HAWKING®
T E C H N O L O G Y

HOW12ACM — Outdoor Wireless-AC1300 Managed Access Point/Extender

Requirements
- Wired Network Connection
- A Wired Network Device (Mac or Windows Computer)
- PoE Injector/PoE Switch (Not Included)

Package Contents
- 1x HOW12ACM
- 1x Ethernet Cable
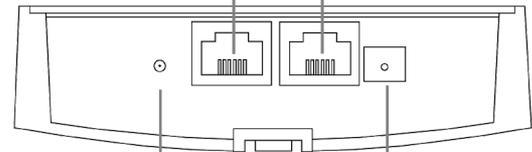- 1x Wall/Pole Mount Kit
- 1x Setup CD-ROM
- 2x Antennas

Product Description

Antenna Ports
2x SMA Female Ports for Omnidirectional Dual Band Antennas

LAN 2 Port (PSE)
IEEE 802.3af PoE PSE-Out

LAN 1 Port (PD)
IEEE 802.3at PoE PD-In

HOW12ACM
Outdoor Wireless AC1300
Managed Access Point / Extender Pro

Reset Switch
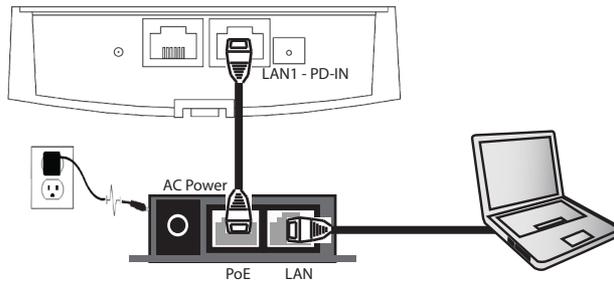Use a pin or similar small object. Press and hold for 30 seconds to factory reset device

Grounding Terminal

Start Here ▽▼

1 Initial Hardware Setup

Connect a PoE injector/switch into LAN1 PD-IN Port on the HOW12ACM.

Connect a computer into the LAN port on the PoE injector/switch.

LAN1 - PD-IN

AC Power

PoE   LAN

LED Behavior
- ■ 5G — 5G: 5GHz Wireless is enabled/disabled
- ■ 2.4G — 2.4G: 2.4GHz Wireless is enabled/disabled
- ■ LAN (PSE) — LAN2(PSE): LAN2 port is connected
- ■ LAN (PD) — LAN1(PD): LAN1 port is connected
- ■ Status — Status: ON, Booting up process; OFF, No error
- ■ Power — Power: On/Off

2 Computer Configuration
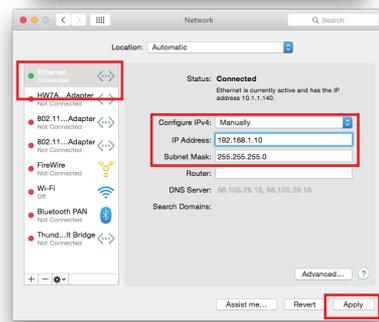
Configure the HOW12ACM with a Mac computer

a. Connect your computer to the network using an ethernet cable. If your computer is Wi-Fi enabled, you'll need to turn off the Wi-Fi connection from your computer until you are done configuring the HOW12ACM.

b. Open your System Preferences and select the "Network" option.

c. Select the "Ethernet" option. Find the "Configure IPv4" drop down menu and select "Manually".
In the IP address, enter "192.168.1.10".
In the Subnet Mask, enter "255.255.255.0"
Select "Apply".

Configure the HOW12ACM with a Windows computer

a. Connect your computer to the network using an ethernet cable. If your computer is Wi-Fi enabled, you'll need to turn off the Wi-Fi connection from your computer until you are done configuring the HOW12ACM.

b. Go to your control panel and select "Network and Sharing Center" On the left hand column, choose "Change Adapter Settings" Right click on "Ethernet" and choose "Properties".
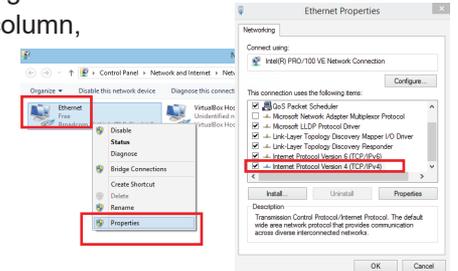
c. Select "Internet Protocol (TCP/IPv4)" and click on "Properties".

