

**802.11ac(draft 2.0)**  
**TEW-815DAP Wireless Access Point**

**TEW-815DAP**

Rev 0.1

**User Manual**

## Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **IMPORTANT NOTE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 24cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

## Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- **EN60950-1:2006+A11: 2009**  
Safety of Information Technology Equipment
- **EN 62311:2008**
- Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz)  
- General public
- **EN 300 328 V1.7.1: (2006-10)**
- Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
- **EN 301 489-1 V1.8.1: (2008-04)**
- Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
- **EN 301 489-17 V2.1.1:( 2009-05)**
- Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for 2,4 GHz wideband transmission systems, 5 GHz high performance RLAN equipment and 5,8 GHz Broadband Data Transmitting Systems
- **EN 301 893 V1.5.1(2008-12)**  
Broadband Radio Access Networks (BRAN);5 GHz high performance RLAN;Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive
- 

This device is a 2.4/5G GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF

output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.



[cs] Český [Czech]	[ <i>Jméno výrobce</i> ] tímto prohlašuje, že tento [ <i>typ zařízení</i> ] je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
[da] Dansk [Danish]	Undertegnede [ <i>fabrikantens navn</i> ] erklærer herved, at følgende udstyr [ <i>udstyrets typebetegnelse</i> ] overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
[de] Deutsch [German]	Hiermit erkläre [ <i>Name des Herstellers</i> ], dass sich das Gerät [ <i>Gerätetyp</i> ] in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
[et] Eesti [Estonian]	Käesolevaga kinnitab [ <i>tootja nimi = name of manufacturer</i> ] seadme [ <i>seadme tüüp = type of equipment</i> ] vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
[en] English	Hereby, [ <i>name of manufacturer</i> ], declares that this [ <i>type of equipment</i> ] is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
[es] Español [Spanish]	Por medio de la presente [ <i>nombre del fabricante</i> ] declara que el [ <i>clase de equipo</i> ] cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
[el] Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ [ <i>name of manufacturer</i> ] ΔΗΛΩΝΕΙ ΟΤΙ [ <i>type of equipment</i> ] ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.
[fr] Français [French]	Par la présente [ <i>nom du fabricant</i> ] déclare que l'appareil [ <i>type d'appareil</i> ] est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
[it] Italiano [Italian]	Con la presente [ <i>nome del costruttore</i> ] dichiara che questo [ <i>tipo di apparecchio</i> ] è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo [ <i>name of manufacturer / izgatavotāja nosaukums</i> ] deklarē, ka [ <i>type of equipment / iekārtas tips</i> ] atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo [ <i>manufacturer name</i> ] deklaruoja, kad šis [ <i>equipment type</i> ] atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

[nl]Nederlands [Dutch]	Hierbij verklaart <i>[naam van de fabrikant]</i> dat het toestel <i>[type van toestel]</i> in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
[mt]Malti [Maltese]	Hawnhekk, <i>[isem tal-manifattur]</i> , jiddikjara li dan <i>[il-mudel tal-prodott]</i> jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
[hu]Magyar [Hungarian]	Alulírott, <i>[gyártó neve]</i> nyilatkozom, hogy a <i>[... típus]</i> megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
[pl]Polski [Polish]	Niniejszym <i>[nazwa producenta]</i> oświadczam, że <i>[nazwa wyrobu]</i> jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
[pt]Português [Portuguese]	<i>[Nome do fabricante]</i> declara que este <i>[tipo de equipamento]</i> está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
[sl]Slovensko [Slovenian]	<i>[Ime proizvajalca]</i> izjavlja, da je ta <i>[tip opreme]</i> v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	<i>[Meno výrobcu]</i> týmto vyhlasuje, že <i>[typ zariadenia]</i> spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
[fi]Suomi [Finnish]	<i>[Valmistaja = manufacturer]</i> vakuuttaa täten että <i>[type of equipment = laitteen tyyppimerkintä]</i> tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
[sv]Svenska [Swedish]	Härmed intygar <i>[företag]</i> att denna <i>[utrustningstyp]</i> står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

### European Union Notice:

Radio products with the CE marking comply with the R&TTE Directive (1999/5/EC), the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN 60950 Product Safety
- EN 300 328 Technical requirement for radio equipment
- EN 301 489-1/-17 General EMC requirements for radio equipment
- EN 301 893 V1.5.1(2008-12)

### **Trademark recognition**

All product names used in this manual are the properties of their respective owners and are acknowledged.

# Getting Started with the TEW-815DAP

Congratulations on purchasing the TEW-815DAP! This manual provides information for setting up and configuring the TEW-815DAP. This manual is intended for both home users and professionals.

The following conventions are used in this manual:



***THE NOTE SYMBOL INDICATES ADDITIONAL INFORMATION ON THE TOPIC AT HAND.***



***THE TIP SYMBOL INDICATES HELPFULL INFORMATION AND TIPS TO IMPROVE YOUR NETWORK EXPERIENCE.***



***THE CAUTION SYMBOL ALERTS YOU TO SITUATIONS THAT MAY DEGRADE YOUR NETWORKING EXPERIENCE OR COMPROMISE***



***LIKE NOTES AND TIPS, THE IMPORTANT SYMBOL INDICATES INFORMATION THAT CAN IMPROVE NETWORKING. THIS INFORMATION SHOULD NOT BE OVERLOOKED.***

## Package Contents

- TEW-815DAP 802.11ac(draft 2.0)3x3 Gigabit Wireless Access Point
- CAT-5 Ethernet Cable (All the TEW-815DAP's Ethernet ports are Auto-MDIX)
- Power Adapter (12V, 2A)
- CD-ROM with Software and Manual
- Quick Installation Guide



Using a power supply with a different voltage than the one included with your product will cause damage and void the warranty for this product.

## Minimum System Requirements

- Ethernet-Based Cable or DSL Modem
- Computers with Windows, Macintosh, or Linux-based operating systems with an installed Ethernet adapter and CD-ROM Drive
- Internet Explorer (Version 6.0 or higher) Mozilla or Safari.

# Wireless LAN Networking

This section provides background information on wireless LAN networking technology. Consult the **Glossary** for definitions of the terminology used in this section.



THE INFORMATION IN THIS SECTION IS FOR YOUR REFERENCE. CHANGING NETWORK SETTINGS AND PARTICULARLY SECURITY SETTINGS SHOULD ONLY BE DONE BY AN AUTHORIZED ADMINISTRATOR.

## Transmission Rate (Transfer Rate)

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The TEW-815DAP provides various transmission (data) rate options for you to select. In most networking scenarios, the factory default Best (automatic) setting proves the most efficient. This setting allows your TEW-815DAP to operate at the maximum transmission (data) rate. When the communication quality drops below a certain level, the TEW-815DAP automatically switches to a lower transmission (data) rate. Transmission at lower data speeds is usually more reliable. However, when the communication quality improves again, the TEW-815DAP gradually increases the transmission (data) rate again until it reaches the highest available transmission rate.

## Types of Wireless Networks

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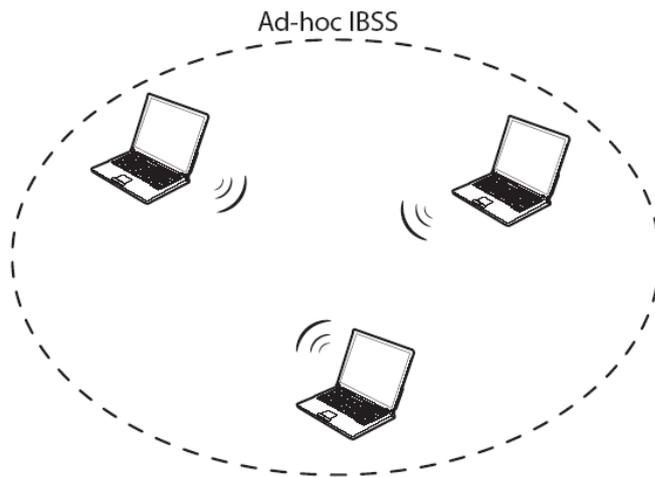
Wireless LAN networking works in either of the two modes: ad-hoc and infrastructure. In infrastructure mode, wireless devices communicate to a wired LAN via access points. Each access point and its wireless devices are known as a Basic Service Set (BSS). An Extended Service Set (ESS) is two or more BSSs in the same subnet. In ad hoc mode (also known as peer-to-peer mode), wireless devices communicate with each other directly and do not use an access point. This is an Independent BSS (IBSS).

To connect to a wired network within a coverage area using access points, set the operation mode to Infrastructure (BSS). To set up an independent wireless workgroup without an access point, use Ad-hoc (IBSS) mode.

