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You can read the recommendations in the user guide, the technical guide or the installation guide for ZYXEL ES-1100. You'll find the answers to all your questions on the ZYXEL ES-1100 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ZYXEL ES-1100
User guide ZYXEL ES-1100
Operating instructions ZYXEL ES-1100
Instructions for use ZYXEL ES-1100
Instruction manual ZYXEL ES-1100

ES1100 Series

8/16/24 Port Unmanaged Fast Ethernet Switch

User's Guide

Version 1.00
Edition 2, 4/2011

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Manual abstract:

00 Edition 2, 4/2011 www.zyxel.com www.zyxel.com Copyright © 2011 ZyXEL Communications Corporation About This User's Guide About This User's Guide Intended Audience This manual is intended for people who want to use and install the Switch. Documentation Feedback Send your comments, questions or suggestions to: techwriters@zyxel.com.tw Thank you! The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 30099, Taiwan. Need More Help? More help is available at www.

zyxel.com. · Download Library Search for the latest product updates and documentation from this link. Read the Tech Doc Overview to find out how to efficiently use the User Guide, Quick Start Guide and Command Line Interface Reference Guide in order to better understand how to use your product. ·

Knowledge Base If you have a specific question about your product, the answer may be here.

This is a collection of answers to previously asked questions about ZyXEL products. · Forum This contains discussions on ZyXEL products. Learn from others who use ZyXEL products and share your experiences as well. Customer Support Should problems arise that cannot be solved by the methods listed above, you should contact your vendor. If you cannot contact your vendor, then contact a ZyXEL office for the region in which you bought the device.

ES1100 Series User's Guide 3 About This User's Guide See http://www.zyxel.com/web/contact_us.php for contact information. Please have the following information ready when you contact an office. · Product model and serial number. · Warranty Information. · Date that you received your device. · Brief description of the problem and the steps you took to solve it. 4 ES1100 Series User's Guide Document Conventions Document Conventions Warnings and Notes These are how warnings and notes are shown in this User's Guide.

Warnings tell you about things that could harm you or your device. Note: Notes tell you other important information (for example, other things you may need to configure or helpful tips) or recommendations. Syntax Conventions · The ES1100-8P, ES1100-16, ES1100-16P, ES1100-24, and ES1100-24E may be referred to as the "Switch", the "device", the "system" or the "product" in this User's Guide. Differentiation is made where needed. · Product labels, screen names, field labels and field choices are all in bold font. @@@@ For example, "k" for kilo may denote "1000" or "1024", "M" for mega may denote "1000000" or "1048576" and so on. · "e.g.," is a shorthand for "for instance", and "i.e.

" means "that is" or "in other words". Icons Used in Figures Figures in this User's Guide may use the following generic icons. The Switch icon is not an exact representation of your device. The Switch Computer Notebook computer Server ES1100 Series User's Guide 5 Safety Warnings Safety Warnings Do NOT use this product near water, for example, in a wet basement or near a swimming pool. Do NOT expose your device to dampness, dust or corrosive liquids.

Do NOT store things on the device. Do NOT install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning. Do not obstruct the device ventilation slots as insufficient airflow may harm your device. Connect ONLY suitable accessories to the device.

Do NOT open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information. Make sure to connect the cables to the correct ports. Place connecting cables carefully so that no one will step on them or stumble over them. Always disconnect all cables from this device before servicing or disassembling. Use ONLY an appropriate power adaptor or cord for your device. Connect it to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe). Use ONLY power wires of the appropriate wire gauge for your device.

Connect it to a power supply of the correct voltage. Do NOT allow anything to rest on the power adaptor or cord and do NOT place the product where anyone can walk on the power adaptor or cord. Do NOT use the device if the power adaptor or cord is damaged as it might cause electrocution. If the power adaptor or cord is damaged, remove it from the device and the power source. Do NOT attempt to repair the power adaptor or cord. Contact your local vendor to order a new one. Your product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electronics and Electrical Equipment. It means that used electrical and electronic products should not be mixed with general waste. Used electrical and electronic equipment should be treated separately.