d. Select "Use the following IP address". In the IP address, enter "192.168.1.10". In the Subnet Mask, enter "255.255.255.0" and click "OK". Select "OK" again to close the properties and save.
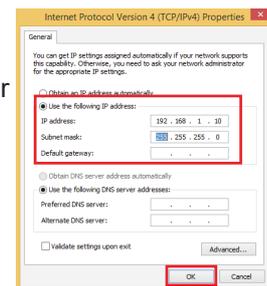
3 Accessing the Setup via Web Browser

a. Open any web browser from the computer that is plugged into the HOW12ACM. In the address field, type in "192.168.1.230". Press "Enter".

http://192.168.1.230/

b. A security prompt will appear asking for a username/password.
Username: admin
Password: 1234

c. A window should appear asking what mode you wish to use. Select your mode and click "Next".
- Access Point: Go to Section 4a.
- Wireless Repeater (Range Extender): Go to Section 4b
- Bridge Client: Refer to Manual located on CD.

This section allows you to set up your Outdoor Wireless-1200AC Managed AP Pro. Please select your mode you wish to use and click "Next".

○ Repeater	Wireless extend a 2.4GHz and/or 5GHz signal	
◉ AP	Standard Wireless AC Access Point	
○ Client Bridge	Client bridge	

Next

4a Access Point Quick Setup

a. To change the SSID of your access point's 2.4GHz wireless network, go to "2.4GHz Basic Settings". Enter the new SSID for your 2.4GHz wireless network in the "SSID1" field". The default 2.4GHz SSID is "Hawking_HOW12ACM_2.4GHz"

2.4GHz Basic Settings

Wireless	⦿ Enable ◯ Disable
Band	11b/g/n ∨
SSID1	ing_HOW12ACM_2.4GHz VLAN ID 1
Auto Channel	⦿ Enable ◯ Disable
Auto Channel Range	Ch 1 - 11 ∨
Auto Channel Interval	One day ∨ ☐ Change channel even if clients are connected
Channel Bandwidth	Auto ∨
BSS BasicRate Set	all ∨

b. Go to "5GHz Basic Settings" and repeat the previous step for the access point's 5GHz AC wireless network. The default 5GHz SSID is "Hawking_HOW12ACM_5GHz"

5GHz Basic Settings

Wireless	⦿ Enable ◯ Disable
Band	11a/n/ac ∨
SSID1	Hawking_HOW12ACM_5 VLAN ID 1
Auto Channel	◯ Enable ⦿ Disable
Auto Channel Range	Band 1 ∨
Auto Channel Interval	One day ∨ ☐ Change channel even if clients are connected
Channel Bandwidth	Auto 80/40/20 MHz ∨
BSS BasicRate Set	all ∨

c. To change the access point's LAN IP address, go to "LAN-side IP Address".
Enter the IP address settings you wish to use for your access point. You can use a dynamic (DHCP) or static IP address, depending on your network environment. Click "Next" to save the changes and to go to the security settings.

LAN-side IP Address

IP Address Assignment	Static IP Address ∨
IP Address	192.168.1.230
Subnet Mask	255.255.255.0
Default Gateway	User-Defined ∨ 192.168.1.1

LAN-side DNS Servers

Primary Address	User-Defined ∨
Secondary Address	User-Defined ∨

Next

d. To configure the security of your access point's wireless network, go to "2.4GHz Wireless Security Settings/5GHz Wireless Security Settings". Select an "Authentication Method" and enter a "Pre-shared Key" or "Encryption Key", depending on your choice, then click "Apply". Hawking recommends at least WPA/WPA2 security.

5GHz Wireless Security Settings

SSID	Hawking_HOW12ACM_5GHz
Broadcast SSID	Enable ∨
Wireless Client Isolation	Disable ∨
Load Balancing	50 /50
Authentication Method	WPA-PSK ∨
WPA Type	WPA2 Only ∨
Encryption Type	AES ∨
Key Renewal Interval	60 minute(s)
Pre-shared Key Type	Passphrase ∨
Pre-shared Key	**********
Additional Authentication	No additional authentication ∨

Click "Apply" and the device will now reset and save your settings. The basic settings for access point are now configured!