### **AD-HOC (IBSS) NETWORK**

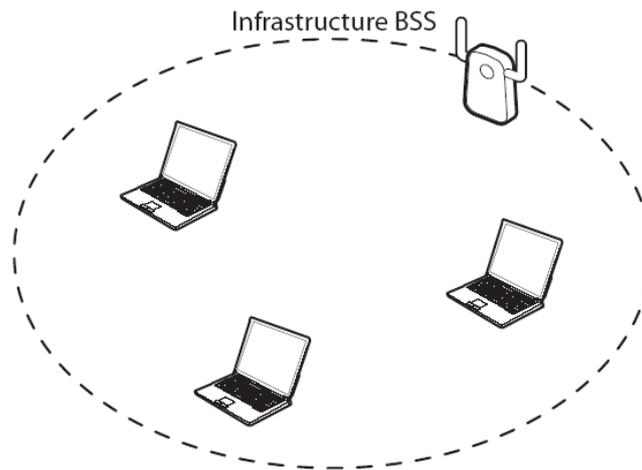
Ad-hoc mode does not require an access point or a wired network. Two or more wireless stations communicate directly to each other. An ad-hoc network may sometimes be referred to as an Independent Basic Service Set (IBSS).

To set up an ad-hoc network, configure all the stations in ad-hoc mode. Use the same SSID and channel for each station.



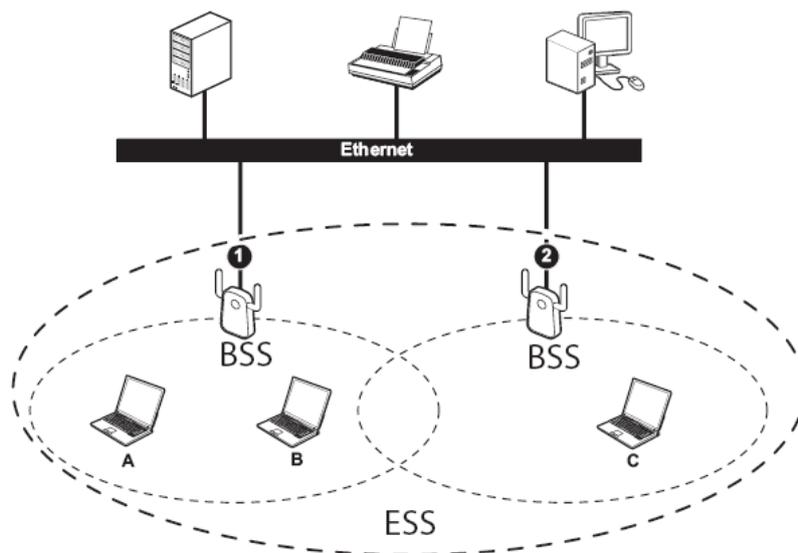
Ad-hoc (also known as peer-to-peer) network diagram

When a number of wireless stations are connected using a single access point, you have a Basic Service Set (BSS).



Infrastructure (IBSS) network diagram

In the ESS diagram below, communication is done through the access points, which relay data packets to other wireless stations or devices connected to the wired network. Wireless stations can then access resources, such as a printer, on the wired network.



Infrastructure (ESS) network diagram

In an ESS environment, users are able to move from one access point to another without losing the

connection. In the diagram below, when the user moves from BSS (1) to BSS (2) the WLAN client devices automatically switches to the channel used in BSS (2).



**Roaming in an ESS network diagram**

# Introduction

The TEW-815DAP 802.11ac (draft 2.0)3x3 Gigabit Wireless Access Point is an high-performance, wireless Access Point that supports high-speed wireless networking at home, at work or in public places.

Unlike most Access Points, the TEW-815DAP provides data transfers at up to 867Mbps when using 11AC connection. This Access Point is also back compatible with 802.11n or 802.11g or 11b devices. This means that you do not need to change your entire network to maintain connectivity. You may sacrifice some of 11ac's speed when you mix 11ac /11n and 11b/g devices, but you will not lose the ability to communicate when you incorporate the 11ac standard into your 11b/g/n network. You may choose to slowly change your network by gradually replacing the 11b/g/n devices with 11ac devices.

## Features

- 1 x 10/100/1000Mbps LAN port
- 1 x Wi-Fi Protected Setup (WPS) button
- On/Off power switch (CE version only)
- Supports simultaneous 2.4GHz / 5GHz wireless networks
- Compliant with the latest draft 802.11ac wireless technology
- Backwards compatible with IEEE 802.11a/b/g/n wireless standards
- High-speed data rates up to 1300Mbps with 802.11ac and 450Mbps with 802.11n \*
- IPv6 (Internet Protocol v6) basic function support
- Supports Wireless Distribution System (WDS) for wireless network bridging
- Advanced wireless security of up to WPA2-RADIUS
- Supports Wi-Fi Multimedia (WMM)
- Support VLAN Tagging
- One touch wireless connection using WPS button
- Configurable web interface using the latest version of Internet Explorer, FireFox, Safari and Chrome
- 3- year limited warranty

\*Maximum wireless signal rates are referenced from IEEE 802.11 theoretical specifications. Actual data throughput and coverage will vary depending on interference, network traffic, building materials and other conditions. For maximum performance of up to 1300Mbps, please use with a 3x3 802.11ac wireless adapter.

\*\* Printer Control Center utility installation required for each computer in order to access the print server

# Hardware Overview

## **LED Indications: (from bottom to top)**

- **PWR/WPS**
- **WAN**
- **LAN**
- **Wireless 2.4G**
- **Wireless 5G**

## **Rear panel: (from bottom to top)**

- **DC-IN**
- **POWER SWITCH( EU)**
- **LAN**

## Installation Considerations

The TEW-815DAP 802.11ac(draft 2.0)3X3 Gigabit Wireless Access Point lets you access your network, using a wireless connection, from virtually anywhere within its operating range. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

- 1 Keep the number of walls and ceilings between the TEW-815DAP and other network devices to a minimum - each wall or ceiling can reduce your wireless product's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
- 2 Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
- 3 Building Materials can impede the wireless signal - a solid metal door or aluminum studs may have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.
- 4 Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate extreme RF noise.

## Getting Started

For a typical wireless setup at home, please do the following:

1. You will need broadband Internet access (a Cable or DSL-subscriber line into your home or office)
2. Consult with your Cable or DSL provider for proper installation of the modem.
3. Connect the Cable or DSL modem to the TEW-815DAP Access Point (WAN port).
4. Ethernet LAN ports of the TEW-815DAP are Auto MDI/MDIX and will work with both Straight-Through and Cross-Over cable.

### Start

1. Plug in the power adapter and verify the Power & Ethernet LEDs are light.
2. To configure the Access Point, open your browser, type '**http://192.168.10.1**' into the address bar
3. At the Password prompt, the User name is '**admin**' and password is **admin**. Enter default username and password and press "Login"



## TEW-815DAP LOGIN

User Name:	<input type="text" value="admin"/>
Password:	<input type="password" value="••••"/>
Language:	<input type="text" value="English"/>

Login

## Network Status

Show your network status

BASIC

ADVANCED

### Network Status



Network Status



Wireless

#### Internet



Internet connected

#### Wireless



2.4 GHz SSID:  
TRENDnet812051f

5 GHz SSID:  
TRENDnet812ac051f



2.4 GHz: WPA2-PSK  
5 GHz: WPA2-PSK



## Wireless Setting:

You could configure the minimum number of Wireless settings for communication, such as Network Name (SSID) and Security Mode. The Access Point can be set simply with only the minimum setting items.

BASIC

ADVANCED



Network Status



Wireless

## Wireless Settings

You could configure the minimum number of Wireless settings for communication, such as Network Name (SSID) and Security Mode. The Access Point can be set simply with only the minimum setting items.

### 2.4GHz Wireless Network

Enabled	<input checked="" type="checkbox"/>
Wireless Name (SSID)	TRENDnet815051f
802.11 n-mode	Auto
Broadcast Network Name (SSID)	Enabled
Frequency (Channel)	Auto
Channel BandWidth	20 MHz

### Security Policy

Security Mode	WPA2-PSK
---------------	----------

### WPA

WPA Encryption	AES
WPA passphrase	..... <a href="#">Click here to display</a>
Network Key Rotation Interval	3600 (seconds)

Apply

Cancel

### 5GHz AC Wireless Network (802.11ac/a/n)

Enabled	<input checked="" type="checkbox"/>
Wireless Name (SSID)	TRENDnet815051f
802.11 n-mode	Auto
Broadcast Network Name (SSID)	Enabled
Frequency (Channel)	Auto
Channel BandWidth	80 MHz

Security Policy	
Security Mode	WPA2-PSK
WPA	
WPA Encryption	AES
WPA passphrase	..... <a href="#">Click here to display</a>
Network Key Rotation Interval	3600 (seconds)
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

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## Administrator

Status:

BASIC

ADVANCED



Administrator

- Management
- Upload Firmware
- Settings Management
- Status
- IPv6 Status
- System Log



Setup



Wireless 2.4GHz



Wireless 5GHz

## Status

The device status.