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1.2 Features The following are the essential features of the Switch. · Conforms to IEEE 802.3, 802.3u, and 802.3x standards. · ES1000-8P and ES1100-16P support IEEE 802.3af PoE standard. · Auto-negotiating 10/100 Mbps Ethernet RJ-45 ports (ES1000-8P and ES1100-16P include FE PoE ports). · Auto-sensing crossover for all 10/100 Mbps Ethernet RJ-45 ports. · Supports N-Way protocol for speed (10/100 Mbps) and duplex mode (Half/Full) auto-detection. · Supports store-and-forward switching. · Supports automatic address learning. · Full wire speed forwarding rate. · 802.1p CoS support. 10 ES1100 Series User's Guide Chapter 1 Getting to Know Your Switch · Link-on cable length power saving and link-down power saving. · IEEE 802.3az (only ES1100-16/24E/24) · Loop detection (only ES1100-16/24E/24) · Jumbo frame (only ES1100-16/24E/24) · Embedded MAC address table providing MAC addresses entries (ES1100-16, ES1100-16P, ES1100-24 and ES1100-24E provide 8K; ES1100-8P provides 1K). @@The Switch can be used standalone for a group of heavy traffic users. @@@@Figure 3 Bridging Example 1.4 Power Over Ethernet (PoE) The PoE function is available for ES1100-8P and ES1100-16P only.the rack/wall. For ES1100-8P/16/16P/24E, you can place the Switch directly on top of your desk or have it rackmounted. @@@@Use screws with 6 mm ~ 8 mm (0.24" ~ 0.31") wide heads. @@@@Eight M3 flat head screws and a #2 Philips screwdriver. @@@@You may now mount the Switch on a rack. Proceed to the next section. 3 4 18 ES1100 Series User's Guide Chapter 2 Hardware Description and Connection 2.3.3 Mounting the Switch on a Rack 1 Position a mounting bracket (that is already attached to the Switch) on one side of the rack, lining up the two screw holes on the bracket with the screw holes on the side of the rack. Figure 10 Mounting the Switch on a Rack (ES1100-8P/16/16P/24E) Figure 11 Mounting the Switch on a Rack (ES1100-24) 2 Using a #2 Philips screwdriver, install the M5 flat head screws through the mounting bracket holes into the rack. Repeat steps 1 and 2 to attach the second mounting bracket on the other side of the rack.

3 ES1100 Series User's Guide 19 CHAPTER 3 Troubleshooting This section describes common problems you may encounter with the Switch and possible solutions. Troubleshoot the Switch using the LEDs to detect problems. The PWR LED on the front panel does not light up. · Check the connections from your Switch to the power source. Make sure you are using the supplied power cord and that you are using an appropriate power source. Refer to the product specifications. · Make sure the power source is turned on and that the Switch is receiving sufficient power. · If these steps fail to correct the problem, contact your local distributor for assistance. The LINK/ACT LED does not light up when a device is connected. · Verify that the attached device(s) is turned on and properly connected to your Switch. · Make sure the network adapters are working on the attached devices. · Verify that proper network cable type is used and its length does not exceed 100 meters. For more information on network cable types, see Section 3.1 on page 21. The PWR LED is off and/or power is not being supplied to my PoE-enabled device. (For ES1100-8P and ES1100-16P) · Check to see that the power cord is securely connected to the ES1100-8P/16P and an appropriate power source. Make sure the power source is on and functioning properly. · Check that the Ethernet cables are connected properly and that you are using the correct type of Ethernet cable. Contact your local distributor if the problem persists. ES1100 Series User's Guide 20 Chapter 3 Troubleshooting 3.