4b Repeater Quick Setup

a. To scan for your Wi-Fi signal, click "Scan". If you only wish to scan only in 2.4G or 5G, choose accordingly. Clicking scan will scan for all available Wi-Fi networks in the area

Wireless Extender

Site Survey	⦿ Wireless 2.4G / 5G ◯ 2.4G ◯ 5G Scan

b. After it has finished scanning, a list of networks will appear. Please select the Wi-Fi source you wish to connect to. In repeater mode, you can select either a 2.4GHz OR 5GHz Wi-Fi source. It can only repeat from one source. However, it will broadcast this source in both the 2.4GHz and 5GHz range.

Wireless 2.4GHz (10 Accesspoints)

Select	Ch	SSID	MAC Address	Security	Signal (%)	Type
◯	3			WPA1PSKWPA2PSK /TKIPAES	15	b/g/n
◯	7			WPAPSK/TKIP	24	b/g/n
◯	7	HawkTech	80:1F:02:0D:CE:D0	WPA2PSK/AES	100	b/g/n
◯	11			WPA2PSK/TKIPAES	24	b/g/n
◯	11			WPA2PSK/AES	50	b/g/n
◯	2	Hawking_Outdoor_HPOW	00:11:A3:00:00:03	WPA2PSK/AES	100	b/g/n
◯	6			WPA2PSK/AES	91	b/g/n
◯	6			NONE	86	b/g/n
◯	10			WEP	39	b/g

Wireless 5GHz (3 Accesspoints)

Select	Ch	SSID	MAC Address	Security	Signal (%)	Type
◯	44	HawkTech_5GHz	80:1F:02:0D:CE:D2	WPA2PSK/AES	100	a/n
◯	153			WPA2PSK/AES	87	ac
◯	153			NONE	87	ac

c. After you select your network, it will ask you to create a profile. You can change the extended SSID if you wish. By default it will use the same SSID as your wireless source. The security settings will also be listed and it will automatically choose the security settings of the wireless source. Type in your password in the "Key Field". If you do not know this password, please contact your network administrator or check the wireless source's settings. If you wish to make changes to your IP, go to next step before you click "Connect"

Wireless Create profile

SSID	Hawking_Outdoor_HPOW
Extended SSID	Hawking_Outdoor_HPOW
Authentication Method	WPA-PSK ∨
WPA Type	WPA2 Only ∨
Encryption Type	AES ∨
Pre-shared Key Type	Passphrase ∨
Pre-shared Key	

Connect   Cancel

d. Enter the IP address settings you wish to use for your access point. You can use a dynamic (DHCP) or static IP address, depending on your network environment. Go back to the previous step and click "Connect"

LAN-side IP Address

|	
IP Address Assignment	Static IP Address ∨
IP Address	192.168.1.230
Subnet Mask	255.255.255.0
Default Gateway	From DHCP ∨

Click "Connect" and the device will now reset and save your settings. The basic settings for repeater mode are now configured!

5 Hardware Installation

Connect the HOW12ACM to your POE injector/switch.
If in Access Point mode, connect the PoE switch/injector to the rest of the network via ethernet cable.
In Range Extender/Repeater mode, just plug into your PoE switch for power, connect to unit via Wi-Fi.
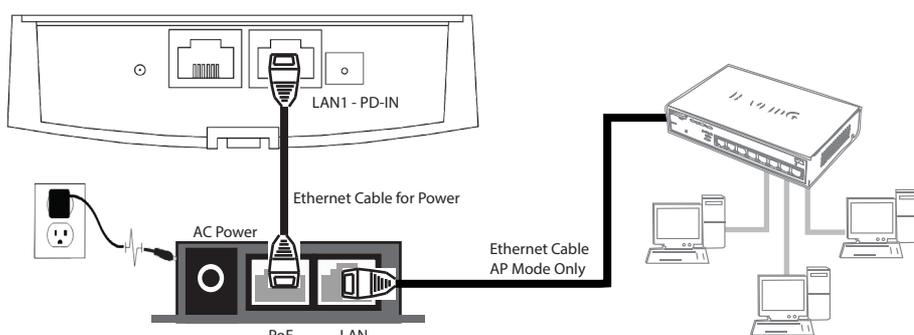
The HOW12ACM supports both wall and pole mounts. Refer to the manual located on the CD for installation instructions.