### System Info

Firmware Version	0.0.3.0, Jul 30, 2013
System Time	Sun Jan 1 03:24:46 2012
System Up Time	03:24:50

### Internet Configurations

Connected Type	DHCP Client
WAN IP Address	10.4.3.182
Subnet Mask	255.255.255.0
Default Gateway	10.4.3.2
Primary Domain Name Server	10.4.3.10
Secondary Domain Name Server	10.4.5.11

Renew

Release

### LAN

MAC Address	00:30:44:15:2D:BA
IP Address	192.168.10.1
Subnet Mask	255.255.255.0

### 2.4GHz Wireless

MAC Address	00:30:44:15:2D:BB
Channel	11
Network Name (SSID1) / Security Mode	TRENDnet815051f/WPA2-PSK
Multiple SSID2 / Security Mode	
Multiple SSID3 / Security Mode	

5GHz Wireless	
MAC Address	00:30:44:15:2D:BF
Channel	149
Network Name (SSID1) / Security Mode	TRENDnet815ac051f/WPA2-PSK
Multiple SSID2 / Security Mode	
Multiple SSID3 / Security Mode	

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The device status.

## Management:



AC1750 Dual Band Wireless Access Point  
TEW-815DAP

**BASIC**    **ADVANCED**

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 **Administrator**

- Management
- Upload Firmware
- Settings Management
- Status
- IPv6 Status
- System Log

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 **Setup**

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 **Wireless 2.4GHz**

### System Management

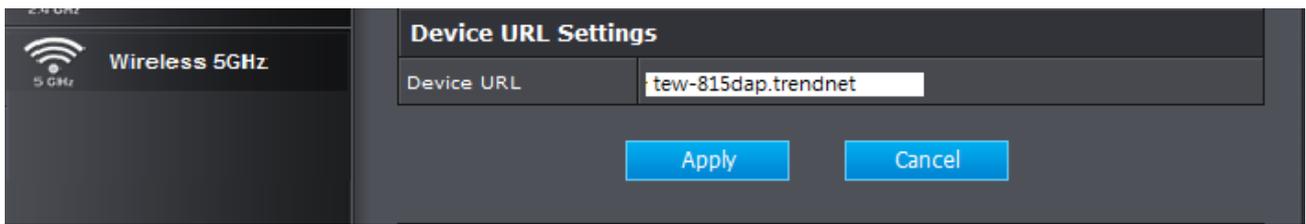
You may configure administrator account and password.

**Administrator Settings**

Account	<input type="text" value="admin"/>
Password	<input type="password" value="....."/> (Max Length: 16 characters)
Idle Timeout	<input type="text" value="600"/> (120-3600 seconds)

**Device Name Settings**

Device Name	<input type="text" value="TEW-815DAP"/>
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You may configure administrator account and password.

#### Admin Password

Enter a password for the user "admin", who will have full access to the Web-based management interface.

#### Device Name

The name of the Access Point can be changed here.

#### Enable Dynamic DNS

Enable this option only if you have purchased your own domain name and registered with a dynamic DNS service provider. The following parameters are displayed when the option is enabled.

#### Dynamic DNS Provider

Select a dynamic DNS service provider from the pull-down list.

#### Host Name

Enter your host name, fully qualified; for example: **myhost.mydomain.net**.

#### Account

Enter the account provided by your service provider. If the Dynamic DNS provider supplies only a key, enter that key in all three fields.

#### Password

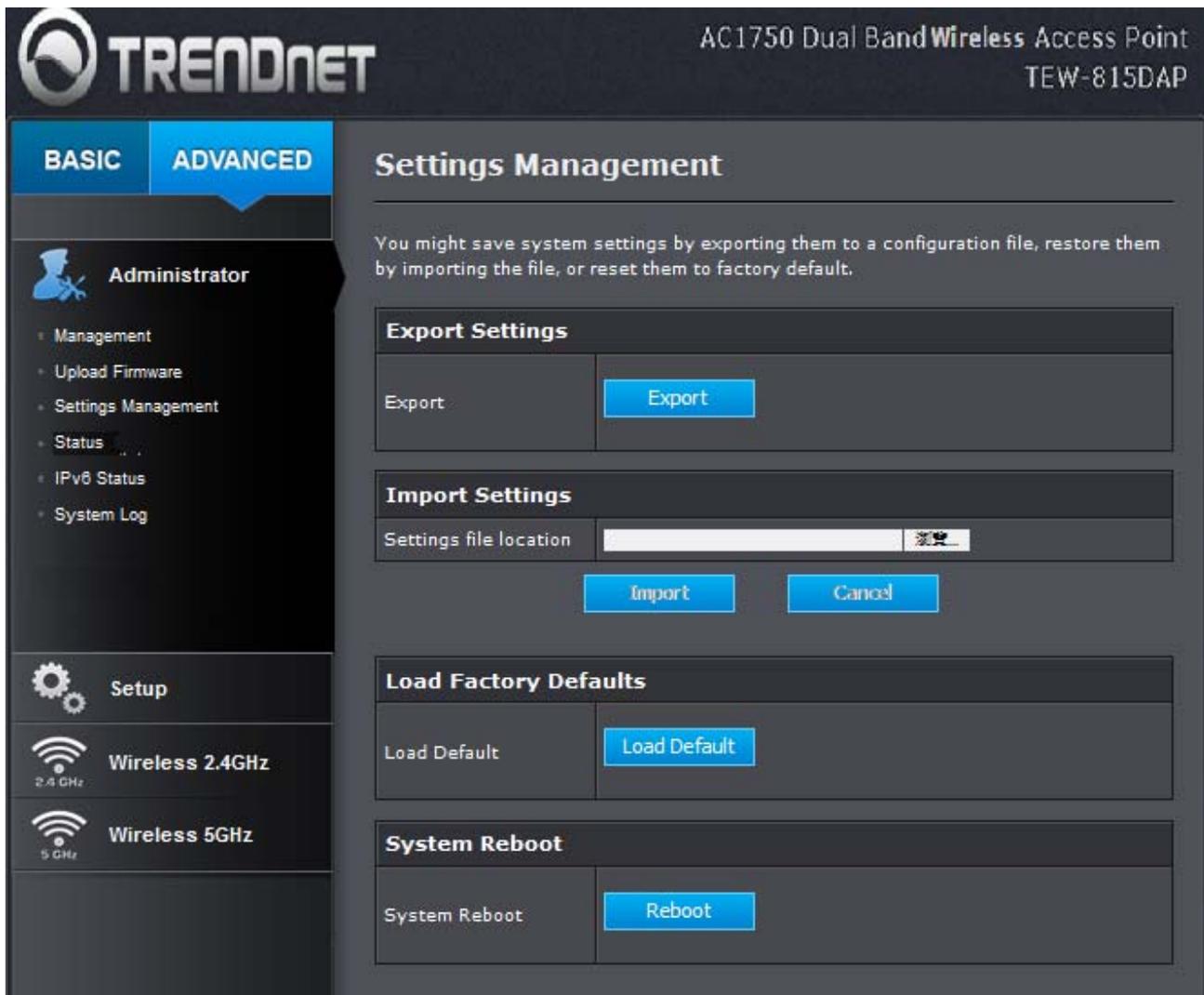
Enter the password provided by your service provider. If the Dynamic DNS provider supplies only a key, enter that key in all three fields.

## Upload Firmware:



Once you have a firmware update on your computer, use this option to browse for the file and then upload the information into the Access Point.

## Setting Management:



### Export Settings

This option allows you to export and then save the Access Point's configuration to a file on your computer. Be sure to save the configuration before performing a firmware upgrade.

### Import Settings

Use this option to restore previously saved Access Point configuration settings.

### Load Factory Defaults

This option restores all configuration settings back to the settings that were in effect at the time the Access Point was shipped from the factory. Any settings that have not been saved will be lost. If you want to save your Access Point configuration settings, use the **Export Settings** option above.

### System Reboot

This restarts the Access Point. It is useful for restarting when you are not near the device.