1 Improper Network Cabling and Topology Improper network cabling or topology setup is a common cause of poor network performance or even network failure. Figure 12 Troubleshooting Improper Network Cabling and Topology PROBLEM Faulty cables Non-standard network cables Cabling Length CORRECTIVE ACTION Using faulty network cables may affect data rates and have an impact on your network performance. Replace with new standard network cables. Non-standard cables may increase the number of network collisions and cause other network problems that affect your network performance. Refer to Section 2.2.2 on page 14 for more information on network cable types. If you use longer cables than are needed, transmission quality may be affected. The network cables should not be longer than the limit of 100 meters. Too many hubs between the computers in the network A loop in the data path Too many hubs (or repeaters) between the connected computers in the network may increase the number of network collision or other network problems. Remove unnecessary hubs from the network. A data path loop forms when there is more than one path or route between two networked computers. This results in broadcast storms that will severely affect your network performance. Make sure there are no loops in your network topology. ES1100 Series User's Guide 21 Chapter 3 Troubleshooting 22 ES1100 Series User's Guide CHAPTER 4 Product Specifications These are the product specifications. Table 6 Product Specifications Dimension ES1100-8P/16P: 262mm(W) x 184mm(D) x 41mm(H) ES1100-16: 216 mm (W) x 133 mm (D) x 42 mm (H) ES1100-24: 441 mm (W) x 131 mm (D) x 44 mm (H) ES1100-24E: 267 mm (W) x 162 mm (D) x 42 mm (H) Weight ES1100-8P: 1.4 kg ES1100-16: 0.8 kg ES1100-16P: 1.7 kg ES1100-24: 1.5 kg ES1100-24E: 1.3 kg Standard IEEE802.3 10 BASE-T IEEE802.3u 100 BASE-TX IEEE802.3x full-duplex flow control IEEE802.3az (EEE) (ES1100-16/24/24E only) IEEE 802.1p Class of Service IEEE 802.3af PoE standard (ES1000-8P and ES1100-16P) Interface ES1100-8P: 8 x 10/100 Mbps auto MDI/MDI-X RJ-45 switching port (including 4 FE PoE ports) ES1100-16P: 16 x 10/100 Mbps auto MDI/MDI-X RJ-45 switch port (including 8 FE PoE ports) ES1100-16: 16 x 10/100 Mbps auto MDI/MDI-X RJ-45 switching ports ES1100-24/24E: 24 x 10/100 Mbps auto MDI/MDI-X RJ-45 switching ports Cable Connections Network Data Rate Transmission Mode Data Forwarding Rate LED Indications RJ-45 (10 BASE-T): Category 3,4,5 UTP/STP RJ-45 (100 BASE-TX): Category 5 UTP/STP 10/100 Mbps Auto-negotiation 10/100 Mbps: Full-duplex, Half-duplex 14880 pps for 10 Base-T 148800 pps for 100 Base-Tx System: PWR Ports: LINK/ACT PoE ports: PoE (for ES1100-8P/16P) ES1100 Series User's Guide 23 Chapter 4 Product Specifications Table 6 Product Specifications (continued) Memory ES1100-8P: 1K MAC entries, 96 K bytes buffer Memory ES1100-16/24/24E: 8K MAC entries, 256 K bytes buffer Memory ES1100-16P: 8K MAC entries, 160 K bytes buffer Memory Jumbo Frame Operating Temperature Storage Temperature Operating Humidity PoE Power Budget Up to 2048 bytes (for ES1100-16/24/24E) 0 ~ 50 oC -40 ~ 70 oC 10 % - 95 % (non-condensing) ES1100-8P: 64W ES1100-16P: 130W Power Supply Power rating: 100-240 V ~50/60 Hz 0.



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5 A Max Power consumption: Safety EMC ES1100-8P: 74.9W max. ES1100-16: 2.

65W max. ES1100-16P: 161.6 W max. ES1100-24: 4.05W max. ES1100-24E: 4.05W max. EN 60950-1 FCC Part15 (Class A) CE EMC (Class A) 24 ES1100 Series User's Guide APPENDIX A Legal Information Copyright Copyright © 2011 by ZyXEL Communications Corporation. The contents of this publication may not be reproduced in any part or as a whole, transcribed, stored in a retrieval system, translated into any language, or transmitted in any form or by any means, electronic, mechanical, magnetic, optical, chemical, photocopying, manual, or otherwise, without the prior written permission of ZyXEL Communications Corporation. Published by ZyXEL Communications Corporation.

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Certifications Federal Communications Commission (FCC) Interference Statement This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: · This device may not cause harmful interference. · This device must accept any interference received, including interference that may cause undesired operations. FCC Warning This device has been tested and found to comply with the limits for a Class A digital switch, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment.

This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. CE Mark Warning: This is a class A product. @@@@Any replacement will consist of a new or re-manufactured functionally equivalent product of equal or higher value, and will be solely at the discretion of ZyXEL. This warranty shall not apply if the product has been modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions. Note Repair or replacement, as provided under this warranty, is the exclusive remedy of the purchaser. This warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular use or purpose. ZyXEL shall in no event be held liable for indirect or consequential damages of any kind to the purchaser. To obtain the services of this warranty, contact your vendor. You may also refer to the warranty policy for the region in which you bought the device at http://www.zyxel.com/web/support_warranty_info.php.

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