LAN1 - PD-IN

Ethernet Cable for Power

AC Power

Ethernet Cable
AP Mode Only

PoE   LAN

HAWKING TECHNOLOGY®
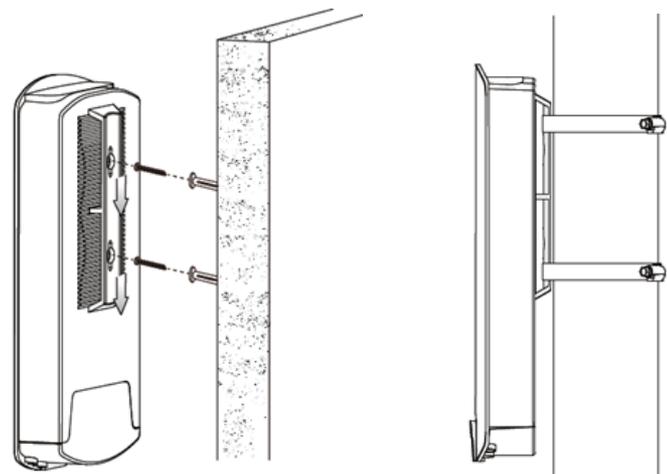
Requirements
- HOW12ACM x2
- Wired Network Connection
- A Wired Network Device (Mac or Windows Computer)
- PoE Injector/PoE Switch (Not Included)

HOW12ACM (Unit #2) in Repeater Mode

HOW12ACM (Unit #1) in Access Point Mode
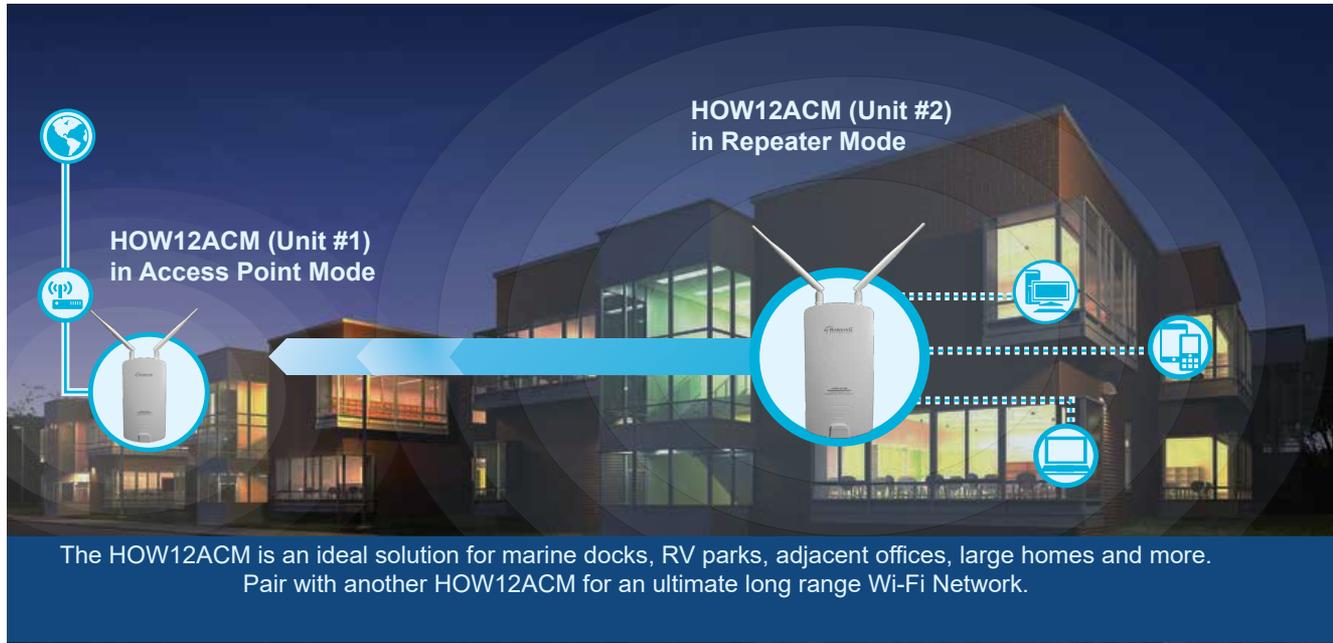
The HOW12ACM is an ideal solution for marine docks, RV parks, adjacent offices, large homes and more. Pair with another HOW12ACM for an ultimate long range Wi-Fi Network.

