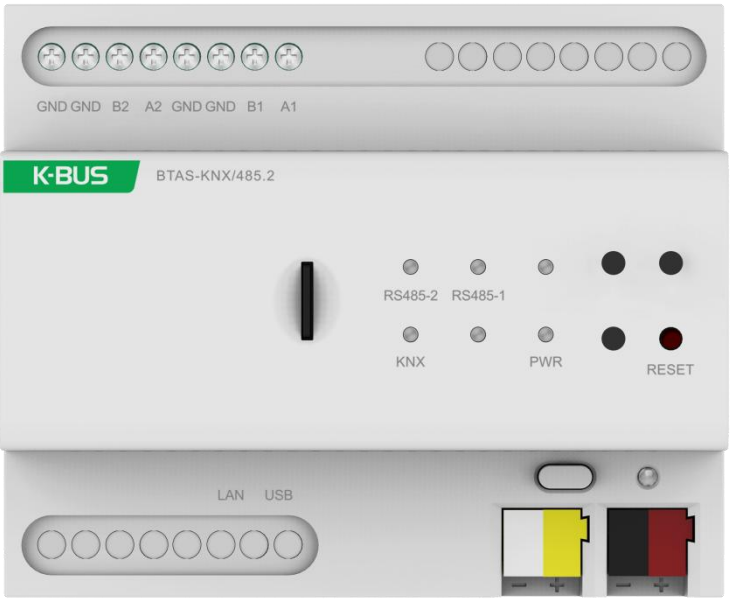
User manual

K-BUS® Air1 Server V2_V1.1

BTAS-KNX/485.2



KNX/EIB Home and Building Control System

Attentions

1. **Please keep devices away from strong magnetic field, high temperature, wet environment;**

2. **Do not fall the device to the ground or make them get hard impact;**

3. **Do not use wet cloth or volatile reagent to wipe the device;**

4. **Do not disassemble the devices.**

Contents

Chapter 1 Summary

Air1 Server V2 is a device that realizes management and control for KNX standard system, and also used for mobile devices (iOS, Android smartphones and tablets) and computer devices (Windows and Mac). All KNX smart building devices inside the home can be managed via AirHome Management Software, integrated with multimedia systems, video surveillance, intrusion detection and more, and remotely controlled in AirHome Remote Pro.

This manual provides detailed technical information about the Air1 Server V2, including installation and programming details, and explains how to use it in the practical examples.

Note: The detailed operation of AirHome Manage Software please refer to the user manual *GVS_AirHome Manager_UM*; And AirHome remote control please refer to *GVS_AirHome Remote Pro_UM*.

Air1 Server V2 is a modular installation device for fast installation in the distribution board on 35 mm mounting rails to DIN EN 60 715. The electrical connection is implemented using screw terminals. Bus connection directly via the KNX connection terminal and to the local router via the LAN port, the devices requires an auxiliary supply voltage of 9~36V DC. For RS485 device, it depends on the protocol carried by the device. Must sure that power is only supplied when correctly wired, otherwise short circuits and damage may result.

The functions are summarized as followed:

- **Multi-protocol integration, compatible with home and building automation protocols, support to any kind of system or device.**
- **Manage both standard and proprietary protocols at the same time, realize freedom of brand and choice.**
- **Communicate with all of the installations devices for security, access control, temperature control and audio / video via specific proprietary protocols.**
- **Allow communication between all protocols supported by AirHome. It can connect systems based on different buses like KNX, Modbus, 485 and other protocols.**
- **Provide AirHome management software, professionally configured applications for smart phone, tablet and PC.**
- **Support design auto-task quickly, and control it in any time.**
- **Enrich smart home via recording scene, week scheduling and analysis & charts.**

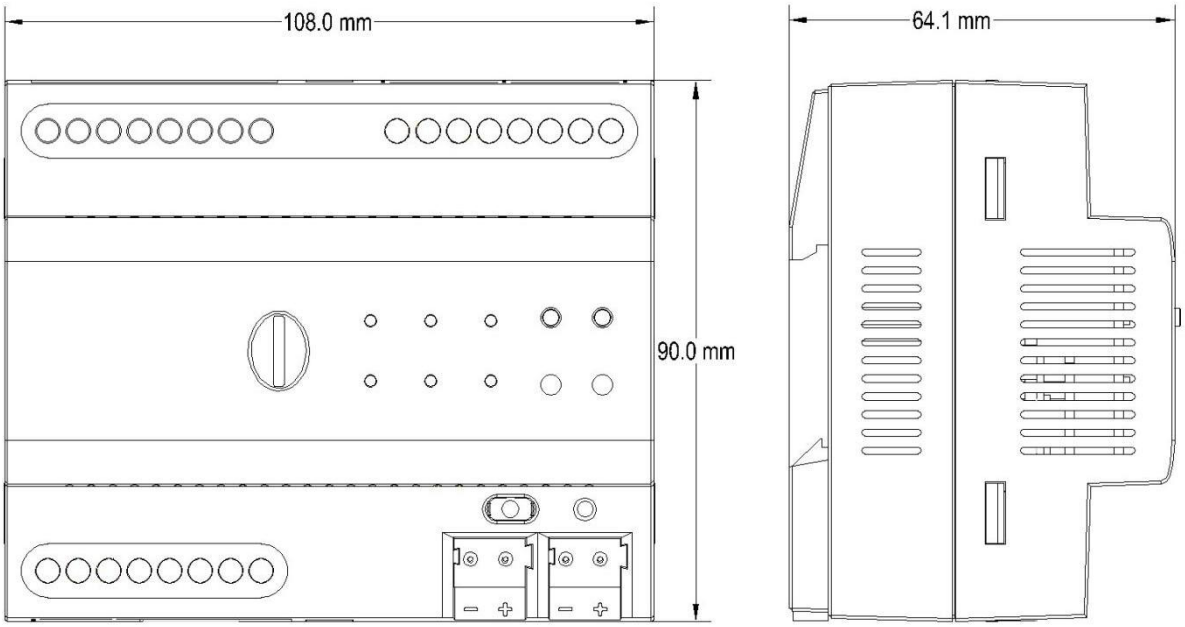
Perform many complex operations independently, to further minimize energy consumption and enhance the comfort of the home or building.

