AtlasScientific AtlasDesktop Monitoring Software User Guide

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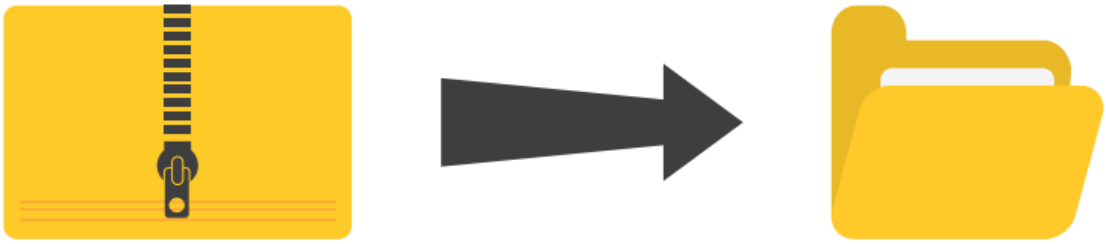
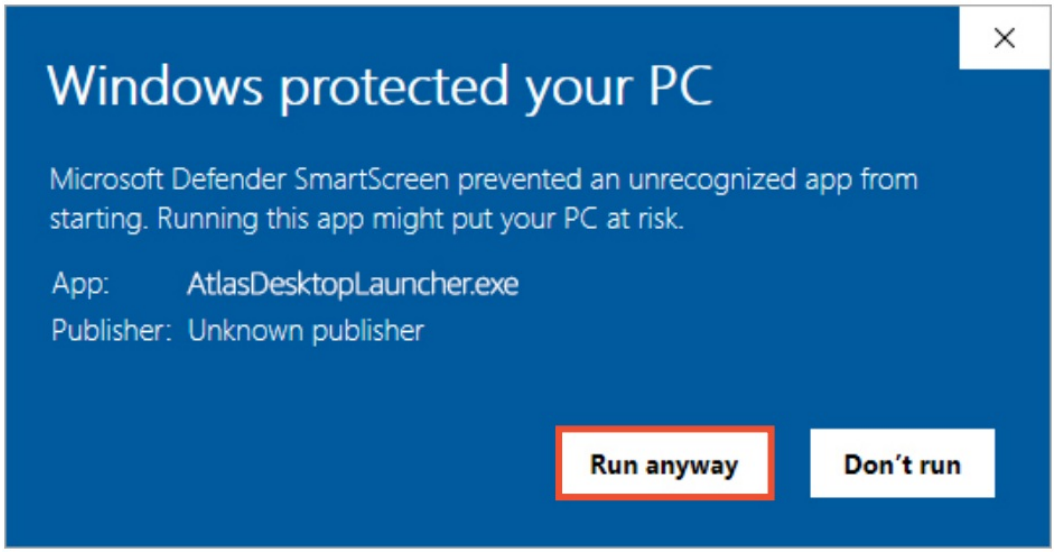
Installation guide

Step 1
Click HERE to download the Atlas Desktop™ Monitoring Software for Windows. (~101mb)

Step 2
Once the *.zip file has been downloaded, unzip into a directory of your choice.



Step 3
Run **AtlasDesktopLauncher.exe**



When running the launcher, you may receive a warning message from windows.

This is a known issue and will be resolved in a future update.

To continue, choose “Run anyway”

You may also get a request to download ASP.NET Core 6.0.

If so, select yes to download and install the file.

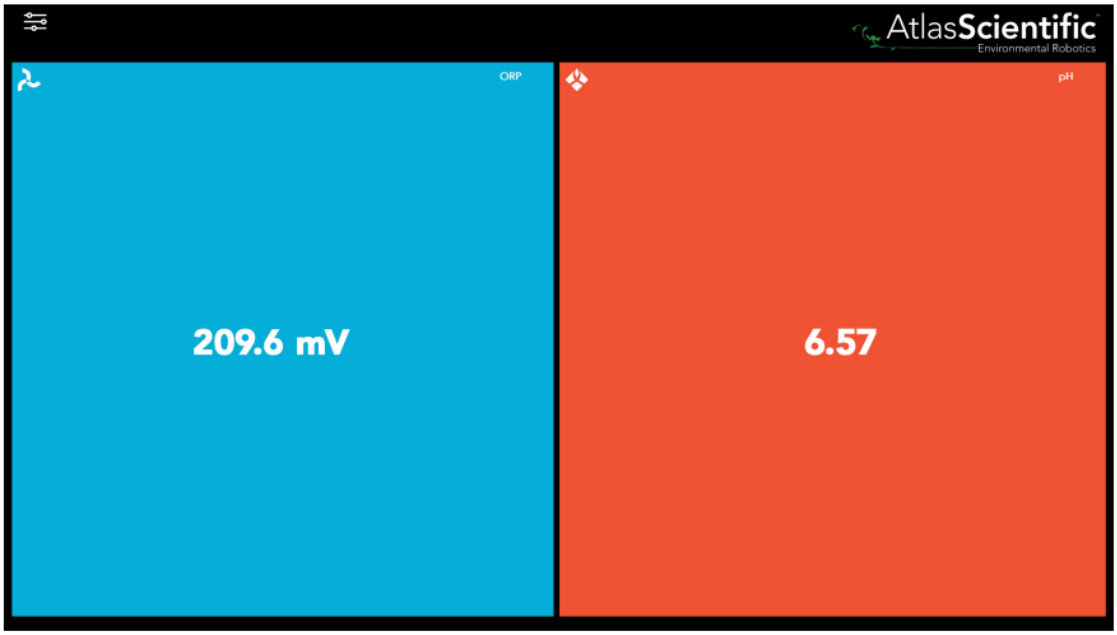
Once that’s complete, run **AtlasDesktopLauncher.exe again**