A HOW12ACM (Unit #1) Initial Hardware Setup

Repeat Steps 1-3 on the Basic Setup Guide of the HOW12ACM. In this Building to Building/Point to Point Setup, we will configure HOW12ACM (Unit #1) as an Access Point. This will broadcast a signal for HOW12ACM (Unit #2) to pick up and repeat.
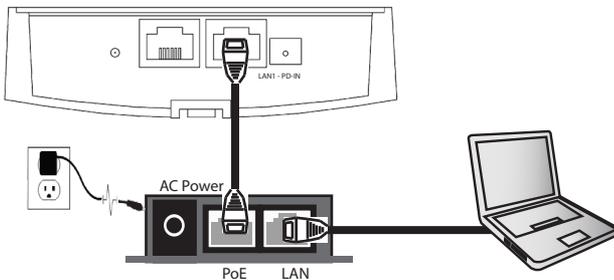
B HOW12ACM (Unit #1) Access Point Setup

a. To change the SSID of HOW12ACM (Unit #1) 2.4GHz wireless network, go to "2.4GHz Basic Settings". Enter the new SSID for your 2.4GHz wireless network in the "SSID1" field".

b. Go to "5GHz Basic Settings" and repeat the previous step for the access point's 5GHz AC wireless network.

c. To change HOW12ACM (Unit #1) LAN IP address, go to "LAN-side IP Address".
Enter the IP address settings you wish to use for your access point. HOW12ACM (Unit #1) and (Unit #2) **MUST** have different IP addresses. Click "Next" to save the changes and to go to the security settings.

d. To configure the security of your access point's wireless network, go to "2.4GHz Wireless Security Settings/5GHz Wireless Security Settings". Select an "Authentication Method" and enter a "Pre-shared Key" or "Encryption Key" depending on your choice, then click "Apply". Hawking recommends at least WPA/WPA2 security.

Click "Apply" and the device will now reset and save your settings. HOW12ACM (Unit #1) is now configured as a wireless access point.

C HOW12ACM (Unit #1) Hardware Installation

Connect the HOW12ACM (Unit #1) to your POE injector/switch. Connect the PoE injector to the rest of the network via ethernet cable.

HOW12ACM (Unit #1)
LAN1 - PD-IN
Ethernet Cable for Power
AC Power
Etherne Cable to Network
PoE   LAN
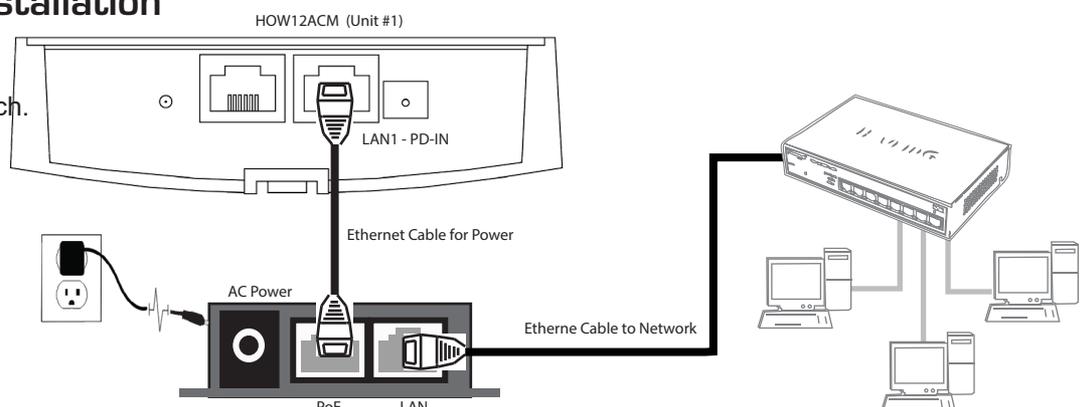
D HOW12ACM (Unit #2) Initial Hardware Setup