## Status:

The screenshot displays the TrendNet web interface for an AC1750 Dual Band Wireless Access Point (TEW-815DAP). The interface is divided into a navigation menu on the left and a main content area. The navigation menu includes sections for Administrator (Management, Upload Firmware, Settings Management, Status, IPv6 Status, System Log) and Setup (Wireless 2.4GHz, Wireless 5GHz). The main content area is titled 'Status' and shows the device status. It includes three sections: LAN, 2.4GHz Wireless, and 5GHz Wireless, each with a table of configuration details.

**LAN**

MAC Address	00:30:44:15:2D:8A
IP Address	192.168.10.1
Subnet Mask	255.255.255.0

**2.4GHz Wireless**

MAC Address	00:30:44:15:2D:8B
Channel	1
Network Name (SSID) / Security Mode	TRENDnet8120S1/WPA2-PSK
Multiple SSID2 / Security Mode	
Multiple SSID3 / Security Mode	

**5GHz Wireless**

MAC Address	00:30:44:15:2D:8F
Channel	149
Network Name (SSID) / Security Mode	TRENDnet812ac0011/WPA2-PSK
Multiple SSID2 / Security Mode	
Multiple SSID3 / Security Mode	

The device status

## IPv6 Status:

**TRENDNET** AC1750 Dual Band Wireless Access Point  
TEW-815DAP

**BASIC** **ADVANCED**

**Administrator**

- Management
- Upload Firmware
- Settings Management
- Status
- IPv6 Status
- System Log

**Setup**

**Wireless 2.4GHz**

**Wireless 5GHz**

### IPv6 Status

The device IPv6 status.

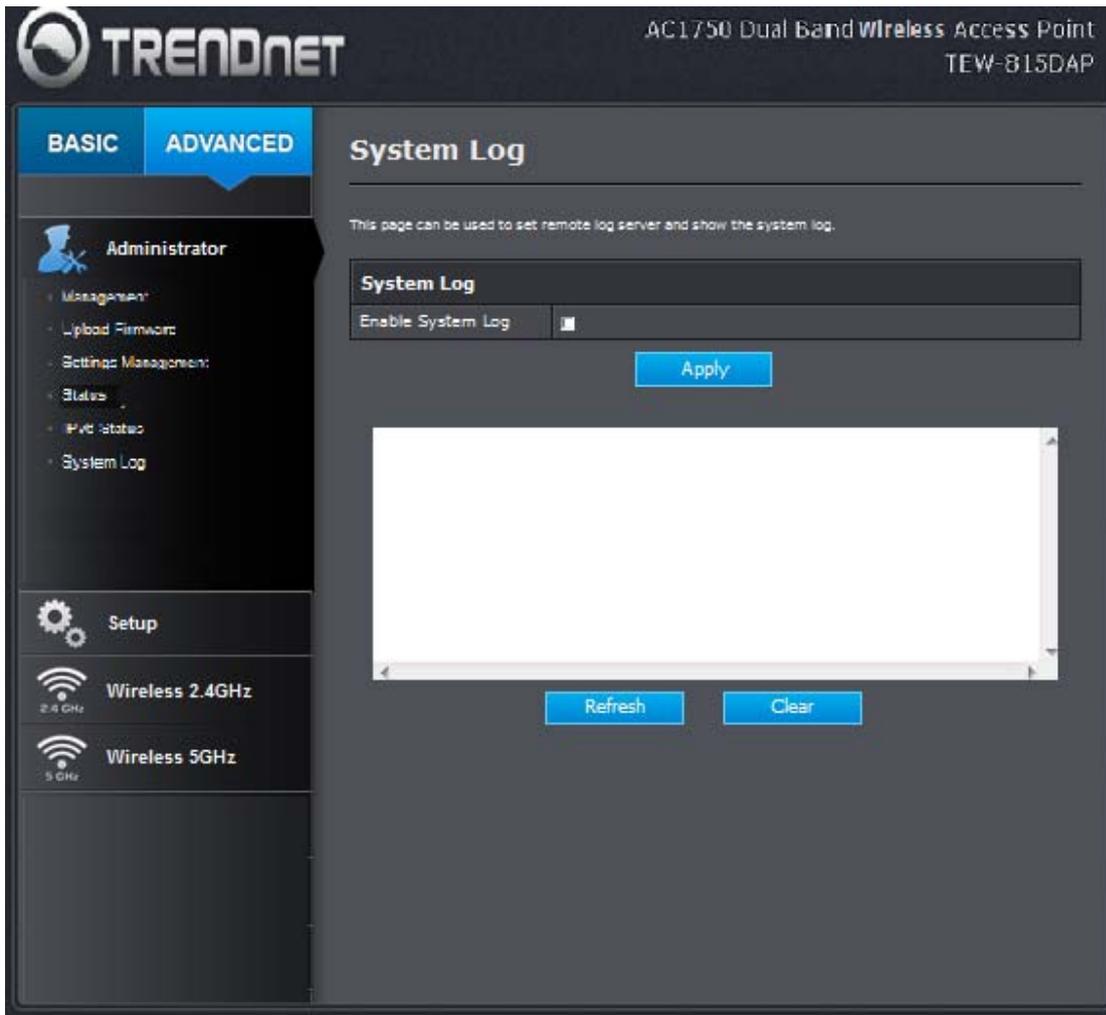
#### IPv6 Internal Network Configurations

Connected Type	
Network Status	
Network Prefix	
IPv6 Default Gateway	
IPv6 DNS Server	

#### IPv6 Guest Network Configurations

Connected Type	
Network Status	
Network Prefix	
IPv6 Default Gateway	
IPv6 DNS Server	

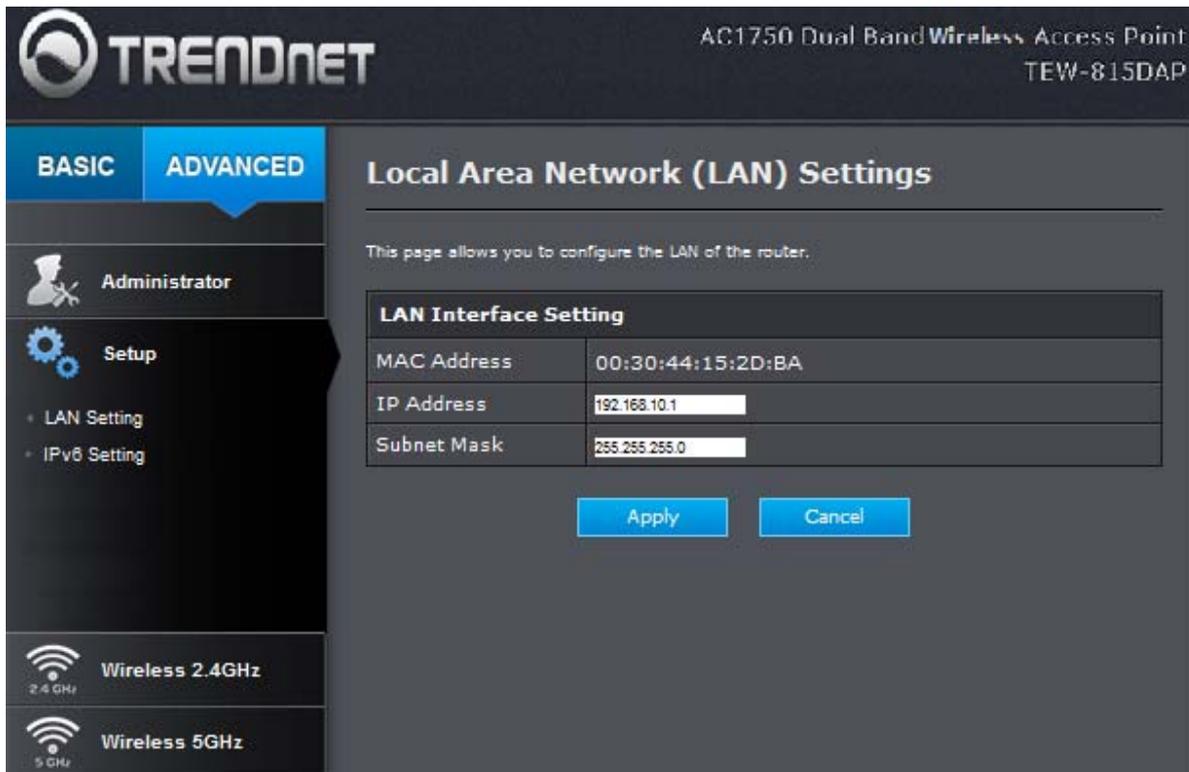
## System log:



This page can be used to set remote log server and show the system log.