Chapter 2 Technical Data

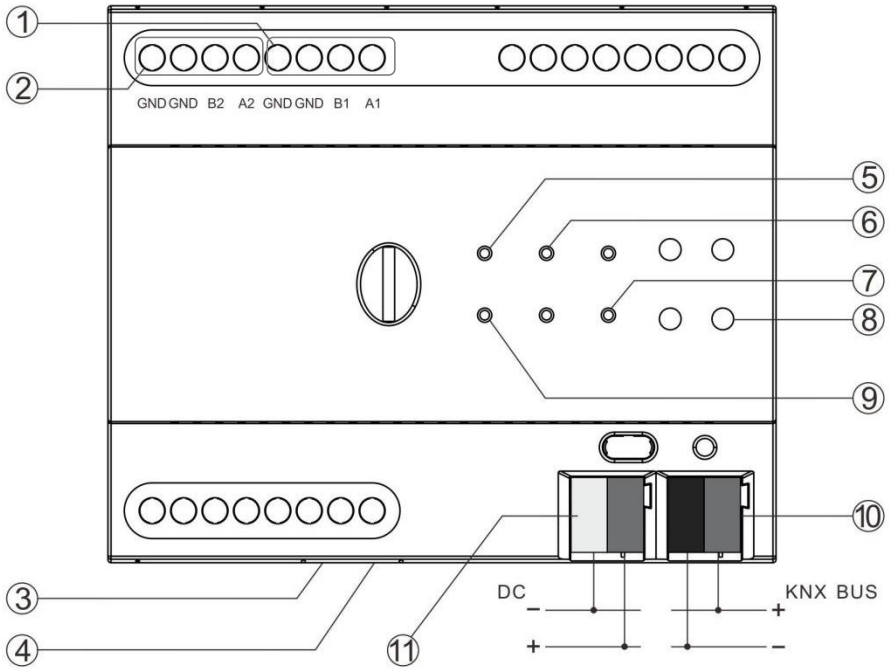
Power Supply	Bus voltage	21-30V DC, via the KNX bus
	Bus current	<12mA, 30V DC
	Bus consumption	<360mW
Auxiliary Supply	Voltage	9-36V DC
	Current	<123mA 24V DC, <113mA 30V DC
	Consumption	<3.4W
Performance	RAM	512MB
	SD card	16GB
	CPU	Quad-core cortex A7
Connections	KNX	Bus connection terminal(Red/Black)
	Auxiliary supply	Bus connection terminal(Yellow/White)
	RS485-1/2	Screw terminals, Torque 0.4N-m Wire Range Multi-core 0.2-1.5mm^2 Single core 0.2-2.5mm^2
	LAN	RJ45 socket for 10/100 bps
	USB2.0	USB socket
Operation and display	LAN LED	Flashing, communicates with network
	KNX LED	Flashing, communicates with KNX
	RS485-1 LED	Flashing, communicates with RS485-1
	RS485-2 LED	Flashing, communicates with RS485-2
	POWR LED	Always on, power supply is normal
	Reset button	Click to reset device
Temperature	Operation	– 5 °C ... 45 °C
	Storage	– 25 °C ... 55 °C
	Transport	– 25 °C ... 70 °C
Ambient	Humidity	<93%, except dewing
Mounting	Standard 35mm DIN rail installation	
Dimension	108×90×64.1mm	
Weight	0.18KG	

Chapter 3 Dimension and Structural Diagram

3.1 Dimension Diagram



3.2 Structural Diagram



① RS485-1connection terminal, include A1, B1, GND*2	⑦ Power LED
② RS485-2connection terminal, include A2, B2, GND*2	⑧ Rest button
③ LAN socket and LAN LED	⑨ KNX LED
④ USB socket	⑩ KNX bus connection terminal
⑤ RS485-2 LED	⑪ Auxiliary supply connection terminal
⑥ RS485-1 LED	

Chapter 4 Connect the Air1 Server to the AirHome Management Software

When connecting Air1 Server for the first time, connect the LAN network router to the device then connect the power supply 9~36V DC. The server will then boot all the firmware and user data. The Server will now get an IP address automatically from the router (DHCP server).