Repeat Steps 1-3 on the Basic Setup Guide of the HOW12ACM. In this Building to Building/Point to Point Setup, we will now configure HOW12ACM (Unit #2) as a Repeater. HOW12ACM (Unit #2) will pick up the signal from HOW12ACM (Unit #1) and rebroadcast the Wi-Fi signal.
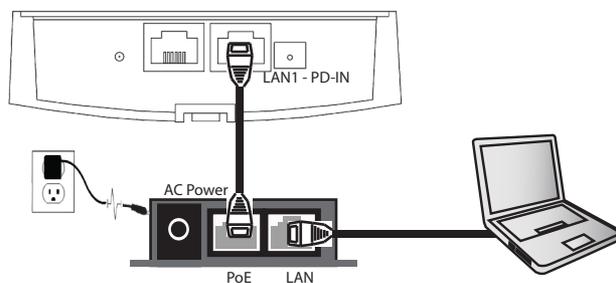

E HOW12ACM (Unit #2) Repeater Setup

a. To scan for your Wi-Fi signal, click "Scan". If you only wish to scan in 2.4G or 5G, choose accordingly. Clicking scan will scan for all available Wi-Fi networks in the area.

b. After it has finished scanning, a list of networks will appear. Please select the Wi-Fi Name you gave HOW12ACM (Unit #1). You can select either the 2.4GHz OR 5GHz Wi-Fi name. It can only repeat from one source. However, it will broadcast this source in both the 2.4GHz and 5GHz range.

c. After you select your network, it will ask you to create a profile. You can change the extended SSID if you wish. By default it will use the same SSID as your wireless source. The security settings will also be listed and it will automatically choose the security settings of the wireless source. Type in your password in the "Key Field". This password will be the same Wi-Fi password you used for HOW12ACM (Unit #1)
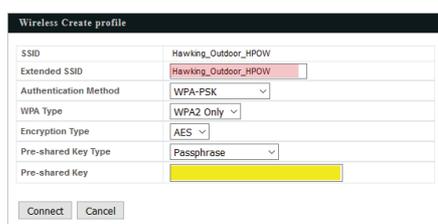
d. Enter the IP address settings you wish to use for your access point. You can use a dynamic (DHCP) or static IP address, depending on your network environment. This IP address **MUST** be differnet from HOW12ACM (Unit #1). Go back to the previous section and click "Connect"
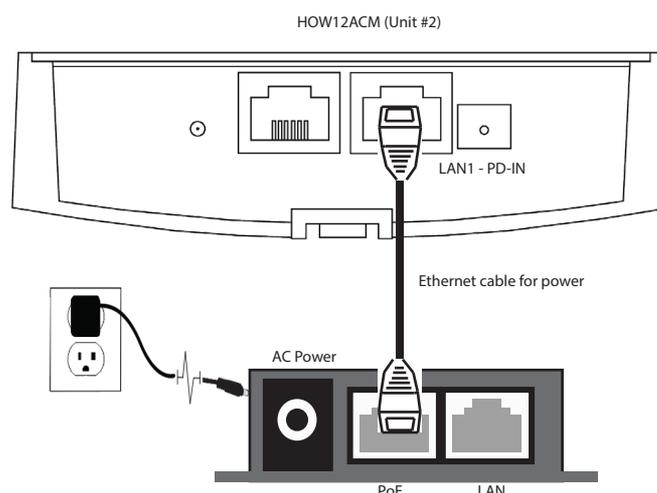

Click "Connect" and the device will now reset and save your settings. The basic settings for repeater mode are now configured!

F HOW12ACM (Unit #2) Hardware Installation

Connect the HOW12ACM (Unit #2) to your POE injector/switch. This will provide power to HOW12ACM (Unit #2). It does not need to wired to the LAN side.

Point-to-Point mode is now complete. Mount the devices outside within view of each other and it should create a long range wifi network that can reach up to 500ft+ and connect both locations together. Perfect for remote Wi-Fi security cameras, remote Wi-Fi access, Outdoor Wi-Fi Hotspots, etc. Set up this long range outdoor Wi-Fi at a RV park, marina, backyards, warehouses, offices and more. The HOW12ACM is durable and can withstand any outdoor condtions, including rain and snow.