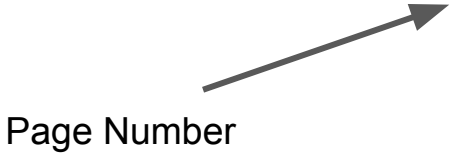
ButterflyMX Elevator Control Installation

This guide covers the general setup procedure for ButterflyMX Elevator Control Systems (ECS)

The Elevator Control System (ECS) is a network-connected set of relays. It is meant to communicate with a BMX panel on site, as well as the building's access control system.

It is used in buildings where the elevator is locked until a resident authenticates with a keyfob or other type of ID.

When a resident opens the door for a visitor, the panel signals the ECS to activate a relay assigned to the resident's floor number.



INTRODUCTION

For future reference and support, take note of the ECS device's serial number. It is printed on a sticker on the back of the device.

The serial number will look like **BTFLYMX2-xxxxx.**

Your serial number is: **BTFLYMX2-_____**

Building Address: _____

_____

Write it down!

Having this information available makes the last step of the setup process very quick for our Support team.

The general setup process looks like this:

1) Plan relay connections
2) Power the device
3) Connect to network
4) Connect the relays
5) Call ButterflyMX Support for testing and building configuration

We will walk through each step.

At the back of the guide, please find sections for **Advanced Configuration** and **Advanced Testing**.

1) Plan relay connections

The ButterflyMX ECS device uses dry contact relays to trigger behaviors in other systems.

Each relay has 3 electrical contacts:

- **B** **normally open (NO)**
- **IN** **common (C)**
- **A** **normally closed (NC)**

Decide how you will connect the relays to the external system. The best approach will depend on how that system is configured to handle inputs.

Some systems have designated inputs/contacts for elevator floor lockouts -- e.g., “when voltage is detected here, allow elevator access to the 4th floor.”

Other systems have generic contacts or terminals than must be assigned a function via a software interface.

Whether you should use the NO or NC contact will also depend on the configuration of the external system.

Relay #	Triggered Behavior	Delay before activating relay	Relay active duration
1	*allow access to basement*	*5 s*	*60 s*
2	*allow access to floor 2*	*5 s*	*60 s*
3			
4			

To adjust timing/delay:
contact ButterflyMX Support

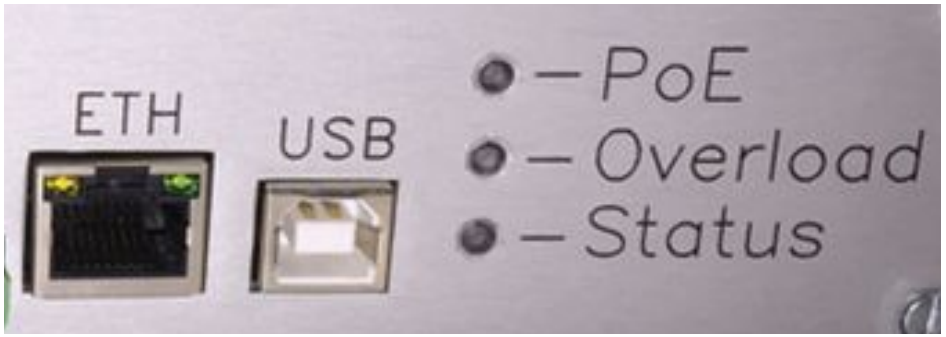
2) Power the device

There are several options for providing power to the device. **PICK ONE:**

- **Power over Ethernet (PoE) using an existing PoE-capable switch or router**:
  - If the local network already uses PoE (common for VoIP phones, for example), this is the simplest option.

- **Power over Ethernet (PoE) using an injector**:
  - A PoE injector is an adapter (“dongle”) that plugs into a wall outlet. It receives a regular ethernet cable from the network as input. It adds power, then provides power-injected ethernet as output.

- **USB**:
  - This is a standard (5V) input, like you might find on a printer or external hard drive. This is compatible with any wall outlet adapter made for standard USB devices.
  - We recommend NOT connecting this USB port to a computer -- in nearly all cases, if the computer turns off, the USB port stops providing power.



DISCLAIMER
To prevent voltage drops and surges, ButterflyMX strongly recommends installing a surge protector.