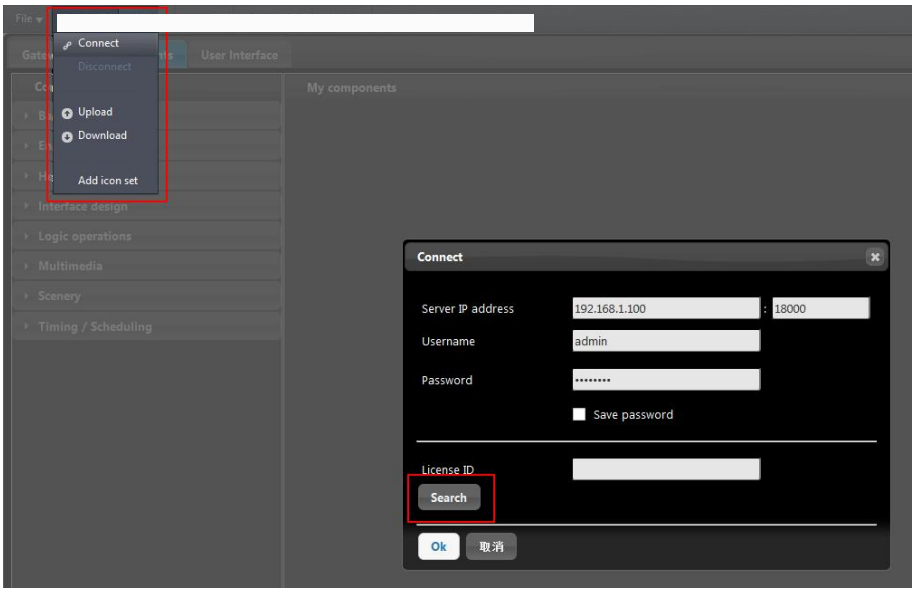
Note: It is important that your server is connected to the same network as your computer, so you can use the Server Connection command on AirHome Manager Software.

4.1 Router connection

Please follow the steps below:

Step 1: Open AirHome Manager Software

Step 2: Select [Project] from top menu, then click [Connect command] to popup the Connect dialog box.



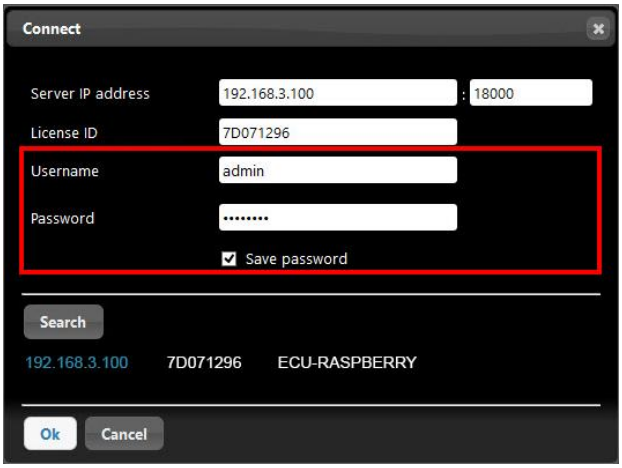
Step 3: Click [Search] button find Air1 Server on the whole network.

The details of the sever will be display in the Connect dialog box, including IP address, License ID (the unique ID of the Air1 Server) and Username.

Step 4: Select the required Air1 Server from the search results, enter the correct username and password, then click [OK] to confirm the connection.

Note: The default username is “admin” and the default password is “password”, which can be changed in the AirHome Management Software.

Complete the above steps to connect to the Air1 Server and you can start configuring the project.


Connect
Server IP address
192.168.3.100
18000
License ID
7D071296
Username
admin
Password
Save password
Search
192.168.3.100
7D071296
ECU-RASPBERRY
Ok
Cancel

