

NETGEAR®

Installation Guide

ProSafe 16-port 10/100Mbps Unmanaged Plus Switch FS116E

Start Here

Estimated Installation Time: 5–10 minutes

Unpack the Box and Verify the Contents

When you open the box, verify that you received everything. The package includes:

- ProSafe 16-port 10/100Mbps Unmanaged Plus Switch FS116E
- AC power adapter
- Wall-mounting screws
- *Installation Guide* (this document)
- *Resource CD* (contains switch configuration software)

If you do not have everything listed above, see the support information card for contact information. If you are missing the support information card, get contact information at <http://www.NETGEAR.com> in the Technical Support section.

Prepare to Install the Switch

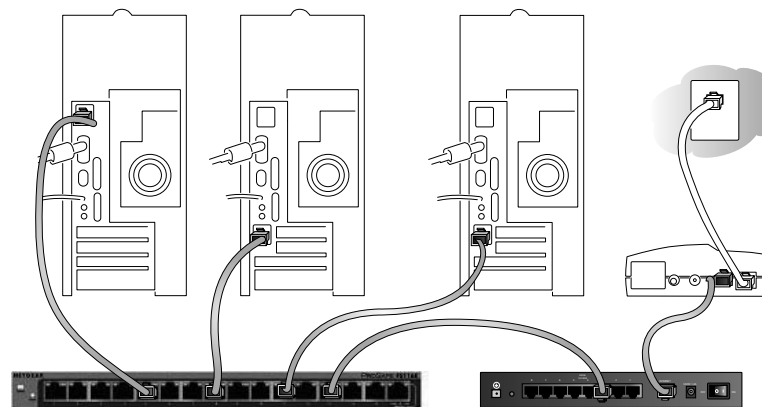
Decide where you want to place the switch. Find a flat horizontal surface such as a table, desk or shelf. The switch comes with wall-mounting screws. You can use the screws if you want to hang the switch in an open space on a wall. Make sure the selected location is:

- Not in direct sunlight or near a heater or heating vent.
- Not cluttered or crowded. There should be at least 2 inches (5 cm) of clear space on all sides of the switch.
- Well ventilated (especially if it is in a closet).

Also, you will need one Category 5e (Cat 5e) Ethernet cable with RJ-45 connectors for each device you want to connect to the switch. Each Ethernet cable must be less than 328 feet (100 meters).

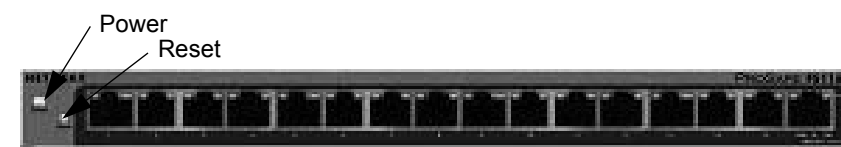
Install the Switch and Connect the Other Devices

1. Place the switch on a flat surface or hook onto the screws.
2. For each device, insert one end of an Ethernet cable into the port in the device and insert the other end into one of the Ethernet ports on the switch.



3. Connect the power adapter cord into the back of the switch and then plug the adapter into a power source (such as a wall socket or power strip).

The Power light should light up.



4. Check the LEDs to confirm that all connections are correct.

LED	Activity
Power	<ul style="list-style-type: none"> • On: 16-port Unmanaged Plus Switch has power. • Off: No power.
RJ-45 ports	<ul style="list-style-type: none"> • Right LED on: 10 Mbps connection to a powered device. • Left LED on: 100 Mbps connection to a powered device. • Blink: Activity on this port.

Set Up the Switch Configuration Utility

In order to make use of the switch's enhanced features you can install and use a switch configuration utility. This utility is on the *Resource CD* shipped with the switch.

Note: The configuration utility is installed on your PC and is only supported on MS Windows.

