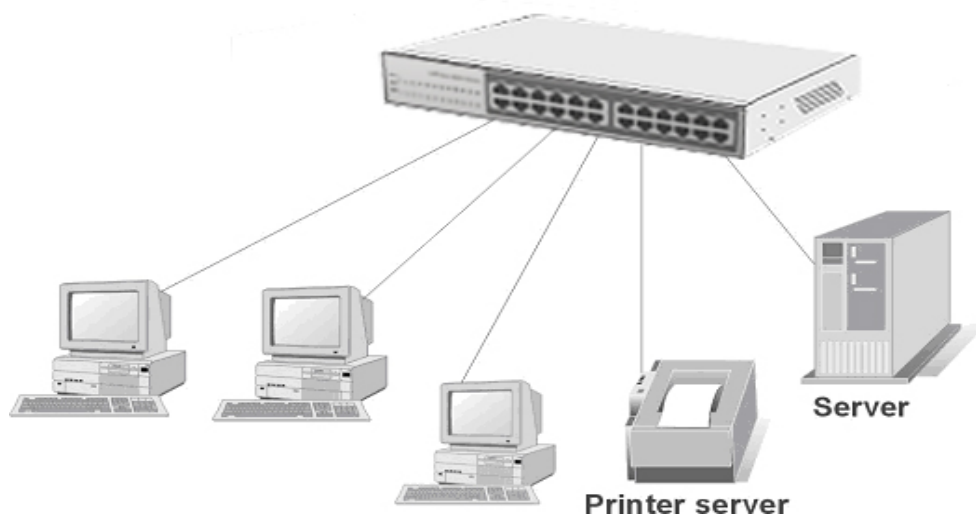
Figure 3-1. Small Workgroup Application

Segment Bridge

For enterprise networks where large data broadcasts are constantly processed, this switch is an ideal solution for department users to connect to the corporate backbone.

In the illustration below, two Ethernet switches with PCs, print server, and local server attached, are both connect to the FSW-1621/2421. All those devices in this network can communicate with each other through FSW-1621/2421 Switch. Connecting servers to the Switch allow other users to access the server's data.
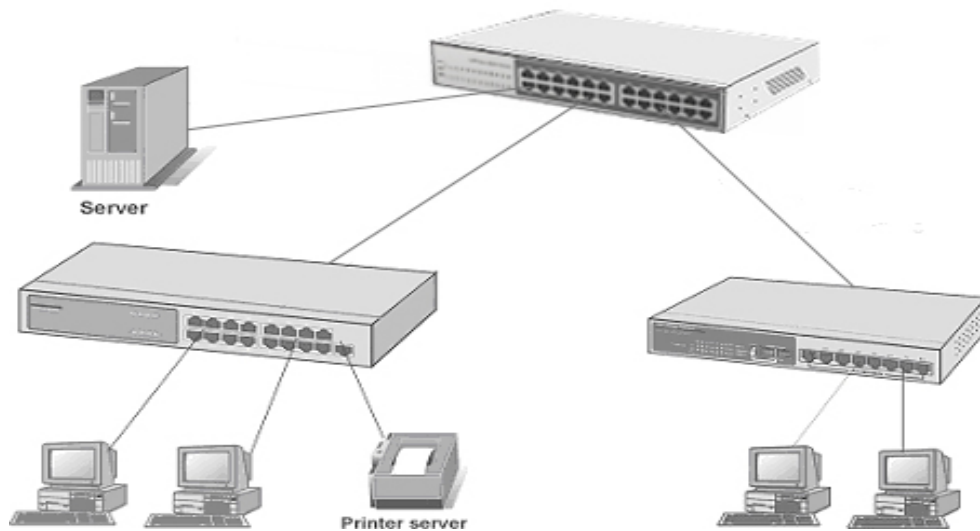
Figure 3-2 Department Bridge Application

4.Technical Specification

This section provides the specifications of FSW-1621/2421,16/24-port 10/100Base-TX Switch.

Standard	IEEE 802.3 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet IEEE802.3x Flow Control and Back-pressure
Protocol	CSMA/CD
Technology	Store and Forward switching architecture
Transfer Rate	14,880 pps Ethernet port 148,800 pps Fast Ethernet port
MAC address	4K/8K Mac address table for FSW-1621/2421
Memory Buffer	4Mbits/1.25Mbits of FSW-1621/2421
Network Cable	10BASE-T: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm (100m) 100BASE-TX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm (100m)
LED Indicators	Per port: Link/Activity Per unit: Power
Back-plane	3.2/4.8Gbps for FSW-1621/2421
Dimensions	250mmx 133 mm x 37mm (L x W x H)
Operational Temp.	O℃ to 45℃ (32℉ to 113℉)
Operational Humidity	10% to 90% (Non-condensing)
Power Supply	100-240 VAC, 50~60Hz
Power Consumption	10Watts for FSW-1621(maximum) 19 Watts for FSW-2421(maximum)
EMI	FCC Class A, CE
Safety	CE/EN60950, UL, cUL