4.2 Direct connection

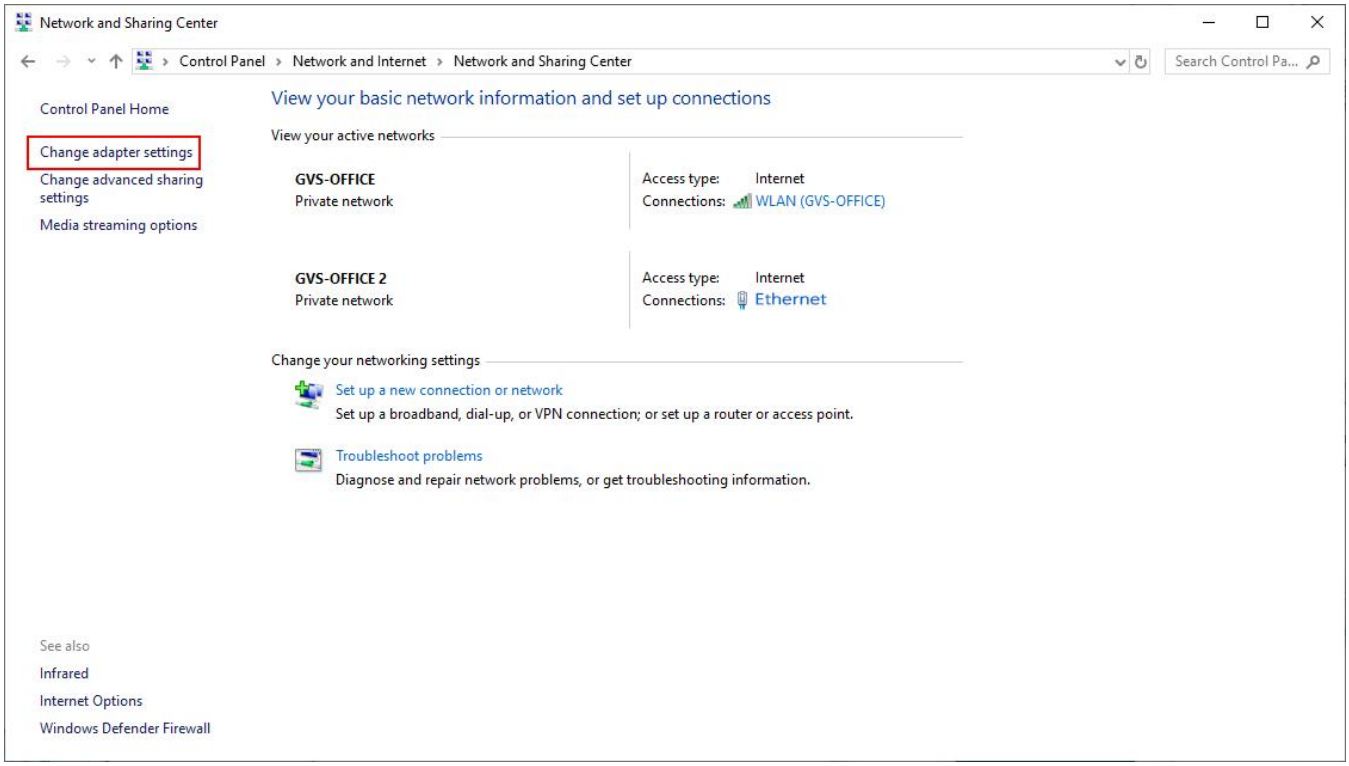
If there is no router available in the installation, or if you need to quickly program the server in the installation, you can use the PC to connect directly to the Air1 Server.

⚠ Setting a manual IP address

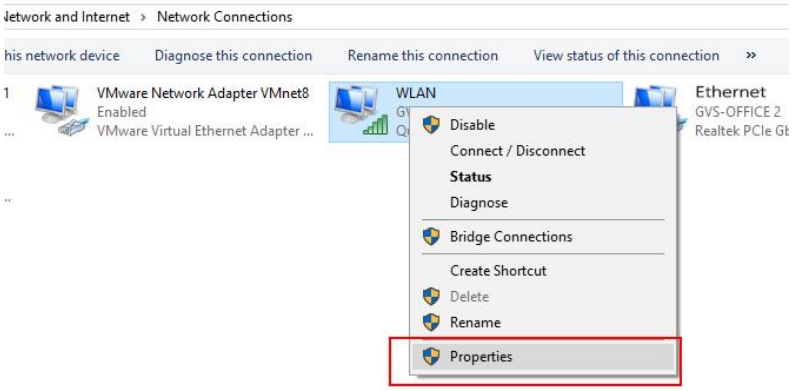
If there is no DHCP server or router to assign an IP address to the Server, you must set one manually. By default, this should be in the range 192.168.1.x.
You can change network settings in Web configuration panel, disable DHCP and static IP address.

Please follow the steps below:

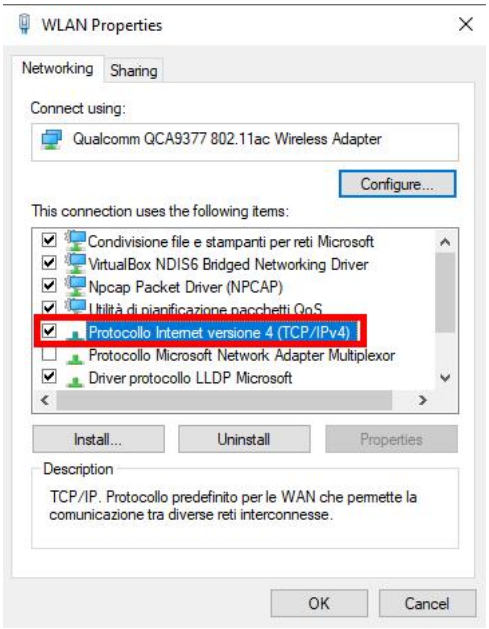
Step 1: Open Windows Control Panel and go to the Network and Sharing Center. On the left you will see the Adapter settings option, click on this to see the adapters of your computer.



Step 2: Right click on the Ethernet adapter (the one connected to the Air1 Server) to go the Properties of the adapter.



Step 3: Scroll down in the Networking tab to the entry [Internet Protocol Version 4 (TCP/IPv4)] and then click on the [Properties] button to edit the IPv4 properties of the adapter.