Install the Configuration Utility

To install the Unmanaged Plus Switch Configuration Utility:

1. Insert the *Resource CD* into a PC connected to the switch.
2. Click on **Install NETGEAR UM+ Utility** and follow the prompts to install the program. The switch configuration utility will be installed in the program directory of your PC and a **NETGEAR UM+ Utility** icon will be placed on your desktop.

Configure the Switch

To configure the switch to use enhanced features:

1. Double click the **NETGEAR UM+ Utility** icon. The configuration home screen displays.
2. The configuration utility displays a list of enhanced switches it discovers on the local network. Select the switch you want to configure.
3. You will be asked to enter the password for the switch. The default is "password".
4. Enter the desired switch configuration. Refer to the *Unmanaged Plus Switch Configuration Utility User Guide* for a description of enhanced features. The user guide can be accessed by links on the Help tab of the utility or on the *Resource CD*.

Specifications

Technical Specifications	
Standards compatibility	IEEE 802.3i 10BASE-T Ethernet, IEEE 802.3u 100BASE-TX Fast Ethernet, IEEE 802.3x Flow Control, IEEE 802.1p and TOS priority, WRR queuing with two queues
Network interface	RJ-45 connector for 10BASE-T or 100BASE-TX
Power Adapter	12V @ 1.0A DC input
Power Consumption	5.46W max
Weight	0.81 Kg (1.79 lbs)
Dimensions (W x D x H)	287 mm x 103 mm x 27 mm 11.3 in x 4.1 in x 1.1 in
Operating temperature	0 to 40° C (32 to 98° F)
Operating humidity	10% to 90% relative humidity, non-condensing
Electromagnetic compliance	CE Class A, included EN55022 (CISPR 22) and EN55024, FCC part 15 Class A, VCCI Class A, C-Tick Class A
Power adapter safety agency approvals	CE mark, Commercial UL listed (UL 60950-1), C-Tick, CB

Performance Specifications	
Frame filter rate	14,880 frames/sec max for 10M port; 148,800 frames/sec max for 100M;
Frame forward rate	14,880 frames/sec max for 10M port; 148,800 frames/sec max for 100M;
Network latency (using 64-byte packets)	100 Mbps to 100 Mbps: 10 µs max
Address database size	up to 8K MAC addresses
MAC Address Learning	Automatically updated
Queue buffer	1.25 Mb
NETGEAR Green features	<ul style="list-style-type: none"> • Auto power-down mode saves energy when ports are unused • Power-saving per port if the cable length is less than 32.8 feet (10 meters)

Troubleshooting Tips

Problem	Action
Power light is not lit	The switch has no power. Make sure that: <ul style="list-style-type: none"> • The power cord is properly connected to the switch. • The power adapter is properly connected to a functioning power outlet. If it is in a power strip, make sure the power strip is turned on. If the socket is controlled by a light switch, make sure the switch is in the on position. • You are using the NETGEAR power adapter supplied with your switch.
Port number light is not lit for a connected device, or stays on continuously	There is a hardware connection problem. <ul style="list-style-type: none"> • Make sure the cable connectors are securely plugged in at the switch and the device. • Make sure the connected device is turned on. • If the Ethernet cable is connected to a NIC or other Ethernet adapter, make sure the card or adapter is installed correctly and is working. • Make sure the cable is less than 328 feet (100 meters).

Technical Support

Thank you for selecting NETGEAR products.

After installing your device, locate the serial number on the label of your product and use it to register your product at <http://www.NETGEAR.com/register>. Registration is required before you can use our telephone support service. Registration via our website is strongly recommended.

Go to <http://kbserver.netgear.com> for product updates and Web support. For Warranty and Regional Customer Support information, see the *Resource CD* that came with your product.



This symbol was placed in accordance with the European Union Directive 2002/96 on the Waste Electrical and Electronic Equipment (the WEEE Directive). If disposed of within the European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing the WEEE Directive.

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201-11714-02



July 2009