# Setup

## LAN Setting:



This page allows you to configure the LAN of the Access Point

### IP Address

The IP address of the this device on the local area network. Assign any unused IP address in the range of IP addresses available for the LAN.

### Subnet Mask

The subnet mask of the local area network.

### Subnet Mask

The subnet mask of the local area network.

### Gateway

The IP address of the Access Point on the local area network. For example, 192.168.10.1.

### IP Address:

The LAN address that you want to reserve.

## MAC Address

To input the MAC address of your system, enter it manually or connect to the Access Point's Web-Management interface from the system and click the **Copy Your PC's MAC Address** button.

A MAC address is usually located on a sticker on the bottom of a network device. The MAC address is comprised of twelve digits. Each pair of hexadecimal digits are usually separated by dashes or colons such as 00-0D-88-11-22-33 or 00:0D:88:11:22:33. If your network device is a computer and the network card is already located inside the computer, you can connect to the Access Point from the computer and click the **Copy Your PC's MAC Address** button to enter the MAC address.

## IPv6 Setting:

AC1750 Dual Band Wireless Access Point  
TEW-815DAP

**BASIC** **ADVANCED**

Administrator

Setup

- LAN Setting
- IPv6 Setting

Wireless 2.4GHz

Wireless 5GHz

### IPv6 Settings

Please contact your Internet Service Provider if they support IPv6.

LAN IPv6 Setting	
Configured Networks	Internal Network
Mode	Disabled
LAN Network Prefix	
DNS Server	
6to4 subnet ID	

Apply Cancel

## **LAN IPv6 Setting**

### **6to4**

6to4 is provided as a transition for migrating from IPv4 to IPv6. It allows IPv6 packets to be transmitted over an IPv4 network through the automatic tunneling technology, and routes traffic between 6to4 and IPv6 networks.

### **Native IPv6 only**

Native IPv6 refers to the network where IPv6 is the only transport protocol running.

### **6to4 + Native IPv6**

Support 6to4 and Native IPv6 simultaneously.

### **DNS server**

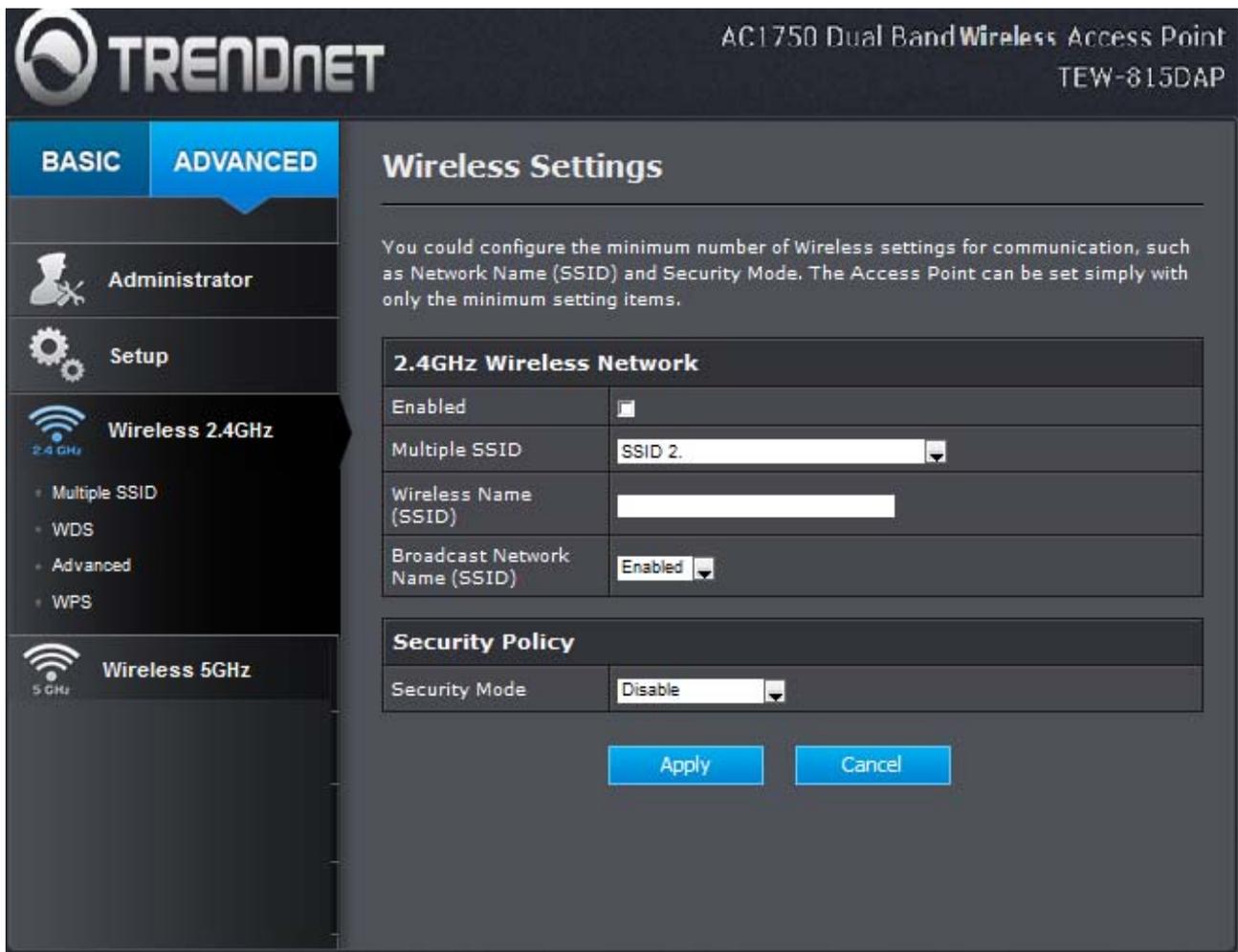
User need to key in the IPv6 DNS server address which is provided by ISP.

### **6to4 subnet ID**

Specifies, in hexadecimal notation, a subnet ID other than 0

# Wireless

## Multiple SSID:



You could configure the minimum number of Wireless settings for communication, such as Network Name (SSID) and Security Mode. The Access Point can be set simply with only the minimum setting items.

### Wireless Network Name (SSID)

When you are browsing for available wireless networks, this is the name that will appear in the list (unless Visibility Status is set to Invisible, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the pre-configured

network name. Add up to three additional SSIDs to create virtual wireless networks from one wireless Access Point device.

#### Add Additional Wireless Network Name (SSID)

To add additional wireless Network Names simply add the name to the Multiple SSID field and click on apply at the bottom of the page. When finished, go to the Security section in this Users Guide for wireless security configuration.

#### Security Mode

Unless one of these encryption modes is selected, wireless transmissions to and from your wireless network can be easily intercepted and interpreted by unauthorized users.

#### WPA-

Both of these options select some variant of Wi-Fi Protected Access (WPA) -- security standards published by the Wi-Fi Alliance. The WPA Mode further refines the variant that the Access Point should employ.

WPA Mode: WPA is the older standard; select this option if the clients that will be used with the Access Point only support the older standard. WPA2 is the newer implementation of the stronger IEEE 802.11i security standard. With the "WPA2" option, the Access Point tries WPA2 first, but falls back to WPA if the client only supports WPA. With the "WPA2 Only" option, the Access Point associates only with clients that also support WPA2 security.

Cipher Type: The encryption algorithm used to secure the data communication. TKIP (Temporal Key Integrity Protocol) provides per-packet key generation and is based on WEP. AES (Advanced Encryption Standard) is a very secure block based encryption. With the "TKIP and AES" option, the Access Point negotiates the cipher type with the client, and uses AES when available.

