

Hazards, Safety and Concerns



Electrical Hazard Warning - Caution when installing and using electrical devices. Electricity can cause injury or death.



Electromagnetic (EM) Radiation Warning - Caution when using devices that emit EM or Radio Frequency emitting devices such as Wi-Fi. The Halo should be installed and operated at least eight inches away from people.



Component Damage Warning - Hard-wiring the Halo Extender and associated equipment into the vessel electrical system should be accomplished by a certified electrician.



Component Damage Warning - Do not power the Halo without the Antenna being attached to the Extender Base. Doing so could cause permanent damage to the equipment. See pages 5-8 for physical setup guidance.

Table of Contents

Hazards, Safety and Concerns 2
Product specifications
Physical setup and configuration 5
Mounting details
Halo App for Apple iOS
Halo App for Google Android
Halo App additional information
Mac or PC setup and configuration 17
Frequently asked questions 20
Corporate details and contact information24

Specifications

Model Name - RedPort Halo Wi-Fi Extender System **Description** - Wi-Fi signal boosting outdoor antenna Antenna Radio Frequency Range - 2.4 GHz Antenna Compatibility - 802.11 b/g/n Antenna Gain - 9 dbi Antenna Horizontal Beam - 360 degrees Antenna Directivity - Omni-Directional Ports - 1x Ethernet/BJ45 Buttons - 1x Factory Reset labeled "Reset" LED Indicators - 1x Power, 1x Connection, 1x Signal Strength **Browser Support** - None, intended to be connected to RedPort Optimizer hotspot router device **Dimensions** - 28 in (L), 3 in (W), 3 in (H) Weiaht - 9 oz Power - 12 V AC *Operating Range (distance) - Maximum possible - 7 miles *Operating Throughput - Maximum possible - 72.2 Mbps

*Performance is dependent on many variables including but not limited to: distance to gaining Wi-Fi signal; strength of gaining Wi-Fi signal; foliage or obstacles between Halo antenna and gaining Wi-Fi signal; or weather conditions.

Regulatory Information and Certifications

FCC ID : 2AB879331 CE ROHS

Product Warranty Information

RedPort hardware carries a 1-year manufacturer warranty against defects from the date of sale.

Product Support Information

RedPort agrees to provide initial customer assistance, up to thirty (30) minutes at no charge, for products and services purchased. It is recommended that a customer has reasonable knowledge of basic computer and software setup procedures for the initial installation.





Run the Ethernet cable through the metal base, threaded connector and place gray plastic gasket around Ethernet cable as shown.

Push gray plastic gasket into the hole. To create a watertight seal, add silicone if desired.







Mounting the Wi-Fi Extender

Install the Wi-Fi Extender on any standard 14 TPI 1" threaded antenna mount. The Halo does not include a standard antenna mount. Standard antenna mounts can easily be found online or at your local marine supply store.

Access to the Extender may be occasionally needed, so consider mounting in a location that can be reached at all times.

Take caution when transporting or underway as branches and other objects can cause damage to the Extender and antenna.

Mounting on a Ship



The Wi-Fi Extender can be installed in many different locations on-board. For best results, mount the Wi-Fi Extender as high above the water line as possible. This will increase the chances of capturing Wi-Fi via line-of-site.

Mounting on a Vehicle or Building

The Wi-Fi Extender can be installed on vehicles or buildings to capture long distance Wi-Fi. For best results, mount the Wi-Fi Extender as high off the ground as possible.





Halo Wi-Fi App

The Halo Wi-Fi App allows control of your Halo system from your phone or tablet. Available on the Apple App Store & Google Play Store. Use of <u>the Halo Wi-Fi App</u> is the <u>RECOMMENDED</u> way to setup and use your Halo Long Range Wi-Fi Extender.

iOS Halo Wi-Fi App Installation and Setup

1. Download the Halo App

For iOS (iPad, iPhone, iPod Touch with iOS 10.3 or later) Search for "Halo WiFi" in the Apple App Store.

2. Assemble and plug your RedPort Halo into an Optimizer

Reference the diagrams (pages 5-8) for assembly, then power on all equipment.

3. Connect to the Optimizer

Navigate to Settings on your mobile device and click <Wi-Fi>. Find the Optimizer which will be displayed as wXa-203-xxxx. Click <"wXa-203-xxxx">.

NOTE: This is making the connection between your iOS device and the Optimizer.