Installation Complete!

Home Screen

The Atlas Desktop™ Monitoring Software runs in a browser; when you run the software, the first page you’ll see is the Home screen.
Here you can see which EZO sensors have been connected to your PC.

In the image below, two EZO sensors are shown. You can have up to 9 on the screen at one time; this includes multiple sensors of the same type.



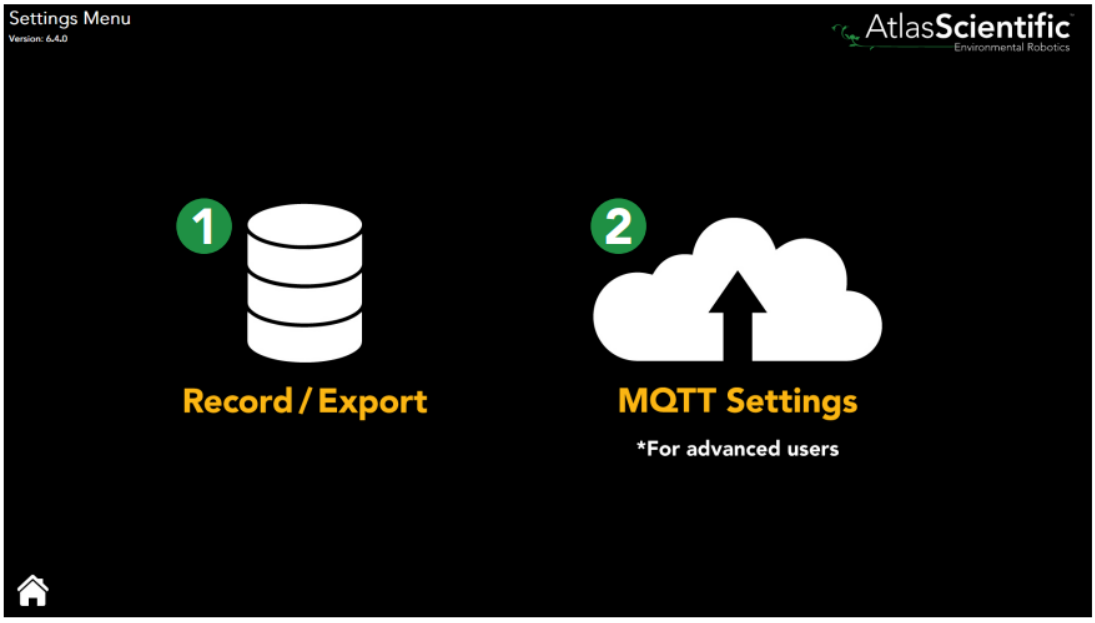
If the software cannot detect any Atlas Scientific EZO sensors, you'll see this message:

Reading Screen

Clicking on one of the EZO sensors, will take you to the sensor's reading page.
From here you can access the specific sensor's graph and calibration pages.

Settings Menu

You can access the settings menu for the The Atlas Desktop™ Monitoring Software, by clicking the “ ” icon, located at the top left corner of the home screen.



Record / **Export**
MQTT Settings this setting is for advanced users.

Record / Export Settings

File Name – The file name of your recoreded readings
Atlas Desktop .db – This is the default filename.