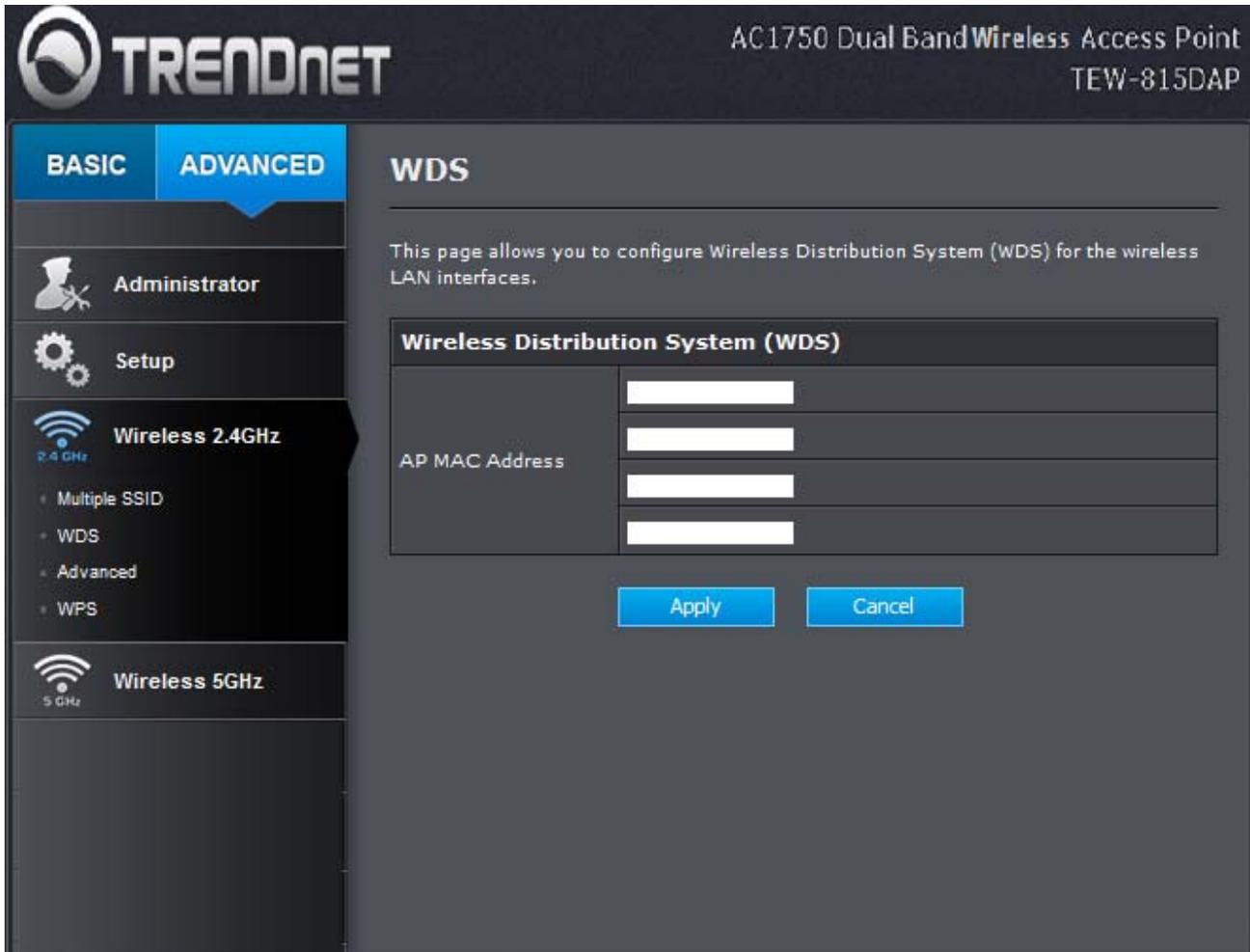
**Group Key Update Interval:** The amount of time before the group key used for broadcast and multicast data is changed.

#### WPA-PSK

This option uses Wi-Fi Protected Access with a Pre-Shared Key (PSK).

Pre-Shared Key: The key is entered as a pass-phrase of up to 63 alphanumeric characters in ASCII (American Standard Code for Information Interchange) format at both ends of the wireless connection. It cannot be shorter than eight characters, although for proper security it needs to be of ample length and should not be a commonly known phrase. This phrase is used to generate session keys that are unique for each wireless client.

## WDS:



This page allows you to configure Wireless Distribution System (WDS) for the wireless LAN interfaces.

### Wireless Distribution System (WDS)

When WDS is enabled, this access point functions as a wireless repeater and is able to wirelessly communicate with other APs via WDS links. A WDS link is bidirectional; so this AP must know the MAC Address (creates the WDS link) of the other AP, and the other AP must have a WDS link back to this AP. Make sure the APs are configured with same channel.

(Note that WDS security is incompatible with mixed mode, like WPAPSK+WPA2PSK mixed, WEP AUTO and 802.1x, both feature cannot be used at the same time).

#### Configuring WDS with TEW-815DAP

Enable the option for WDS and input the MAC Address of the wireless device that also supports WDS in to the blank fields. You can add up to four additional devices in the spaces provided.

Click on apply at the bottom of the page, to apply your setting changes.

Enable the security seeing in security page, each WDS APs need to use same security setting.

(Note: WDS supports wireless g/n modes. The use multiple Access Point will reduces the overall network throughput to ½ the TEW-815DAP.

## Advanced:

The screenshot shows the configuration interface for a Trendnet AC1750 Dual Band Wireless Access Point (TEW-815DAP). The interface is divided into a left sidebar and a main content area. The sidebar includes tabs for 'BASIC' and 'ADVANCED', and a menu with options: Administrator, Setup, Wireless 2.4GHz (with sub-options: Multiple SSID, WDS, Advanced, WPS), and Wireless 5GHz. The main content area is titled 'Advanced Wireless Settings' and contains a descriptive paragraph: 'Use the Advanced Setup page to make detailed settings for the Wireless. Advanced Setup includes items that are not available from the Basic Setup page, such as Beacon Interval, etc.' Below this is a table of settings for 'Advanced Wireless':

Advanced Wireless	
Beacon Interval	100 ms (range 20 - 1000, default 100)
DTIM	3 (range 1 - 255, default 3)
Fragment Threshold	2346 (range 256 - 2346, default 2346)
RTS Threshold	2347 (range 1 - 2347, default 2347)
Short Preamble	Disabled
XPress™ Technology	On
MCS	Auto

At the bottom of the settings table are two buttons: 'Apply' and 'Cancel'.

Use the Advanced Setup page to make detailed settings for the Wireless. Advanced Setup includes items that are not available from the Basic Setup page, such as Beacon Interval, etc

### Beacon Interval

Beacons are packets sent by a wireless Access Point to synchronize wireless devices. Specify a Beacon Period value between 20 and 1000. The default value is set to 100 milliseconds.

### DTIM

A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages. When the wireless Access Point has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Wireless clients detect the beacons and awaken to receive the broadcast and multicast messages. The default value is 1. Valid settings are between 1 and 255.

### Fragmentation Threshold

Wireless frames can be divided into smaller units (fragments) to improve performance in the presence of RF interference and at the limits of RF coverage. Fragmentation will occur when frame size in bytes is greater than the Fragmentation Threshold. This setting should remain at its default value of 2346 bytes. Setting the Fragmentation value too low may result in poor performance.

### RTS Threshold

When an excessive number of wireless packet collisions are occurring, wireless performance can be improved by using the RTS/CTS (Request to Send/Clear to Send) handshake protocol. The wireless transmitter will begin to send RTS frames (and wait for CTS) when data frame size in bytes is greater than the RTS Threshold. This setting should remain at its default value of 2346 bytes.

### Short Preamble and Slot

Using a short (400ns) guard interval can increase throughput. However, it can also increase error rate in some installations, due to increased sensitivity to radio-frequency reflections. Select the option that works best for your installation.

## WPS:

**TRENDNET** AC1750 Dual Band Wireless Access Point  
TEW-815DAP

**BASIC** **ADVANCED**

Administrator  
Setup  
Wireless 2.4GHz  
Multiple SSID  
WDS  
Advanced  
WPS  
Wireless 5GHz

### WPS

This page allows you to configure WPS.

WPS Config	
WPS Configuration	Enabled

WPS Summary	
WPS Current Status	Init
WPS Current Mode	AP with Built-in Registrar
Current SSID	TRENDnet815051f
Current Authentication Type	WPA2-PSK
Current Encryption Type	AES
Current PSK	Click here to display
Device PIN	10370339

WPS Action	
Station PIN	<input type="text"/> Note: Empty for PBC method.
	<a href="#">Add Enrollee</a>

[Apply](#) [Cancel](#)

### Enable

Enable the WPS feature.

### PIN Settings

A PIN is a unique number that can be used to add the Access Point to an existing network or to create a new network. The default PIN may be printed on the bottom of the Access Point. For extra security, a new PIN can be generated. You can restore the default PIN at any time. Only the Administrator ("admin" account) can change or reset the PIN.

### Current PIN

Shows the current value of the Access Point's PIN.

### Reset To WPS Default

Restore the default PIN of the Access Point.

**Generate New PIN**

Create a random number that is a valid PIN. This becomes the Access Point's PIN. You can then copy this PIN to the user interface of the registrar.

# Glossary

## 8

### 802.11

A family of specifications for wireless local area networks (WLANs) developed by a working group of the Institute of Electrical and Electronics Engineers (IEEE).

## A

### Access Control List

ACL. This is a database of network devices that are allowed to access resources on the network.