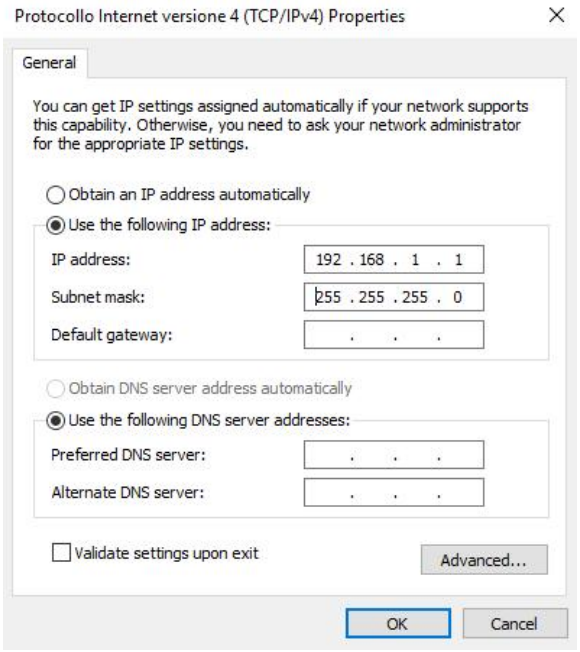


Step 4:

In the IPv4 properties window you can assign your computer a static IP address.

Select [Use the following IP address:], and then fill in an IP address and subnet. **Note: The IP address for your computer must different from the one that the Air1 Server will gather.**

By default, with no router, the IP address of Air1 Server is 192.168.1.100, so set your computer IP address to a different address of your Server IP address, for example 192.168.1.1 (Simulating a router). Hit enter after entering the IP address and the subnet will automatically be filled in as 255.255.255.0. Click [OK] and then exit the Control Panel network adapter windows.


Protocollo Internet versione 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 1 . 1
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel

Chapter 5 Web configuration panel

Ensure that the Air1 Server is properly connected, then boot up the device and connect to the LAN.

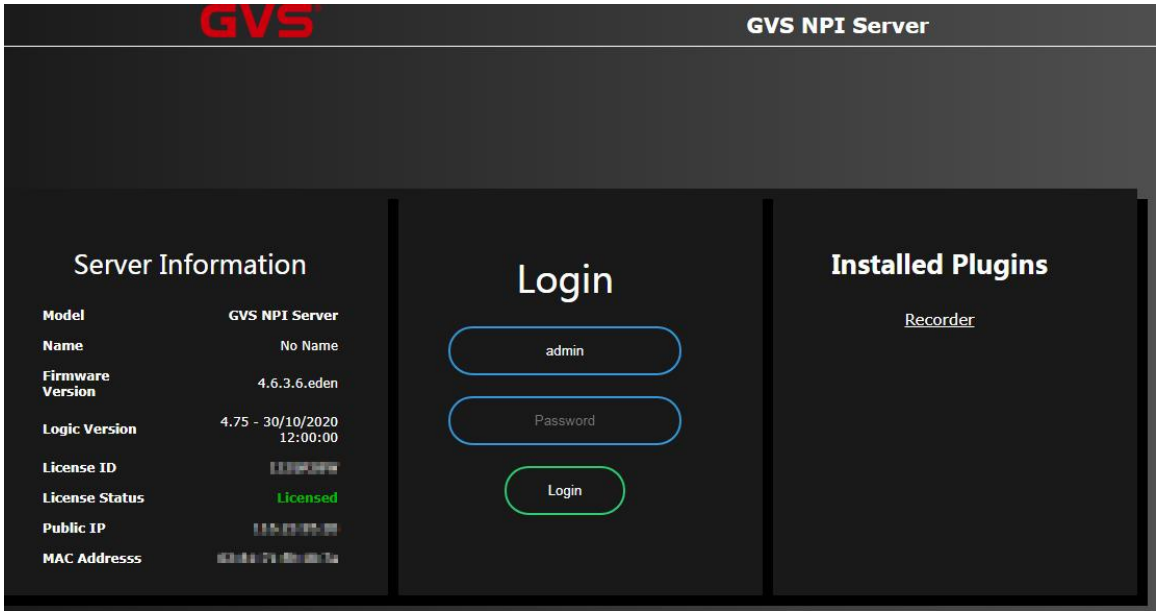
5.1 Login

Accessing the Web Configuration Panel in your browser allows you to do the following:

Step 1:

Start your browser and enter the IP address of the Air1 Server at the top to access the Web configuration panel.

As shown below, the first information panel on the left side lists all the important information about the server including Firmware Version, Licence ID, Licence Status, Public IP and MAC Address.



Troubleshooting

- If the browser cannot access the Web configuration panel login page, check if the LAN port is connected incorrectly and if the Air1 Server is connected to the same network.

- If the Air1 Server is not on the same network, you can use the open source IP scanner to check the IP. if the IP scanner software cannot find the device IP either, you will need to reset the IP.

Step 2:

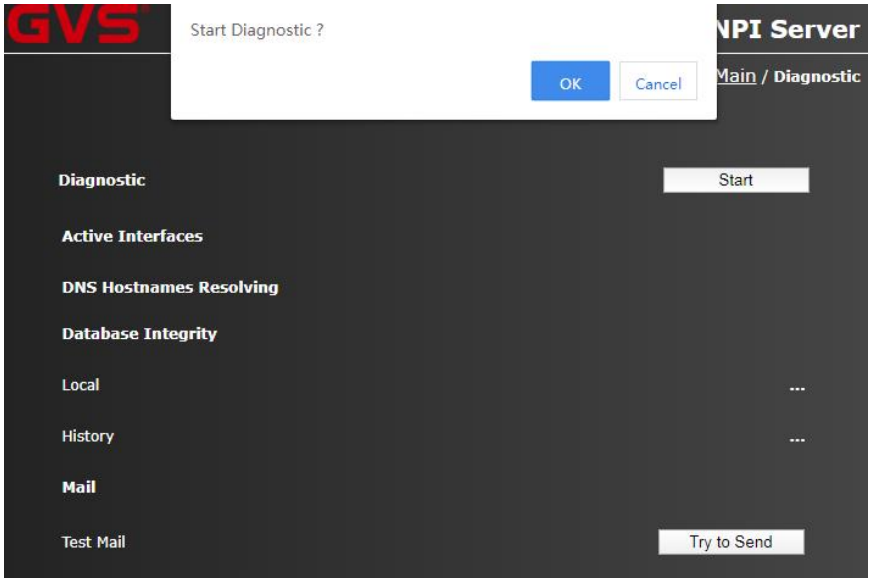
After connecting to the Air1 Server configuration page, enter the user name and password. After successful login, the Web configuration panel menu is displayed as shown below, including all configuration settings and the access rights for Diagnostic.