∎il Verizon 🗢 9:55 AN	√ 69% 🗖
Settings Wi-Fi	
Wi-Fi	
VXa-203-80f8 Unsecured Network	? (j
MY NETWORKS	
2A	ê 🗢 🚺
2A5G	ê 🕈 🚺
NETWORKS	
Other	
Ask to Join Networks	Notify >
Known networks will be joined a networks are available, you will b networks.	utomatically. If no known se notified of available
Auto-Join Hotspot	Ask to Join >

4. Open Halo Wi-Fi App

Click <Halo WiFi App> icon on your device.



5. Configure Halo Wi-Fi

There are two ways to configure the Halo Wi-Fi. 1. You can click <Press Here to Search for Networks> or 2. You can click <WiFi> at the bottom of the Halo Wi-Fi App "Home" page.

NOTE: This is making the connection between the Halo/Optimizer and the Wi-Fi network you are boosting.

🖬 Verizon 🗢	9:51 AM	√ 90% ■)
ি	Halo V	ViFi
Connect	ted To wXa-20	3-80f8 🔘
(i) Sea	rching For Inter	met 🥥
Descentiles	an Cauch Inc	Management
Press Her	e to search for	rvetworks

6. Select Wi-Fi Source

Connect to the Wi-Fi network of your choice (marina, landbased hotspot, etc.) by clicking <"network name">. If required, enter the password for the selected network, then click <Join>.

Optionally you can click <Rescan> to force a new search.

Optionally you can sort found networks by Wi-Fi strength; Open Wi-Fi; Closed Wi-Fi (password protected); A-Z (alphabetically); or Z-A (reverse alphabetically).



7. Installation and Setup Complete

At the Halo WiFi App "Home" page the signal strength indicator will populate into a full green bar. You can now exit the Halo App and enjoy Internet usage.



Android Halo Wi-Fi App Installation and Setup

1. Download the Halo App

For Android (any Android device 5.0 or later) Search for "Halo WiFi" in the Google Play Store.

2. Assemble and plug your RedPort Halo into an Optimizer

Reference the diagrams (pages 5-8) for assembly, then power on all equipment.

3. Connect to the Optimizer

Navigate to Settings on your mobile device and click <Wi-Fi>. Find the Optimizer which will be displayed as wXa-203-xxxx. Click <"wXa-203-xxxx">.

NOTE: This is making the connection between your Android device and the Optimizer.



4. Open Halo Wi-Fi App

Click <Halo WiFi App> icon on your device.



5. Configure Halo Wi-Fi

There are two ways to configure the Halo Wi-Fi. 1. You can click <Press Here to Search for Networks> or 2. You can click <WiFi> at the bottom of the Halo Wi-Fi App "Home" page.

NOTE: This is making the connection between the Halo/Optimizer and the Wi-Fi network you are boosting.



6. Select WiFi Source

Connect to the Wi-Fi source of your choice (marina, land-based hotspot, etc.) by clicking <"network name">. If required, enter the password for the selected network, then click <Join>.

Optionally you can click <Rescan> to force a new search.

Optionally you can sort found networks by WiFi strength; Open WiFi; Closed WiFi (password protected); A-Z (alphabetically); or Z-A (reverse alphabetically).



7. Installation and Setup Complete

At the Halo Wi-Fi App "Home" page the signal strength indicator will populate into a full green bar. You can now exit the Halo App and enjoy Internet usage.



Halo Wi-Fi App Additional Options

Settings - Click <Settings>

NOTE: The Optimizer will revert to default settings if you accomplish a Factory Reset by pushing the "RST" button on the front of the Optimizer.

The Optimizer default password is set to "webxaccess". This password permits your Halo App to make changes to the Optimizer. In the screen shot below, the password has been changed to "webxaccess2020" and then clicking "Save".

The "WiFi" name is factory set to a "wXa-203-xxxx" set of characters. In the screen shot below, the Wi-Fi Name has been changed to "seacruiser1" and then clicking "Save". Once the "WiFi Name" is changed, the new name will appear in a Wi-Fi Search as shown in the screen shot below.

The "WiFi" password is factory set to be blank (no characters). Adding a password increases the security of your WiFi network.

If changes have been made to settings, click <Save>.

6	Optimizer	
Password Save	webxaccess2020 Show Password	0
	WiFi	
Name Password	seacruiser1	
Save	Show Password Extender Mode	0



Halo Mac or PC Device Installation and Setup

NOTE: Using the Halo App is the Recommended process for installation and setup (see page 10).

1. Assemble and plug your RedPort Halo into an Optimizer

Reference the diagrams (pages 5-8) for assembly, then power on all equipment.