3) Connect to network

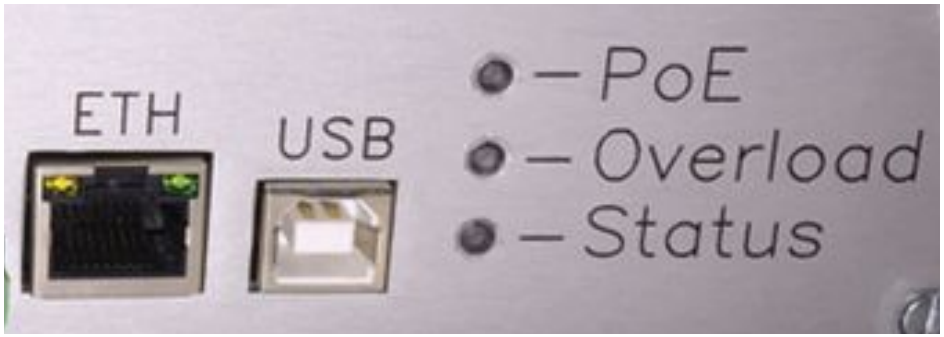
If the device uses PoE from existing network equipment, it is probably already on that network.

If it uses PoE from an injector, simply ensure that the ethernet cable going INTO the injector is connected (at the other end) to a router or switch.

If the device is powered via USB, just plug an ethernet cable from your network's router or switch into the device.

By default, the ECS device requests an IP address from the network using DHCP. However, we can set up a static IP address if necessary.

The device needs to be on the same network as the building's ButterflyMX panel. More specifically, the ECS device and the panel need to share the same subnet.



If your network setup requires a static IP address for the ECS, please see the **"Advanced Configuration"** section at the end of this guide.

4) Connect the relays

As this step is entirely dependent on a building's needs and existing systems, we cannot definitively state the best way to connect the relays to the access control system. You may want to contact the vendor of that system for expertise specific to your product.

In general, we recommend checking your system for any software settings related to inputs, which might be disabled by default.

However you decide to connect the relays to the elevator system, be sure to **document the process!**

Feel free to jump ahead and call our Support team after you've wired up the first relay. We can help you test it before you do the rest!

5) Call ButterflyMX Support for testing and building configuration

Aside from the wiring, all the setup happens via our software and a web interface accessible to our Support team. Call 775-600-2950, tell us the building and ECS serial number, and where you are in this process.

On our side, the Support team will:

a) add the ECS device serial number to the settings for this building
b) specify which relays should be associated with which floors of the building
c) specify the timing of the relays
d) assist with testing & troubleshooting, as needed

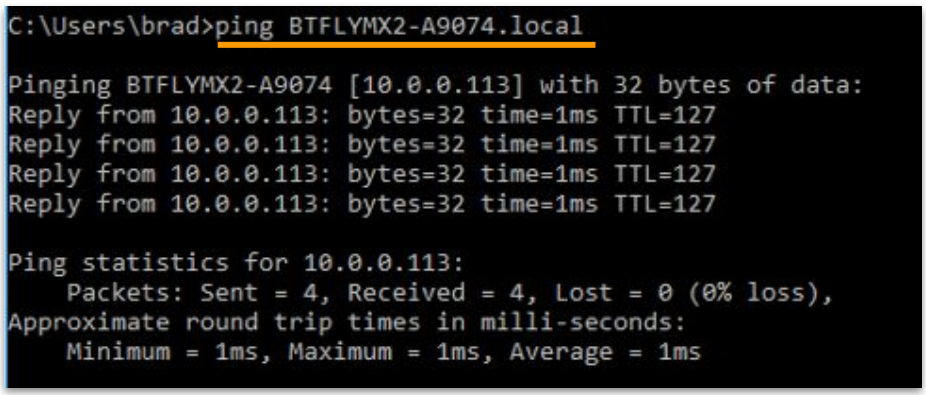
ADVANCED CONFIGURATION

This section will cover the assignment of a static IP address to the ECS device.