Note: The default username is “admin” and the default password is “password”, which can be changed in the AirHome Management Software.

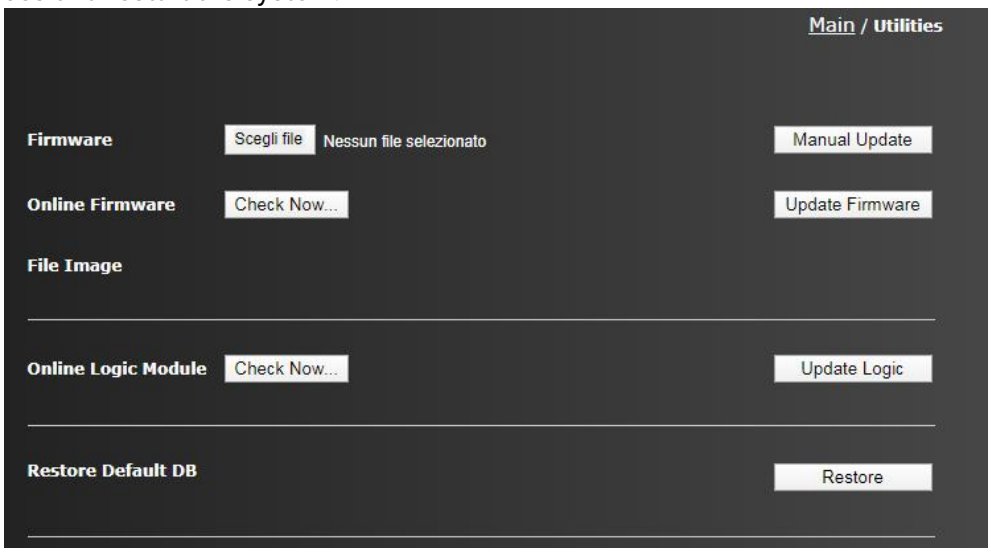

GVS
GVS NPI Server
Home / Main
Setting
Utility
Diagnostic
Infos
Ports
Vivaldi Discovery
Guangzhou Video-Star Intelligent Corp., Ltd

5.2 Menu

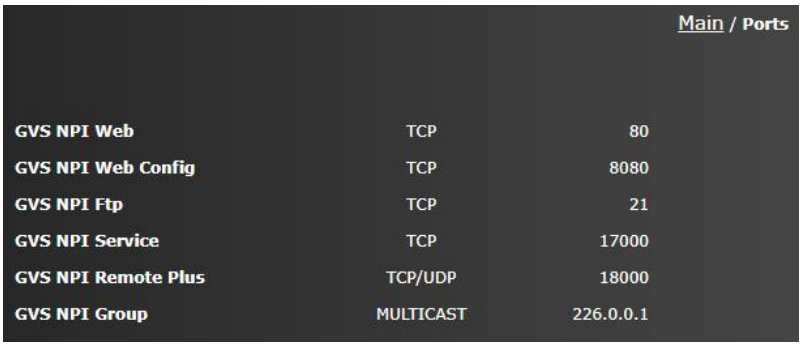
1. **Diagnostic:** Setting of Diagnostic. Click the icon to display a page with all the options for setting the various settings of the device. Click on [Start] to start the diagnostic, and if [OK] is displayed on the right side of the screen, the diagnostic is OK.



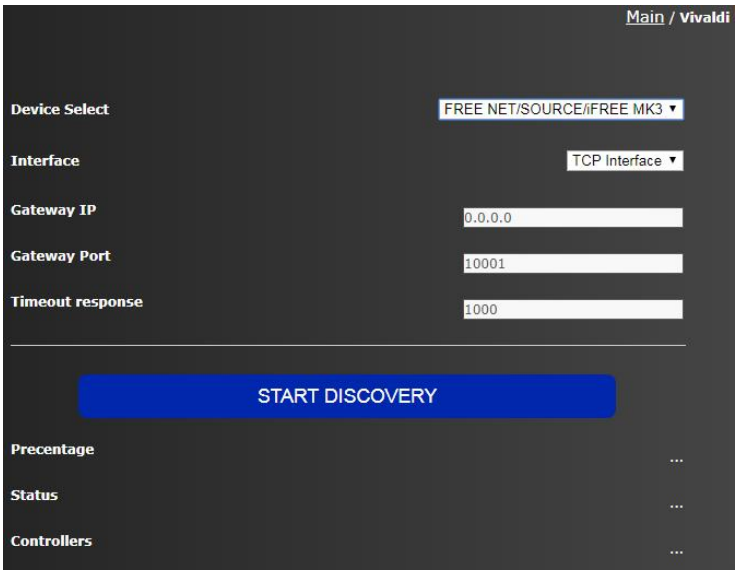
2. **Utility:** Setting of Utility. Click the icon to display a page, which supports to check firmware and logic module. If the device needs to be updated, download this update and install it on the Air1 Server. In addition, this menu supports to restore the database of the Air1 Server, start and stop Air1 services and restart the system.