2. Connect to the Optimizer

Navigate to Wi-Fi Settings of your Mac or PC device and click Find the listed Optimizer network which will be displayed as wXa-1xx-xxxx. Click <"wXa-1xx-xxxx">.

3. Open a Web Browser

Open a web browser of your preference and enter 192.168.10.1 (Optimizer Interface) in the address bar and press <enter>.

2	
	Reset OLOgn
	() () ()

4. Login to User Interface (UI)

Username: admin Password: webxaccess Click <Login>

For initial Installation and Setup, the Halo will be configured from RedPort with the Wi-Fi Extender Mode enabled, as shown in the following screen shot.

ptimizer wXa-203 v2.61 Load: 1.00 1.01 1.08		Changes:
Home Services Status System Network Statistics	Logest	
Tasks		
Welcome		
WiFi Extender Setup		
Step 1	Cornect Select external WFI network to connect to. Requires an external anterna amplifier connected to LAN port.	
Step 2	Ossible WFI Extender WFI bits dar Status: ON Doable WFI Extender to route traffic through Satellite Link.	
Step 3 (Automatic)	Enable Frewall Frewal Status: OFF Enabling the Interval Status: OFF Enabling the Interval Status all Static to the Internet except for optimized Estati and web Drowsing.	
System Status		

5. Connect WiFi Extender

Click <Connect> in the "WiFi Extender Setup".

NOTE: Your browser will redirect to 192.168.10.177 (Halo Interface). See next screen shot.

Aperial.	diseas.	Armilli -									
irele	ss Overvi	lew								_	
-	Generie	MAC80213 802.13bgr	(radioD) WiFi Extend	ler				112	Scan	1 its	Add
	-	ED: 2A Hode: Cleat SED: 40:28 (02:22:20) End	Pyatiana WPAZ PDK (NON)	o)			Disable	-10	6.44		Homove
soci	ated Stat	ions									
	5510	HAC-Address	IP-ri-Address	Gignel	Noise	RX Bate			TX Re		
1	26	60-36-00-32-22-30		-3.7 d6en	-65 d8m	72.2 MbR/b, HCS 7, 20HHz		22.3	NUMPE, MC	5 7, 20	HHt:

6. Scan for Wi-Fi Network

Click <Scan> to Search for available WiFi.

inter I	W/0-W/F V2.0 Loss: 0.04 0.14 0.14	Change
Join H	letwork: Wireless Scan	
100	2A Channel: 1 Mode: Miclar BERED: 05:38 05:82 02:32 Encryption: minut WM/WM/2 - FEK	III Jon Natwork
1027	MySpectrumWiFH5-2G Channel: 1 Mode: Master 64800-10:00:04:78:00:79 Enryphen: <u>WPA2 - File</u>	El Join Methodic
1	Scout's Pince Channel: 11 Meder Huster 868701 28:80-89-05-52-08 Encryption: 9052 - 156	Californi teatasaria
100	ATTUZg3A2Z Obanneti 11 (Model Matter 1 85630) 20:22:04:37:55:29 (Exerviption: 32522,253)	123 Jame Norkewath
ala.	JaLaKWIPI-guest Channel: + Mode: Haster 99920: 72:34.CD:10:73:09 Encryption: <u>WFA2 - F34</u>	(13) Juan Mariavan
10	Ridgenet Channet: 2 Node: Mactar BBRID: 40:00.00.01.09.AX Becryption: <u>WPA2 - FIX</u>	III Join Nertwork
100	JnLnKWIPI-guest Gannel 1 Male Meder BBITE 22-33-CB-21-37-58 Encryption (<u>WFA2 - FLE</u>	III Jain Network

7. Select Wi-Fi Network

Click <Join Network> for the network of choice.

6mizer wXa-WiFi v2.0 Load: 0.08 0.13 0.14 Fume Status Admin			Charge
Join Network: Settings			
WPA passphrase	Specify the secret encry	ption key here.	
Name of the new network	www	*	
1			Back to scan results Submit

8. Enter Wi-Fi Network Password

Enter password as needed. Click <Submit>.

timizer wXa-WiFi v2.0 Load: 0.18 0.16 0.14 A	ato Refresh: on Unwood Ehonges
Hume Status Admin	
Wireless Network: Client "2A" (wlar	10)
The Device Configuration section covers physical the radio hardware is multi-SSID capable). Per n Device Configuration	settings of the radio hardware such as channel, transmit power or antenna selection which an shared among all defined wreless networks (if exerk settings like encryption or operation mode are grouped in the Interface Configuration,
General Setup	
Status	Mode: Clent SSI0: 2A #SSI0: 60:38:85:27:27:0 Encryption: WHA2 PSX (HONE) tors: Channel 16 (24-47) 47(1) TherVarver 27 dbm Signat-15 68(1) Notice: 46 dbm Bitrafta: 27.2 Mbh/1 (Souther 50 dbm
Operating frequency	Mode Channel Width N ♥ B (2447 MHz) ♥ 20 MHz ♥
Back to Overview @Reset	Sove Save & App

