

AS5 User Manual

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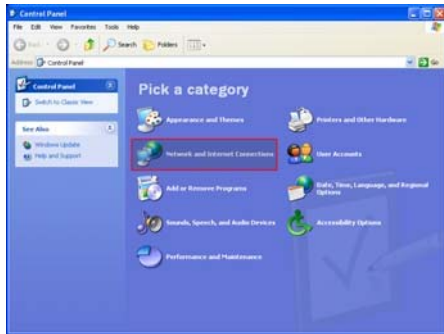
Chapter 1 : PC Preparation.

1-1. Computer set as the fixed IP :

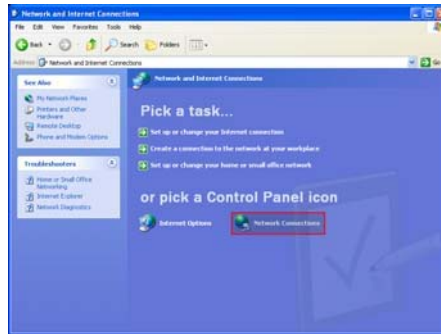
- a. From the [Start Menu] select [Settings] → select [Control Panel]
→ select [Network and Internet] → select [Network Connections]
→ Select [Ethernet Icon] → click and press right button of the mouse,
and select [properties].



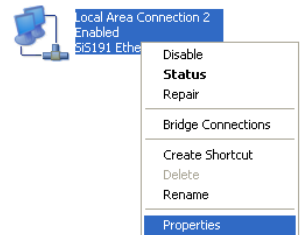
a1



a2

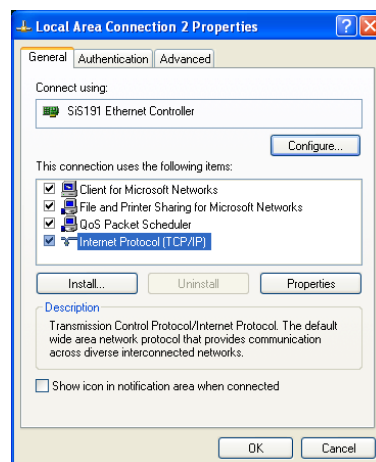


a3

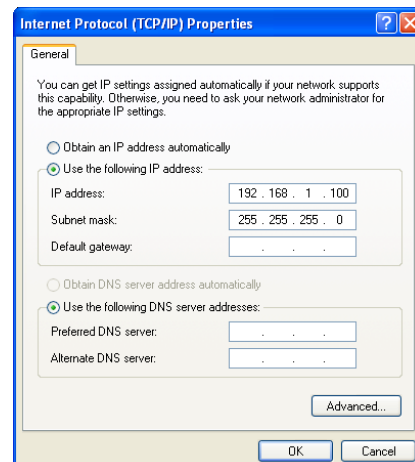


a4

- b. In [General] tab, Please select [Internet Protocol (TCP/IP)]
→ click [Properties].
- c. Select both [Use the following IP address] and [Use the following DNS server addresses]. Enter the IP address between 192.168.1.2~192.168.1.254 range ; subnet mask is 255.255.255.0 → click [OK].



b

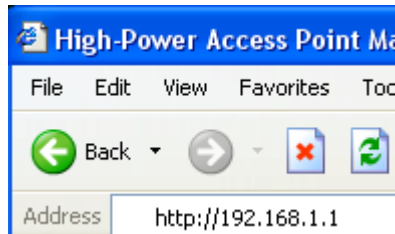


c

- d. Return back to [Local Area Connection Properties] screen
→ click [OK] to close it.

1-2. Access the setup page :

- a. Launch the web browser (this section take IE6.0 for instance).
- b. Type “ 192.168.1.1 ” in the address tab then press enter.



- c. It shows up the login page, type “admin” in [password] → click [login]



Chapter 2 : How to get the AS5 setting information?

2-1. System Status :

In this page show some information such as Hostname, Country Code, Uptime, Firmware Version, Wireless device MAC address, Wired device MAC address and Device Temperature.

High-Power Access Point Management Interface

Hostname: AP48
00:06, Jan 01st, 2000

Status	Network	Device	Security	Localization
System Information				
System	Hostname: AP48			
Wireless	Country Code: WILDCARD			
Security	Uptime: 6 min			
	Firmware ver.: 1.29-rc5			
	Wireless dev. MAC addr.: 00:40:C7: : :			
	Wired dev. MAC addr.: 00:40:C7: : :			
	Device temperature: 36 °C 96.8 °F			

2-2. Wireless Status :

In this page show some Wireless working information such as mode, ESSID, Band, Channel, 4-address Headers flag, Encryption mode, Power and RSSI. If the device work in AP-Bridge or AP-Router mode you can find out the “Client list” option beside of mode information.