### Access Point

AP. Device that allows wireless clients to connect to it and access the network

### ActiveX

A Microsoft specification for the interaction of software components.

### Address Resolution Protocol

ARP. Used to map MAC addresses to IP addresses so that conversions can be made in both directions.

### Ad-hoc network

Peer-to-Peer network between wireless clients

### ADSL

Asymmetric Digital Subscriber Line

### Advanced Encryption Standard

AES. Government encryption standard

### Alphanumeric

Characters A-Z and 0-9

### Antenna

Used to transmit and receive RF signals.

### AppleTalk

A set of Local Area Network protocols developed by Apple for their computer systems

### AppleTalk Address Resolution Protocol

AARP. Used to map the MAC addresses of Apple computers to their AppleTalk network addresses, so that conversions can be made in both directions.

### **Application layer**

7th Layer of the OSI model. Provides services to applications to ensure that they can communicate properly with other applications on a network.

### **ASCII**

American Standard Code for Information Interchange. This system of characters is most commonly used for text files

### **Attenuation**

The loss in strength of digital and analog signals. The loss is greater when the signal is being transmitted over long distances.

### **Authentication**

To provide credentials, like a Password, in order to verify that the person or device is really who they are claiming to be

### **Automatic Private IP Addressing**

APIPA. An IP address that that a Windows computer will assign itself when it is configured to obtain an IP address automatically but no DHCP server is available on the network

## **B**

### **Backward Compatible**

The ability for new devices to communicate and interact with older legacy devices to guarantee interoperability

### **Bandwidth**

The maximum amount of bytes or bits per second that can be transmitted to and from a network device

### **Basic Input/Output System**

BIOS. A program that the processor of a computer uses to startup the system once it is turned on

### **Baud**

Data transmission speed

### **Beacon**

A data frame by which one of the stations in a Wi-Fi network periodically broadcasts network control data to other wireless stations.

**Bit rate**

The amount of bits that pass in given amount of time

**Bit/sec**

Bits per second

**BOOTP**

Bootstrap Protocol. Allows for computers to be booted up and given an IP address with no user intervention

**Bottleneck**

A time during processes when something causes the process to slowdown or stop all together

**Broadband**

A wide band of frequencies available for transmitting data

**Broadcast**

Transmitting data in all directions at once

**Browser**

A program that allows you to access resources on the web and provides them to you graphically

**C****Cable modem**

A device that allows you to connect a computer up to a coaxial cable and receive Internet access from your Cable provider

**CardBus**

A newer version of the PC Card or PCMCIA interface. It supports a 32-bit data path, DMA, and consumes less voltage

**CAT 5**

Category 5. Used for 10/100 Mbps or 1Gbps Ethernet connections

**Client**

A program or user that requests data from a server

**Collision**

When do two devices on the same Ethernet network try and transmit data at the exact same time.

**Cookie**

Information that is stored on the hard drive of your computer that holds your preferences to the site that gave your computer the cookie

## **D**

### **Data**

Information that has been translated into binary so that it can be processed or moved to another device

### **Data Encryption Standard**

Uses a randomly selected 56-bit key that must be known by both the sender and the receiver when information is exchanged

### **Database**

Organizes information so that it can be managed updated, as well as easily accessed by users or applications.

### **Data-Link layer**

The second layer of the OSI model. Controls the movement of data on the physical link of a network

### **DB-25**

A 25 pin male connector for attaching External modems or RS-232 serial devices

### **DB-9**

A 9 pin connector for RS-232 connections

### **dBd**

Decibels related to dipole antenna

### **dBi**

Decibels relative to isotropic radiator

### **dBm**

Decibels relative to one milliwatt

### **Decrypt**

To unscramble an encrypted message back into plain text

### **Default**

A predetermined value or setting that is used by a program when no user input has been entered for this value or setting

### **Demilitarized zone**

DMZ: A single computer or group of computers that can be accessed by both users on the Internet as well as users on the Local Network, but that is not protected by the same security as the Local Network.

### **DHCP**

Dynamic Host Configuration Protocol: Used to automatically assign IP addresses from a predefined pool of addresses to computers or devices that request them

### **Digital certificate:**

An electronic method of providing credentials to a server in order to have access to it or a network

### **Direct Sequence Spread Spectrum**

DSSS: Modulation technique used by 802.11b wireless devices

### **DMZ**

"Demilitarized Zone". A computer that logically sits in a "no-mans land" between the LAN and the WAN. The DMZ computer trades some of the protection of the Access Point's security mechanisms for the convenience of being directly addressable from the Internet.

### **DNS**

Domain Name System: Translates Domain Names to IP addresses

### **Domain name**

A name that is associated with an IP address

### **Download**

To send a request from one computer to another and have the file transmitted back to the requesting computer

### **DSL**

Digital Subscriber Line. High bandwidth Internet connection over telephone lines

### **Duplex**

Sending and Receiving data transmissions at the same time

### **Dynamic DNS service**

Dynamic DNS is provided by companies to allow users with Dynamic IP addresses to obtain a Domain Name that will always be linked to their changing IP address. The IP address is updated by either client software running on a computer or by a Access Point that supports Dynamic DNS, whenever the IP address changes

### **Dynamic IP address**

IP address that is assigned by a DHCP server and that may change. Cable Internet providers usually use this method to assign IP addresses to their customers.

## **E**

### **EAP**

Extensible Authentication Protocol

### **Email**

Electronic Mail is a computer-stored message that is transmitted over the Internet

### **Encryption**

Converting data into cyphertext so that it cannot be easily read

### **Ethernet**

The most widely used technology for Local Area Networks.

## **F**

### **Fiber optic**

A way of sending data through light impulses over glass or plastic wire or fiber

### **File server**

A computer on a network that stores data so that the other computers on the network can all access it

### **File sharing**

Allowing data from computers on a network to be accessed by other computers on the network with different levels of access rights

### **Firewall**

A device that protects resources of the Local Area Network from unauthorized users outside of the local network

### **Firmware**

Programming that is inserted into a hardware device that tells it how to function

### **Fragmentation**

Breaking up data into smaller pieces to make it easier to store

### **FTP**

File Transfer Protocol. Easiest way to transfer files between computers on the Internet

### **Full-duplex**

Sending and Receiving data at the same time

## G

### Gain

The amount an amplifier boosts the wireless signal

### Gateway

A device that connects your network to another, like the internet

### Gbps

Gigabits per second

### Gigabit Ethernet

Transmission technology that provides a data rate of 1 billion bits per second

### GUI

Graphical user interface

## H

### H.323

A standard that provides consistency of voice and video transmissions and compatibility for videoconferencing devices

### Half-duplex

Data cannot be transmitted and received at the same time

### Hashing

Transforming a string of characters into a shorter string with a predefined length

### Hexadecimal

Characters 0-9 and A-F

### Hop

The action of data packets being transmitted from one Access Point to another

### Host

Computer on a network

### HTTP

Hypertext Transfer Protocol is used to transfer files from HTTP servers (web servers) to HTTP clients (web browsers)

### HTTPS

HTTP over SSL is used to encrypt and decrypt HTTP transmissions

### **Hub**

A networking device that connects multiple devices together

### **ICMP**

Internet Control Message Protocol

### **IEEE**

Institute of Electrical and Electronics Engineers

### **IGMP**

Internet Group Management Protocol is used to make sure that computers can report their multicast group membership to adjacent Access Points

### **IIS**

Internet Information Server is a WEB server and FTP server provided by Microsoft

### **IKE**

Internet Key Exchange is used to ensure security for VPN connections

### **Infrastructure**

In terms of a wireless network, this is when wireless clients use an Access Point to gain access to the network

### **Internet**

A system of worldwide networks which use TCP/IP to allow for resources to be accessed from computers around the world

### **Internet Explorer**

A World Wide Web browser created and provided by Microsoft

### **Internet Protocol**

The method of transferring data from one computer to another on the Internet

### **Internet Protocol Security**

IPsec provides security at the packet processing layer of network communication

### **Internet Service Provider**

An ISP provides access to the Internet to individuals or companies

### **Intranet**

A private network

## **Intrusion Detection**

A type of security that scans a network to detect attacks coming from inside and outside of the network

## **IP**

Internet Protocol

## **IP address**

A 32-bit number, when talking about Internet Protocol Version 4, that identifies each computer that transmits data on the Internet or on an Intranet

## **IPsec**

Internet Protocol Security

## **IPX**

Internetwork Packet Exchange is a networking protocol developed by Novell to enable their Netware clients and servers to communicate

## **ISP**

Internet Service Provider

## **J**

### **Java**

A programming language used to create programs and applets for web pages

## **K**

### **Kbps**

Kilobits per second

### **Kbyte**

Kilobyte

## **L**

### **L2TP**

Layer 2 Tunneling Protocol

### **LAN**

Local Area Network

### **Latency**

The amount of time that it takes a packet to get from the one point to another on a network. Also referred to as delay

### **LED**

Light Emitting Diode

### **Legacy**

Older devices or technology

### **Local Area Network**

A group of computers in a building that usually access files from a server

### **LPR/LPD**

"Line Printer Requestor"/"Line Printer Daemon". A TCP/IP protocol for transmitting streams of printer data.