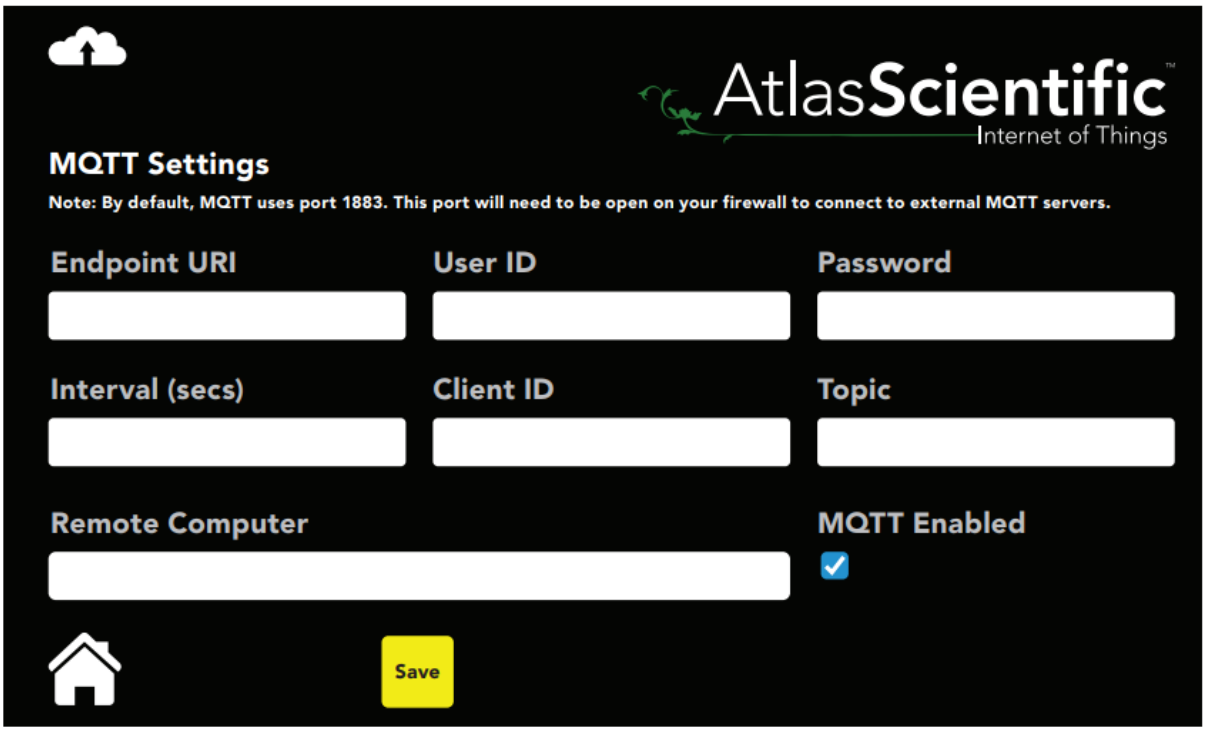
Location – Choose a folder where your recoreded readings will export to.
Example – C:\AtlasDesktop-reading

Interval (sec) / (min) – How often the database is saved
Example – 60 seconds

The exported file is a *.JSON file, and can be imported directly into Excel.

MQTT Settings

For Advanced Users



Endpoint URI – The web address of your MQTT broker
Example io.adafruit.com

User ID – If your broker requires a login, this is where your user ID goes

Example my UserId

Password – If your broker requires a login, this is where your password goes
Example my password

Interval (secs) – How often the IoT should send to data to the broker.
Example 60

ClientID – A random Client ID. (no spaces)
Example My_ Device

Topic – The MQTT topic the data will be sent out under.

See **http://www.steves-internet-guide.com**/understanding-mqtt-topics/

Note
We append on some subtopics /Sensor Type/Add_(Sensor Address)/Sensor Name
Example /RTD/add_102/My Name

If there is no name set, we leave off that subtopic.

MQTT with Mosquitto

Note: By default, MQTT uses port 1883. This port will need to be open on your firewall to connect to external MQTT servers.

Mosquitto is an open source MQTT broker that works quite well and is easy to troubleshoot.
It can be found at **https://mosquitto.org** and is well supported.

If you assume your mosquito broker is on a computer called **My Computer.**
Your settings for the Atlas IoT would be.