High-Power Access Point Management Interface

Hostname: AP48
00:07, Jan 01st, 2000

Status	Network	Device	Security	Localization
Wireless Information				
System	Mode: Access Point Bridge (Client List)			
Wireless	ESSID: AP48			
Security	Band: Auto			
	Channel: 2.412 GHz (Channel 1)			
	4-addr. Headers: Enabled			
	Encryption: none			
	Power: Full power			
	RSSI: 0			

High-Power Access Point Management Interface

Hostname: AP48
00:16, Jan 01st, 2000

Status	Network	Device	Security	Localization
Wireless Information				
System	Mode: Client Bridge(Not-Associated)			
Wireless	ESSID: AP48			
Security	Band: Auto			
	Channel: 5.785 GHz (Channel 157)			
	4-addr. Headers: Enabled			
	Encryption: none			
	Power: Full power			
	RSSI: 0			

MAC Address	Bit Rate	RSSI	Idle
<input type="button" value="Refresh"/>			

2-3. Security Status :

In this page show Access Control working mode (None, Acept, Deny) or SNMP mode.

High-Power Access Point Management Interface

Hostname: AP48
00:14, Jan 01st, 2000

Status	Network	Device	Security	Localization
Security Information				
System	Access Control: None			
Wireless	SNMP: Enable			
Security				

Chapter 3 : How to Set the AS5 Network information?

3-1. Wireless Settings :

there are 3 kinds of modes for wireless network settings.

a. AP Bridge :

SSID : A SSID(service set identifier) is a name used to identify the particular 802.11 wireless LANs which an user wants to attach.

Warning : Only A to Z, a to z, 0 to 9 and under line(' _ ') can be used for SSID.

Frequency Band : This option can be choosed for 802.11 band.

802.11a only, 802.11b only, 802.11g only, 802.11bg mix or Auto.

4-Address Headers : To prevent the MAC addresses of client packets across links between access points if 4-Address Headers is enable.

Channel : Which working channel to be choosed.

Distance : Setting the timeout of device Ack.

Encryption : Selection of different kinds of Encryption mode.

It support WEP, WPA-PSK(AES), WPA-PSK(TKIP), WPA-PSK2(AES), WPA-PSK2(TKIP).

The screenshot shows a web interface for configuring network settings. The top navigation bar includes tabs for Status, Network, Device, Security, and Localization, with a Log Out button on the right. The left sidebar is titled 'Network' and contains links for Wireless Settings, IP Settings, Antenna Settings, and DHCP Settings. The main content area is titled 'Network Function Settings' and displays a form with the following fields:

- Mode:** Radio buttons for AP Bridge (selected), CPE, and CPE Router.
- SSID:** Text input field containing 'AP48' and a checkbox for 'Hide SSID'.
- Frequency Band:** Radio buttons for Auto (selected), 11a, 11b only, 11g only, and 11b/g.
- 4-Address Headers:** Radio buttons for ON (selected) and OFF.
- Transmit Power:** A dropdown menu set to 'Full power'.
- Channel:** A dropdown menu set to '1 (2.412 GHz)'.
- Distance:** A text input field set to '0' with a note 'M (1-50000, 0 is auto.)'.
- Encryption:** A dropdown menu set to 'None'.

An 'Apply' button is located at the bottom left of the settings form.

b. CPE :

SSID : Choose which AP's SSID want to associate.

It can also use "Site Survey" to search AP's SSID.

Warning : Only A to Z, a to z, 0 to 9 and under line(' _ ') can be used for SSID.

Enable Burst : To enable Burst mode or not.

4-Address Headers : To prevent the MAC addresses of client packets across links between access points if 4-Address Headers is enable.

Encryption : Selection of different kinds of Encryption mode.

It support WEP, WPA-PSK(AES), WPA-PSK(TKIP), WPA-PSK 2(AES), WPA-PSK2(TKIP).

The screenshot shows the 'Network Function Settings' page for a CPE device. The 'CPE' radio button is selected. The settings are as follows:

Setting	Value
SSID	AP48 (Site Survey)
Enable Burst	OFF
Enable 4-Address Headers	ON
Transmit Power	Full power
Distance	0 M (1-50000, 0 is auto.)
Encryption	None

Buttons: Apply, Log Out

c. CPE Router:

SSID : Choose which AP's SSID want to associate.