9. Accept Network

Click <Save & Apply>.

imizer wXa-Wi	Fi v2.0 Load: 0.75 0.28 0.18 A	uto Refresh: on				Chan
Home Statu	Admin.					
Wireless Ov	rerview					
Ger Cha	veric MAC80211 802.11bg nnel: 8 (2.447 GHz)) Bitrata: 65	n (radio0) WiFi Extend	ler			
007	SSED: 2A Mode: Client BSSED: 60:38:E0:32:22:30 E	KRYPTION: WPA2 PSK (NONE	0			📑 Scan
Associated	Stations					
553	D MAC-Address	IPv4-Address	Signal	Noise	RX Rate	TX Rate
- 26	60:38:60:32:22:3D	,	-19 diim	-Rk dRm	73.3 MbR/c, MCE 7, 20MHz	65.0 Mbit/e, MCS 7, 30MHz
WiFi Extend	der Status					
Authentic	ation Status					
Authenticate	ed .					
Interface	Live Status					
	HTTP is active web:direct	WIFI is active IPv4:192.168.1.100		DNS is active		
vered by RedPor	t /Copyright @ Global Marine Net	works, LLC 2015 - All Rights	Reserved)			

The Halo Wi-Fi extender is now configured and is ready for use. You can now exit the User Interface and enjoy Internet usage.

Frequently Asked Questions (FAQ) (More FAQ located at halowifi.net)

I do not see anything when I go to 192.168.10.1 or halowifi.net? If you open up a web browser and do not see the UI of the Optimizer, ensure you are connected to the Optimizer's Wi-Fi called "wXa-203-xxxx". If Wi-Fi connection verified, perform a factory reset (press the black inset button under "RST" on the front panel with a pen or paperclip for 15 seconds, then let go). Wait for the lights on the top of the Optimizer to stop flashing (30 seconds of flashing).You should now see the Wi-Fi network.

I can't find the Optimizer's Wi-Fi name?

The Optimizer's Wi-Fi is called "wXa-203-xxxx" by default. If you do not see it in the list of Wi-Fi networks, look at the Optimizer and see if the lights on top are illuminated. If not, is the Optimizer plugged in? If the WLAN light is illuminated and the Wi-Fi network is not viewable, perform a factory reset (press the black inset button under "RST" on the front panel with a pen or paperclip for 15 seconds, then let go). Wait for the lights on the top of the Optimizer to stop flashing (30 seconds of flashing). You should now see the Wi-Fi network.

I logged into the Optimizer and do not see the connect button? If you have logged into the Optimizer's interface and do not see "steps 1-3" or do not see the <scan> button - Look at the Wi-Fi extender. Are there any lights on? It requires power through the Ethernet cable (POE) that is connected to the Optimizer Lan port. The Halo Wi-Fi extender needs to be plugged into the LAN port and not the SAT port.

I don't see any lights on the Halo Wi-Fi Extender?

If you do not see any lights on the Wi-Fi extender, you most likely have not plugged the Ethernet cable into the bottom of the Wi-Fi Extender and then plug the Ethernet cable into the LAN port of the Optimizer.

After I joined a network to repeat, the signal said 0?

If you join a Wi-Fi network and after you click <Save and Apply>, the signal drops to 0, this means you have typed in the password for the Wi-Fi network you are attempting to repeat, incorrectly. I see a lot of networks, but not the one I want to connect to? The Halo Wi-Fi Extender will only connect to 2.4 GHz networks. If the network you want to connect to is 5 GHz, the Halo Wi-Fi Extender will not see that network.

My connectivity is cutting out over the Halo Wi-Fi Extender when I am very close the Wi-Fi hotspot I am repeating?

The Halo Wi-Fi Extender is a very powerful antenna. If you are close enough to connect without using the Wi-Fi extender, you should not use it. In this scenario, the Wi-Fi extender is over powering the weaker Wi-Fi network you are attempting to connect to and most likely causing interference for everyone around you.

My connectivity is cutting out over the Halo Wi-Fi Extender when I am not close enough to connect without the Halo Wi-Fi Extender?