## **M**

### **MAC Address**

A unique hardware ID assigned to every Ethernet adapter by the manufacturer.

### **Mbps**

Megabits per second

### **MDI**

Medium Dependent Interface is an Ethernet port for a connection to a straight-through cable

### **MDIX**

Medium Dependent Interface Crossover, is an Ethernet port for a connection to a crossover cable

### **MIB**

Management Information Base is a set of objects that can be managed by using SNMP

### **Modem**

A device that Modulates digital signals from a computer to an analog signal in order to transmit the signal over phone lines. It also Demodulates the analog signals coming from the phone lines to digital signals for your computer

### **MPPE**

Microsoft Point-to-Point Encryption is used to secure data transmissions over PPTP connections

### **MTU**

Maximum Transmission Unit is the largest packet that can be transmitted on a packet-based network like the Internet

### **Multicast**

Sending data from one device to many devices on a network

## **N**

### **NAT**

Network Address Translation allows many private IP addresses to connect to the Internet, or another network, through one IP address

### **NetBEUI**

NetBIOS Extended User Interface is a Local Area Network communication protocol. This is an updated version of NetBIOS

### **NetBIOS**

Network Basic Input/Output System

### **Netmask**

Determines what portion of an IP address designates the Network and which part designates the Host

### **Network Interface Card**

A card installed in a computer or built onto the motherboard that allows the computer to connect to a network

### **Network Layer**

The third layer of the OSI model which handles the routing of traffic on a network

### **Network Time Protocol**

Used to synchronize the time of all the computers in a network

### **NIC**

Network Interface Card

### **NTP**

Network Time Protocol

## **O**

### **OFDM**

Orthogonal Frequency-Division Multiplexing is the modulation technique for 802.11g

## **OSI**

Open Systems Interconnection is the reference model for how data should travel between two devices on a network

## **OSPF**

Open Shortest Path First is a routing protocol that is used more than RIP in larger scale networks because only changes to the routing table are sent to all the other Access Points in the network as opposed to sending the entire routing table at a regular interval, which is how RIP functions

# **P**

## **Password**

A sequence of characters that is used to authenticate requests to resources on a network

## **Personal Area Network**

The interconnection of networking devices within a range of 10 meters

## **Physical layer**

The first layer of the OSI model. Provides the hardware means of transmitting electrical signals on a data carrier

## **Ping**

A utility program that verifies that a given Internet address exists and can receive messages. The utility sends a control packet to the given address and waits for a response.

## **PoE**

Power over Ethernet is the means of transmitting electricity over the unused pairs in a category 5 Ethernet cable

## **POP3**

Post Office Protocol 3 is used for receiving email

## **Port**

A logical channel endpoint in a network. A computer might have only one physical channel (its Ethernet channel) but can have multiple ports (logical channels) each identified by a number.

## **PPP**

Point-to-Point Protocol is used for two computers to communicate with each over a serial interface, like a phone line

## **PPPoE**

Point-to-Point Protocol over Ethernet is used to connect multiple computers to a remote server over Ethernet

### **PPTP**

Point-to-Point Tunneling Protocol is used for creating VPN tunnels over the Internet between two networks

### **Preamble**

Used to synchronize communication timing between devices on a network

## **Q**

### **QoS**

Quality of Service

## **R**

### **RADIUS**

Remote Authentication Dial-In User Service allows for remote users to dial into a central server and be authenticated in order to access resources on a network

### **Reboot**

To restart a computer and reload it's operating software or firmware from nonvolatile storage.

### **Rendezvous**

Apple's version of UPnP, which allows for devices on a network to discover each other and be connected without the need to configure any settings

### **Repeater**

Retransmits the signal of an Access Point in order to extend it's coverage

### **RIP**

Routing Information Protocol is used to synchronize the routing table of all the Access Points on a network

### **RJ-11**

The most commonly used connection method for telephones

### **RJ-45**

The most commonly used connection method for Ethernet

### **RS-232C**

The interface for serial communication between computers and other related devices

## **RSA**

Algorithm used for encryption and authentication

## **S**

### **Server**

A computer on a network that provides services and resources to other computers on the network

### **Session key**

An encryption and decryption key that is generated for every communication session between two computers

### **Session layer**

The fifth layer of the OSI model which coordinates the connection and communication between applications on both ends

### **Simple Mail Transfer Protocol**

Used for sending and receiving email

### **Simple Network Management Protocol**

Governs the management and monitoring of network devices

### **SIP**

Session Initiation Protocol. A standard protocol for initiating a user session that involves multimedia content, such as voice or chat.

### **SMTP**

Simple Mail Transfer Protocol

### **SNMP**

Simple Network Management Protocol

### **SOHO**

Small Office/Home Office

### **SPI**

Stateful Packet Inspection

### **SSH**

Secure Shell is a command line interface that allows for secure connections to remote computers

### **SSID**

Service Set Identifier is a name for a wireless network

### **Stateful inspection**

A feature of a firewall that monitors outgoing and incoming traffic to make sure that only valid responses to outgoing requests are allowed to pass through the firewall

### **Subnet mask**

Determines what portion of an IP address designates the Network and which part designates the Host

### **Syslog**

System Logger -- a distributed logging interface for collecting in one place the logs from different sources. Originally written for UNIX, it is now available for other operating systems, including Windows.

## **T**

### **TCP**

Transmission Control Protocol

### **TCP Raw**

A TCP/IP protocol for transmitting streams of printer data.

### **TCP/IP**

Transmission Control Protocol/Internet Protocol

### **TFTP**

Trivial File Transfer Protocol is a utility used for transferring files that is simpler to use than FTP but with less features

### **Throughput**

The amount of data that can be transferred in a given time period

### **Traceroute**

A utility displays the routes between your computer and specific destination

## **U**

### **UDP**

User Datagram Protocol

### **Unicast**

Communication between a single sender and receiver

**Universal Plug and Play**

A standard that allows network devices to discover each other and configure themselves to be a part of the network

**Upgrade**

To install a more recent version of a software or firmware product

**Upload**

To send a request from one computer to another and have a file transmitted from the requesting computer to the other

**UPnP**

Universal Plug and Play

**URL**

Uniform Resource Locator is a unique address for files accessible on the Internet

**USB**

Universal Serial Bus

**UTP**

Unshielded Twisted Pair

**V****Virtual Private Network**

VPN: A secure tunnel over the Internet to connect remote offices or users to their company's network

**VLAN**

Virtual LAN

**Voice over IP**

Sending voice information over the Internet as opposed to the PSTN

**VoIP**

Voice over IP

**W****Wake on LAN**

Allows you to power up a computer through its Network Interface Card

**WAN**

Wide Area Network

**WCN**

Windows Connect Now. A Microsoft method for configuring and bootstrapping wireless networking hardware (access points) and wireless clients, including PCs and other devices.

**WDS**

Wireless Distribution System. A system that enables the interconnection of access points wirelessly.

**Web browser**

A utility that allows you to view content and interact with all of the information on the World Wide Web

**WEP**

Wired Equivalent Privacy is security for wireless networks that is supposed to be comparable to that of a wired network

**Wide Area Network**

The larger network that your LAN is connected to, which may be the Internet itself, or a regional or corporate network

**Wi-Fi**

Wireless Fidelity

**Wi-Fi Protected Access**

An updated version of security for wireless networks that provides authentication as well as encryption

**Wireless ISP**

A company that provides a broadband Internet connection over a wireless connection

**Wireless LAN**

Connecting to a Local Area Network over one of the 802.11 wireless standards

**WISP**

Wireless Internet Service Provider

**WLAN**

Wireless Local Area Network

**WPA**

Wi-Fi Protected Access. A Wi-Fi security enhancement that provides improved data encryption, relative to WEP.

## X

### **xDSL**

A generic term for the family of digital subscriber line (DSL) technologies, such as ADSL, HDSL, RADSL, and SDSL.

## Y

### **Yagi antenna**

A directional antenna used to concentrate wireless signals on a specific location