It can also use "Site Survey" to search AP's SSID.

Warning : Only A to Z, a to z, 0 to 9 and under line(' _ ') can be used for SSID.

Enable Burst : To enable Burst mode or not.

4-Address Headers : To prevent the MAC addresses of client packets across links between access points if 4-Address Headers is enable.

Encryption : Selection of different kinds of Encryption mode.

It support WEP, WPA-PSK(AES), WPA-PSK(TKIP), WPA-PSK 2(AES), WPA-PSK2(TKIP).

The screenshot shows the 'Network Function Settings' page for a CPE Router device. The 'CPE Router' radio button is selected. The settings are as follows:

Setting	Value
SSID	AP48 (Site Survey)
Enable Burst	OFF
Enable 4-Address Headers	ON
Transmit Power	Full power
Distance	0 M (1-50000, 0 is auto.)
Encryption	None

Buttons: Apply, Log Out

The 'Site Survey' page displays a table of detected access points. Each row includes the SSID, MAC Address, Channel, Signal strength (represented by a bar chart), and Encryption type.

SSID	MAC Address	Channel	Signal	Encryption
AP48	00:C0:CA: : :	1	[Signal Bar Chart]	NO
MSI_A2P	00:19:DB: : :	6	[Signal Bar Chart]	WEP
jjPlusAPZ	00:13:49: : :	3	[Signal Bar Chart]	WEP
tcc	00:0E:6A: : :	11	[Signal Bar Chart]	WEP
YYCA	00:13:D4: : :	1	[Signal Bar Chart]	WPA-PSK

Buttons: Refresh

3-1.5. Encryption Setting :

WEP : Support 64 / 128 / 256 bit ASCII (5 / 13 / 29 char).

Support 64 / 128 / 256 bit Hex (10 / 26 / 58 char).

WPA-PSK (AES) : Support 8 to 63 char.

WPA-PSK (TKIP) : Support 8 to 63 char.

WPA2-PSK (AES) : Support 8 to 63 char.

WPA2-PSK (TKIP) : Support 8 to 63 char.

The first screenshot shows a dropdown menu for Encryption with options: None, WEP, WPA-PSK (AES), WPA-PSK (TKIP), WPA2-PSK (AES), and WPA2-PSK (TKIP). The second screenshot shows the WEP configuration page with fields for Key Index (1), Key 1, Key 2, Key 3, and Key 4, each with ASCII and Hex radio buttons. The third screenshot shows the WPA-PSK2 (TKIP) configuration page with a Key field.

3-2. Antenna Setting :

To select Antenna Connector.

Warning : Please contact your hardware provider to see if the hardware supports antenna selection.

The screenshot shows the Antenna Settings page. The sidebar has Network, Wireless Settings, IP Settings, Antenna Settings, and DHCP Settings. The main content area shows Tx Antenna and Rx Antenna settings, each with Auto, Antenna1, and Antenna2 radio buttons.

3-3. DHCP Setting :

To set DHCP configure.

Starting Address : To setting DHCP start address.

IP Pool : The number of the available IP addresses that DHCP offers.

Max lease time : Lease times should not be very short (less than one hour).

Warning: The sum of IP pools and start address ***DONOT*** exceeds "254".

The screenshot shows the DHCP Settings page. The sidebar has Network, Wireless Settings, IP Settings, Antenna Settings, and DHCP Settings. The main content area shows Starting Address (192.168.1.100), IP pool (150), and Max lease time (12 hr (1-48)).

3-4. IP Settings :

there are 3 kinds of options for wired network setting.

a. IP Alias : This IP address is mainly for users to access management interface.

Network IP Settings

☐ Wired LAN IP ☐ Wireless WAN IP ☒ IP Alias

☒ Enable IP Alias

IP Address	192	168	1	1
Netmask Address	255	255	0	0

Apply

b. Wired LAN IP :

DHCP : Automatically get the IP address from DHCP Server.

Static IP : Assign a Static IP to this Device.

Status Network Device Security Localization Log Out

Network

Wireless Settings

IP Settings

Antenna Settings

DHCP Settings

Network IP Settings

☐ Wired LAN IP ☒ Wireless WAN IP ☐ IP Alias

☐ DHCP Client

☒ Static IP

IP Address	192	168	100	1
Netmask Address	255	255	255	0
Default Gateway				
DNS Server				

Apply

c. Wireless WAN IP :

DHCP : Automatically get the IP address from DHCP Server.