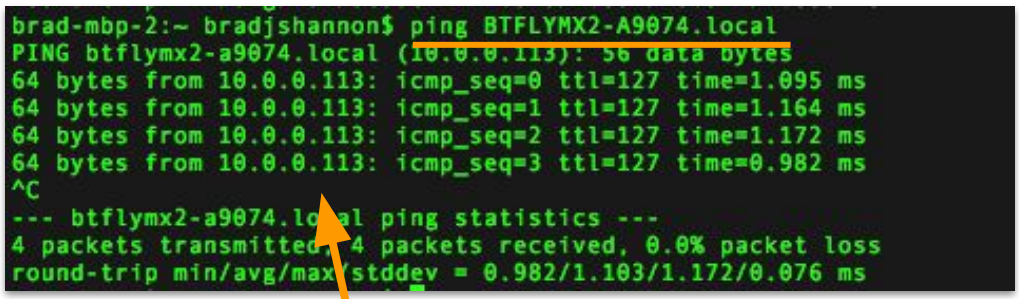
By default, the ECS obtains an IP address automatically using DHCP. In order to assign a static IP, the device must first be brought onto a DHCP-enabled network so we can access its configuration interface.

Once connected to a DHCP-enabled network, the device automatically receives an IP address. We need to find out what it is. The easiest way is to ask your network administrator to look for the ECS's serial number on the DHCP server. But you can also find it by opening a command line in Windows (Start > Run > cmd) or terminal in MacOS (Applications > Utilities > Terminal).

At the command line or terminal, type **`ping`**, then the ECS's serial number followed by **`.local`**, then press enter. Here's an example:



Windows

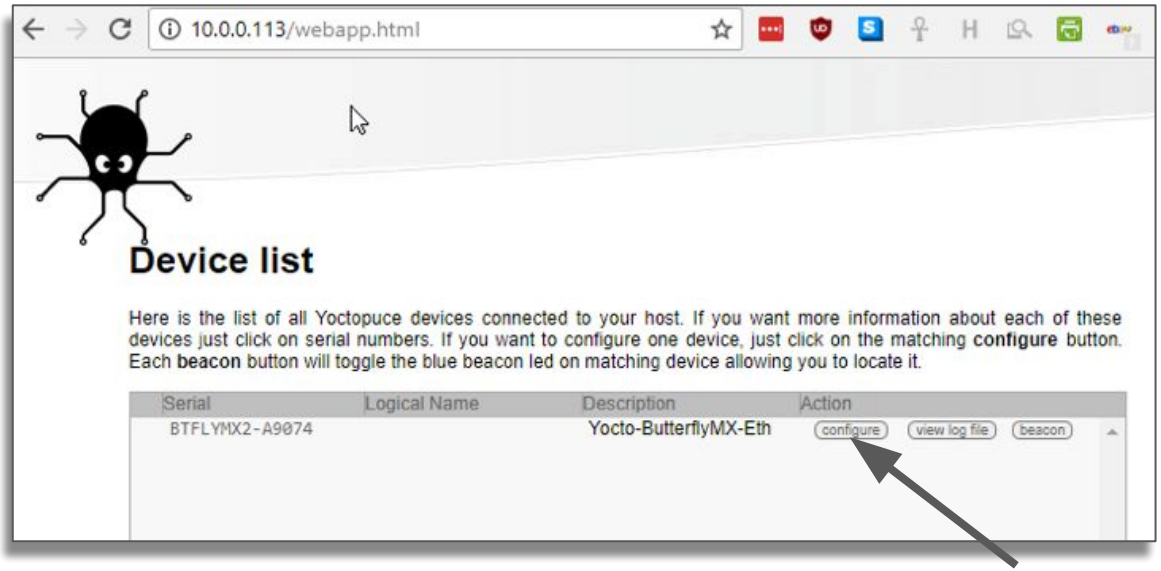


Mac

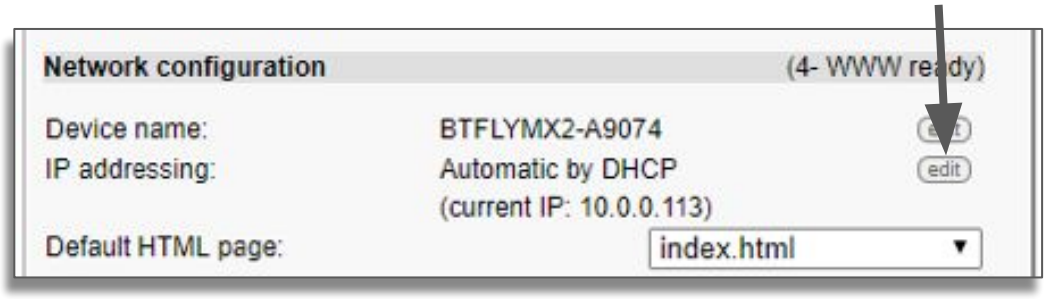
The goal here was to find the ECS's IP address, as assigned by the DHCP server. And in the ping results, you can see it. In this example, the device received the IP address **`10.0.0.113`**.

ADVANCED CONFIGURATION (cont.)

Now we know the IP address of the device. Open a web browser and navigate to that IP address. You will find a screen like this, with a single listing:



Click “configure” to open a settings page. That page has a section for Network configuration, where you can adjust the IP address settings:



There are lots of settings on this page. Be careful!

Please DO NOT rename the device or the specific relays, as we use those in configuration on our side.

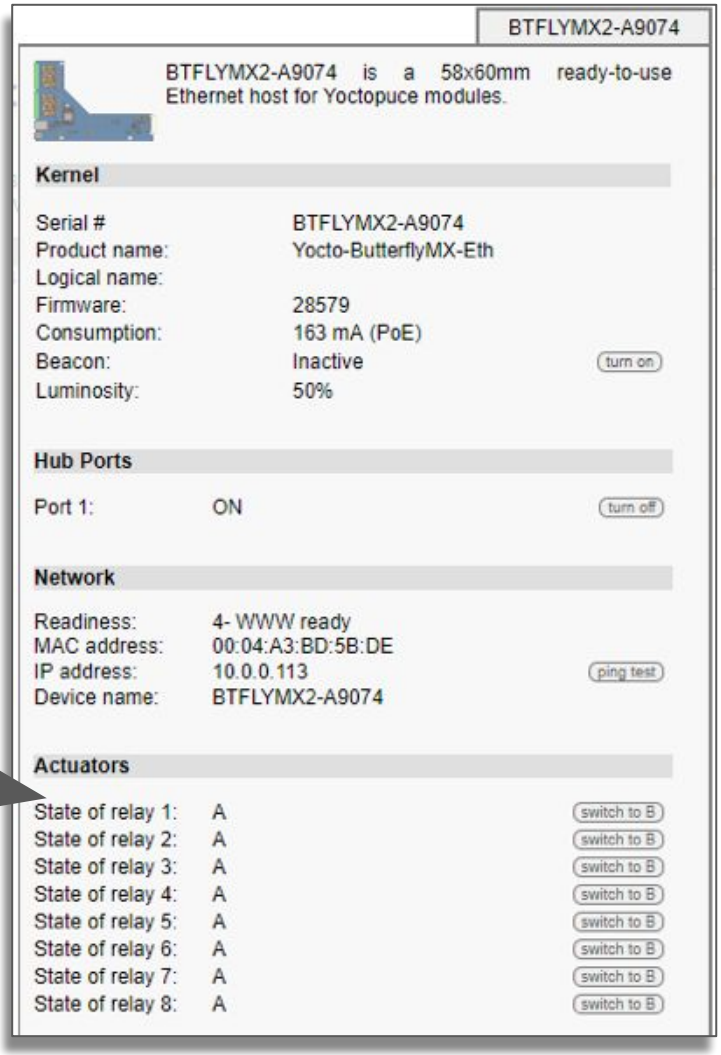
If you would like to add a password to this settings page, edit the option labelled “Authentication to make changes to the devices”. PLEASE MAKE A RECORD OF THE PASSWORD, as we cannot change it for you without resetting the entire device!

ADVANCED TESTING

If you need to test the wiring of your relays, or test the behavior of your access control system, you can do so using the ECS device's web interface.

Open a web browser and navigate to the device's IP address (if you don't know it, see the previous "Advanced Configuration" section). You will find a screen like this, with a single listing:

Click on the name of the device to open a status window like this:



Under the section labelled "Actuators", you will find a list of the device's 8 relays with buttons to toggle the state of each. **Remember to reset them after you test!**