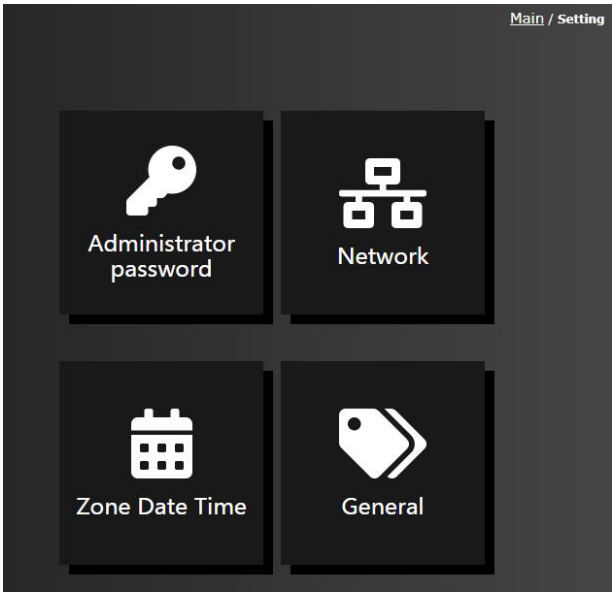
3. **Ports:** Setting of Ports. Click the icon to display a page where you can view all information about the LAN ports used by the Air1 Server and a description of their use.



4. **Vivaldi Discovery:** Vivaldi browser search. Click the icon to display a page where you can search for supported Vivaldi devices on your LAN. Device Select, Interface, Gateway IP and Gateway Port, and set the timeout response time, click [START DISCOVERY] then it will start to search device.

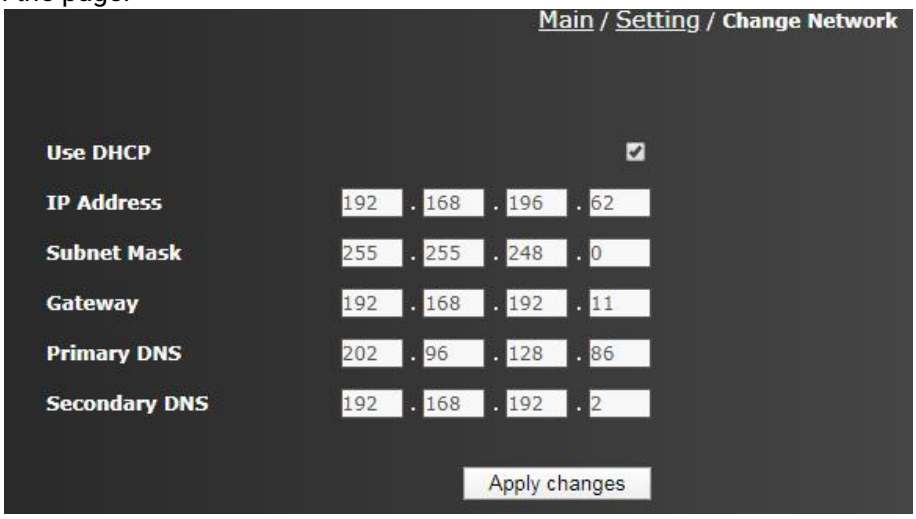


5. **Settings:** Click the icon to display a page, including changing the administrator password, setting the network configuration, date and time, and customizing the name of the Air1 server.