Static IP : Assign a Static IP to this Device.

Wireless WAN IP option only works on CPE Router mode in Wireless Settings. It is the IP settings of target network which mode could be selected depend on the network environment.

Chapter 4 : AS5 Device Function.

4-1. Bandwidth settings :

Setup the maximum the wireless Upload and Download Bandwidth.

The screenshot shows the 'Bandwidth Settings' page. On the left is a sidebar with a 'Device' menu containing 'Bandwidth', 'Firmware Upgrade', 'Reboot', and 'Backup / Restore'. The main area is titled 'Bandwidth Settings' and contains two rows of settings. The first row is for 'Upload' with a checkbox and a text input field followed by 'Kbit'. The second row is for 'Download' with a checkbox and a text input field followed by 'Kbit'. An 'Apply' button is located below these settings. At the top of the interface, there are tabs for 'Status', 'Network', 'Device', 'Security', and 'Localization', along with a 'Log Out' button.

4-2. Firmware Upgrade :

Firmware upgrade procedure:

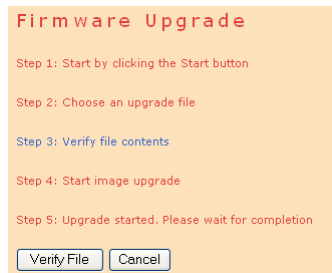
Step1 : click “start” button to start up firmware upgrade.

The screenshot shows the 'Firmware Upgrade' page. It lists five steps: 'Step 1: Start by clicking the Start button', 'Step 2: Choose an upgrade file', 'Step 3: Verify file contents', 'Step 4: Start image upgrade', and 'Step 5: Upgrade started. Please wait for completion'. A 'Start' button is located at the bottom of the page.

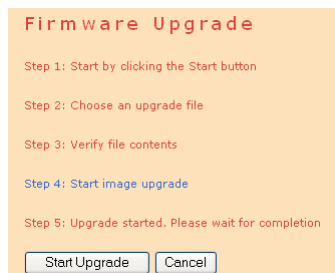
Step2 : a. Click “Browse...” button to select the firmware image file.
b. After selection click “Open”.
c. Click “Upload” button to upload image otherwise Click “Cancel” button to cancel firmware upgrade function.

The screenshot shows the 'Firmware Upgrade' page, specifically the 'Step 2: Choose an upgrade file' section. It displays a text input field containing the filename 'vt-jjplus-2.6-update.img', followed by 'Browse...', 'Upload File', and 'Cancel' buttons.

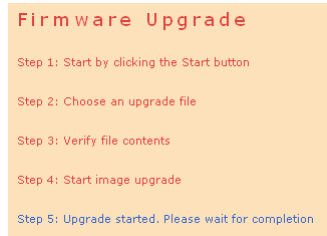
Step3 : click “Verify” button to start up verify firmware image.



Step4 : Click “Start Upgrade” button to upgrade image or Click “Cancel” button to cancel firmware upgrade function.



Step5 : Click “Reboot” button to restart device when upgrade bar was 100% Complete.



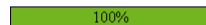
Firmware Upgrade

Upgrade started. Please wait for completion



Firmware Upgrade

Upgrade complete



☒ Reset device to factory settings. WARNING: this will erase all user settings

4-3. Device Reboot :

To reboot the device.

Status	Network	Device	Security	Localization	Log Out
Device		Device Reboot			
Bandwidth		Do you want to reboot?			
Firmware Upgrade		<input type="button" value="Yes"/>			
Reboot					
Backup / Restore					
Hostname					

4-4. Hostname :

The identification of the device.

The hostname is used to identify a particular host in various forms of electronic communication.

Status	Network	Device	Security	Localization	Log Out
Device		Hostname			
Bandwidth		<input type="text" value="AP48"/>			
Firmware Upgrade		<input type="button" value="Apply"/>			
Reboot					
Backup / Restore					
Hostname					

4-5. Backup / Restore :

Backup or restore setting.

Status	Network	Device	Security	Localization	Log Out
Device		Backup/Restore			
Bandwidth		This page can backup/restore the system settings.			
Firmware Upgrade		Backup Settings <input type="button" value="Backup"/>			
Reboot		<input type="text" value=""/> <input type="button" value="Browse..."/>			
Backup / Restore		Restore Settings <input type="button" value="Restore"/>			
Hostname		Restore to factory Settings <input type="button" value="Restore to Factory settings"/>			

File Download

Some files can harm your computer. If the file information below looks suspicious, or you do not fully trust the source, do not open or save this file.