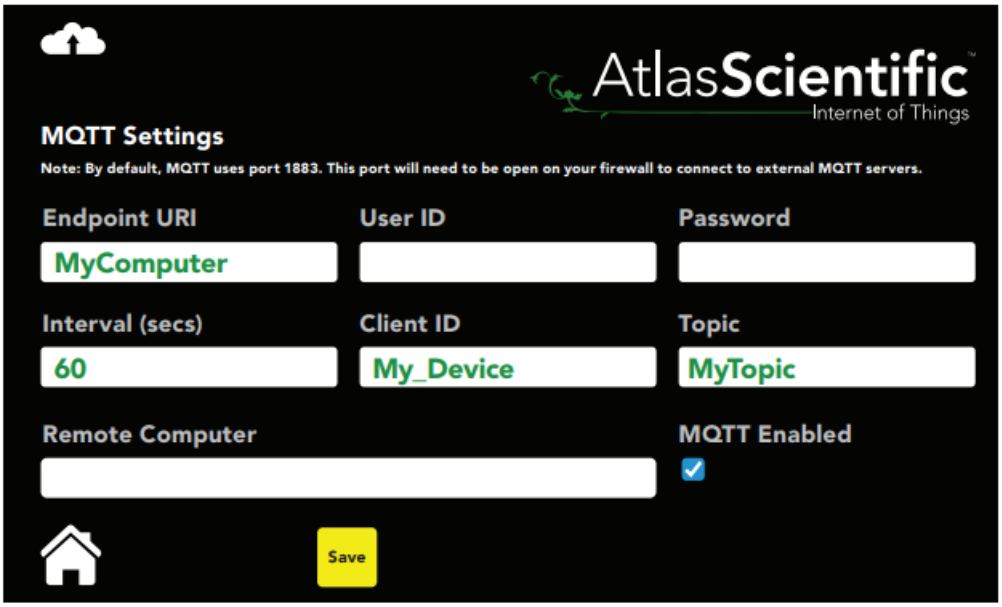
Endpoint URI: My Computer
User ID: leave blank, if you did not setup a user ID
Password: leave blank, if you did not setup a password
Interval (Secs): 60 is a good place to start
Client ID: My Device (No spaces)
Topic: My Topic (I usually do NOT put the starting "/")

We will append a series of subtopic onto your topic

Example
If you are running an EZO™ RTD Temperature Circuit on the default address, and have named it, mosquito will receive the topic My Topic/RTD/add_102/Sensor Name

If the circuit is unnamed (default) it will be **My Topic/RTD/add_102**

If you have multiple sensors, there will be multiple topics, all underneath **My Topic.**
You should see them in your mosquito _sub session.



Troubleshooting

If we assume that you have installed mosquito on a computer called My Computer (see their website **https://mosquitto.org** for ports to open, etc), You can monitor all traffic to that broker with a program call mosquito sub (comes in the install package) The Manual can be found by clicking HERE Assuming you have not setup mosquito for login, the command would be mosquito _sub -v -h My Computer -t '#' That command subscribes to ALL topics ('#') in a verbose manner.

API Settings

We've added web API support to the Atlas iot™ software.
Simply go into your web browser and enter in:

[Your raspberry pi address]/api/values

Displayed in your browser will be a JSON containing all of the connected EZO™ circuits and sensor, along with their readings, device name, and device addresses.

Example

[{"created_at":"2021-07-23T17:08:39.4038617Z","ModuleType":"CO2","value":"1005","Address":77,"Name":"test)co2"},{"Temperature":24.7,"Humidity":35.25,"THI":69.79,"HeatIndex":75.46,"created_at":"2021-07-23T17:08:38.8037542Z","ModuleType":"HUM","value":"35.2","Address":111,"Name":""}]

From the example above, you can see the readings from two EZO™ sensors:
EZO-CO2™ and **EZO-HUM™**

[{"created_at":"2021-07-23T17:08:39.4038617Z","ModuleType":"CO2","value":"1005","Address":77,"Name":"test)co2"},{"Temperature":24.7,"Humidity":35.25,"THI":69.79,"HeatIndex":75.46,"created_at":"2021-07-23T17:08:38.8037542Z","ModuleType":"HUM","value":"35.2","Address":111,"Name":""}]

You can also display the readings of a specific EZO™ circuit or sensor, by entering their I2C or USB address after the API command in your web browser.

[Your raspberry pi address]/api/values/77

Example

[{"created_at":"2021-07-23T17:08:39.4038617Z","ModuleType":"CO2","value":"1005","Address":77,"Name":"test)co2"}]

You will only see the readings from the EZO-CO2™ as this sensors I2C address is 77.

TLS / SSL Connection

There is new section we've added into the upsetting's. JSON file.


```
"MQTT": {
  "CAFile": "",
  "ClientFile": "",
  "SSLProtocol": "None",
  "UseSecure": false,
  "Port": 1883
}
```

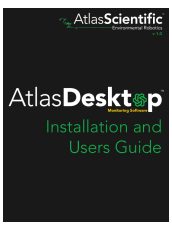

To edit this new section, open the "upsetting's. JSON" file via text editor. If this section is removed entirely, the app will continue to functions as it currently does.

CA File can be set to the path of your certificate authority file.
Client File is set to the path of the Client Key file

SSL Protocol can be any of the following:
None (default if an error is made)
sslv3
tlsv1_0
tlsv1_1
tlsv1_2

Use Secure is set to your User ID and Password.
Port is the TCP/IP port to use.
By default, non TLS/SSL connections use **1883,** secure uses **8883.**

Documents / Resources

	AtlasScientific AtlasDesktop Monitoring Software [pdf] User Guide AtlasDesktop Monitoring Software, Monitoring Software, Software

References

- ASP.NET Core | Open-source web framework for .NET

- IO - Adafruit
- Understanding MQTT Topics
- Eclipse Mosquitto
- User Manual