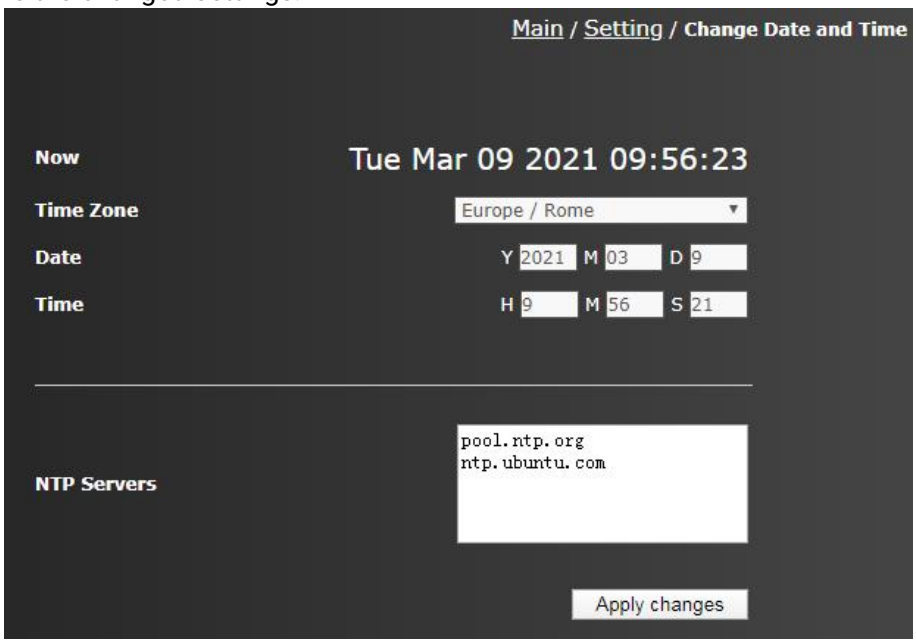


(1) Network: Network configuration. The first thing you should do after connecting the device is to configure the network, clicking on the icon will display a page that supports checking the network configuration of the Air1 Server and setting the device to a static IP. Deselect [Use DHCP], then enter the IP address, subnet mask, gateway and DNS server, set a new IP or keep the IP already used in the Air1 Server.

Then click [Apply changes] and the Air1 Server will reboot. After restarting the IP of Air1 Server is the one set in the page.

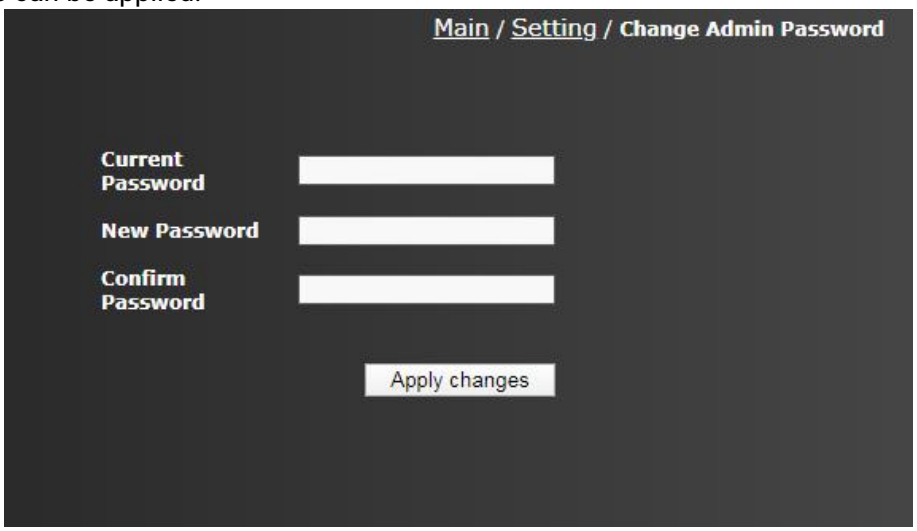


(2) **Zone Date Time:** Setting of Zone Date Time. Click the icon to display a page that support to setting the zone, date and time. The Air1 Server will take this setting into account when executing specific scenes involving timers. Below is the list of devices with time settings by default, which are connected here to update the time. You are free to make changes. Click on the [Apply changes] button to save the changed settings.



(3) **Administrator password:** Setting of administrator password. Click the icon to display a password setting page, to change the administrator password, first enter the current administrator password, then enter the new password and confirm the password again. Click on the [Apply

changes] button to save the changed settings. the Air1 Server will need to be rebooted before the new settings can be applied.



(4) **General:** Setting of general. Click the icon to display a page. Enter a new name for the Air1 Server in the text box. This name will identify the server you have on your system. Click on the [Apply changes] button to save the changed settings, the device will need to be rebooted to apply the settings.

Chapter 6 Reset IP

If the user cannot connect to Air1 Server (e.g. Connection through IP failed), then it need to reset IP (Static IP or DHCP IP) as described in this chapter.

6.1 Prepare USB

Step 1: Format a USB Key in FAT32.

Step 2: Prepare a static IP or DHCP IP file called “eve.settings.txt”. **The file names must be in lower case!**

Step 3: Drag and drop the eve.settings.txt inside the formatted USB.

Step 4: Remove the USB from the PC and plug it in your USB port of Air1 Server.

Step 5: You can start/stop services to apply settings in the file, or restart the system directly.

Step 6: After you have restarted the system, wait 20s and remove the USB.

Step 7: Now the system will have the parameters that you have chosen in the configuration.

6.2 Edit eve.settings.txt

The following shows how to edit eve.settings.txt:

Character Name	Meaning	Example
NETWORK_MODE	Choose from STATIC or DHCP *	NETWORK_MODE = STATIC
NETWORK_IP	Choose the desired IP address	NETWORK_IP = 192.168.99.10
NETWORK_MASK	Choose the desired network mask	NETWORK_MASK = 255.255.255.0
NETWORK_GATEWAY	Choose the desired gateway	NETWORK_GATEWAY = 192.168.99.1
NETWORK_DNS1	Choose the desired 1st DNS server	NETWORK_DNS1 = 192.168.99.1
NETWORK_DNS2	Choose the desired 1nd DNS server	NETWORK_DNS2 = 8.8.8.8

*** If NETWORK_MODE is equal to DHCP, the system will be set in DHCP.**

⚠ **If a file "db.eve" is present in the root of USB it will replace the current Project inside Air1 Server.**
By saving the project named "db.eve" with the AirHome Management Software, you can use this method to install the same project on multiple servers, then move it to the root directory of the USB and reboot the server with the USB plugged in, and the project will automatically start in the server.