File name: AP48-000101.bak
File type:
From: 192.168.1.1

Would you like to open the file or save it to your computer?

☒ Always ask before opening this type of file

Download the Backup file*.BAK.

Backup/Restore	
This page can backup/restore the system settings.	
Backup Settings	<input type="button" value="Backup"/>
	<input type="text" value="n:\Desktop\AP48-000101.bak"/> <input type="button" value="Browse..."/>
Restore Settings	<input type="button" value="Restore"/>
Restore to factory Settings	<input type="button" value="Restore to Factory settings"/>

Chapter 5 : Security Management for networks.

5-1. Access Control :

Connection control by MAC address.

- Add : Add a MAC address into Access list.
- Clear : Clear building list.
- Del : Delete MAC address from Access list.
- Apply : Apply selected list to the AP.

Only one list (None / Accept / Deny) be start up in the same time.

The left screenshot shows the 'Access Control' configuration page. It has a sidebar with 'Security' selected, and sub-items 'Access Control', 'SNMP', and 'Password Settings'. The main area is titled 'Access Control' and contains three radio buttons: 'None' (selected), 'Accept', and 'Deny'. Below them is an 'Apply' button.

The right screenshot shows the 'Access Control' configuration page with the 'Deny' radio button selected. It has a 'MAC Address' field with a list of addresses: 11, 22, 33, 44, 55, 66. There is a '+' button to add more addresses and a 'Deny List' section with a table showing a single entry: '11:22:33:44:55:66'. Below the table is an 'Apply' button.

5-2. SNMP :

SNMP is used in network management systems to monitor network-attached devices for conditions that warrant administrative attention.

The left screenshot shows the 'SNMP Settings' configuration page. It has a sidebar with 'Security' selected, and sub-items 'Access Control', 'SNMP', and 'Password Settings'. The main area is titled 'SNMP Settings' and contains a checkbox 'Enable SNMP' which is checked. Below it are two sections: 'Read Only (RO)' and 'Read and Write (RW)'. Each section has three radio buttons: 'Allow all', 'Deny all', and 'Specific IP/Hostname'. The 'Community Name' field is set to 'public' for 'Read Only (RO)' and 'private' for 'Read and Write (RW)'. Below the sections is an 'Apply' button.

The right screenshot shows the 'SNMP Settings' configuration page with the 'Specific IP/Hostname' radio button selected for both 'Read Only (RO)' and 'Read and Write (RW)'. The 'Community Name' field is set to 'public' for 'Read Only (RO)' and 'private' for 'Read and Write (RW)'. Below the sections is an 'Apply' button.

5-3. Password :

To change login password of Web User Interface.

The screenshot shows the 'Password Settings' configuration page. It has a sidebar with 'Security' selected, and sub-items 'Access Control', 'SNMP', and 'Password Settings'. The main area is titled 'Password Settings' and contains two input fields: 'New Password' and 'Confirmed Password'. Below the fields is an 'Apply' button.

Chapter 6 : Localization.

6-1 Country Code :

Support 4 different country codes.

- Wildcard
- Germany
- Japan
- United States

The screenshot shows a web interface with a top navigation bar containing 'Status', 'Network', 'Device', 'Security', and 'Localization'. A 'Log Out' button is in the top right. On the left, a sidebar has 'Localization' selected, with sub-items 'NTP' and 'Country Code'. The main content area is titled 'Country Code Settings' and features a 'Current Country' dropdown menu currently set to 'WILDCARD'. A dropdown list is open, showing 'WILDCARD', 'Germany', 'Japan', and 'United States'. An 'Apply' button is located below the dropdown.

6-2 NTP :

The Network Time Protocol (NTP) is a protocol to synchronize the clocks of computer systems over networks.

The screenshot shows a web interface with a top navigation bar containing 'Status', 'Network', 'Device', 'Security', and 'Localization'. A 'Log Out' button is in the top right. On the left, a sidebar has 'Localization' selected, with sub-items 'NTP' and 'Country Code'. The main content area is titled 'Network Time Protocol' and contains three rows of input fields: 'First NTP server IP/Hostname' and 'port', 'Second NTP server IP/Hostname' and 'port', and 'TimeZone Setting' with a dropdown menu set to 'GMT-12'. An 'Apply' button is located below the input fields.