The Halo Wi-Fi Extender should be placed 10-15 feet above the water or ground level. You are most likely over-shooting the Wi-Fi networks you want to connect to. Because the Wi-Fi extender emits Wi-Fi perpendicular in relationship to the antenna, at a height of 10-15 feet, the horizon is between 4-6 miles away. If you mount your Wi-Fi extender incorrectly, you will likely overshoot all the Wi-Fi access points you are hoping to repeat, or at the very least, have very poor performance.

I plugged in the Optimizer and antenna but they won't power on?

Ensure that you have fully seated the 12v AC power plug into the Optimizer and have screwed the security fastner onto the screw firmly but not too tightly.

How do I update the firmware?

First step is exit Wi-Fi extender mode. You can find out if you are in Wi-Fi extender mode, by logging into the Optimizer's UI, and if the section "WiFi Extender Mode" says "enable WiFi Extender Mode", you do not need to do anything and can skip down to "Update the Optimizer's WiFi" section. If it says "Disable WiFi Extender Mode", continue with the next section.

To exit out of Wi-Fi extender mode:

1. Click <Admin> tab.

2. Click < Disable WiFi Extender Mode>.

The Optimizer and Wi-Fi extender will reboot. Wait for the lights on the top of the Optimizer to stop flashing (30 seconds of flashing). The Optimizer is now available again and you can reconnect to the Optimizer's Wi-Fi.

Wi-Fi extender mode does step 2 and 3 for you when not in Wi-Fi extender mode, so after updating the firmware, you can simply click "enable Wi-Fi extender mode" to get back to the original setup you had, where you only have to click scan to connect to a new Wi-Fi network. But to update the firmware, we will have to stay out of Wi-Fi extender mode.

Then update the Optimizer's Firmware:

Download the appropriate firmware for your Optimizer to your computer (you can find your model number on the bottom of your Optimizer) from

redportglobal.com/support/technical-downloads/

- 1. Wi-Fi connect to the Optimizer (wxa-203-xxxx).
- 2. Open a browser and go to 192.168.10.1
- 3. Login as Username: superadmin Password: webxaccess.
- 4. Go to system tab > Backup/Flash firmware.
- 5. Under "Flash New Firmware image" uncheck "keep settings", if checked (this is very important).
- 6. Browse for the firmware you downloaded from above link "latest-wxa-203.bin" by clicking <choose file>.
- 7. Click <Flash image>.
- Click <Proceed> (this page will die and never refresh. Close web page).

9. Wait for the lights to stop flashing on top of the Optimizer (30 seconds of flashing). The Optimizer's Firmware is updated.

AS NEEDED...Then update the Wi-Fi Extender Firmware:

Download this firmware for your Wi-Fi extender from redportglobal.com/support/technical-downloads/

- 1. Wi-Fi connect to the optimizer (wxa-203-xxxx).
- 2. Open a browser and go to 192.168.10.1
- 3. Login as Username: superadmin Password: webxaccess
- 4. Go to system tab > Backup/Flash firmware.
- 5. Under the pane "WiFi extender", click
- <Backup/Flash firmware>.
- Check that the URL has 192.168.10.177 and not 192.168.10.1. If you do not see 192.168.10.177, please go back to step 1.
- 7. Browse for the firmware you downloaded from above link "latest-wifiext.bin" by clicking <choose file>. Do not confuse with Optimizer firmware ("latest-wxa-203.bin").
- 8. Click <Flash>, then click <Proceed> (this page will die and never refresh. Close web page.)
- 9. Wait for 2 minutes, and then check in the Optimizer's web page (192.168.10.1) to see if your Wi-Fi extender has updated the firmware. You will see steps 1, 2, 3 under "WiFi extender setup" pane, if Wi-Fi extender has successfully booted up.

The Optimizer and Halo are now up to date. You can click <enable WiFi extender mode> to have the same setup as when you started. Your Optimizer will reboot, to enable Wi-Fi extender mode.

Additional Halo FAQ, Help, and Information

- halowifi.net
- redportglobal.com/support/documentation-manuals/
- redportglobal.com/support/technical-downloads/

RedPort Company Information

For product orders, support or returns, please contact: Phone: International: +1 865.379.8723

USA: 877.379.8723

Email: info@redportglobal

Sales: sales@redportglobal.com

Web: <u>redportglobal.com</u>

RedPort Address

RedPort 3224 Wrights Ferry Road Louisville, TN 37777

© 2020 RedPort Global I Powered by Pivotel America Inc. I All Rights Reserved.