

openQCM Wi2: Python Environment Configuration Guide for Software version 2.x

Version: 1.0

Date: 2025-07-11

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Introduction

This guide provides detailed instructions for setting up the Python environment required to run openQCM Wi2 software version 2.x. openQCM Wi2 is a Python-based project that requires specific dependencies and configurations to operate properly.

We have chosen Anaconda as our Python distribution platform for its efficient package management, cross-platform compatibility, and integrated scientific libraries, making it ideal for openQCM Wi2 deployment.

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System Requirements

Supported Platforms

Windows

- **Package:** Anaconda3-2022.05-Windows-x86_64.exe
- **Platform:** 64-bit Windows only
- **Python Version:** 3.9
- **Size:** 593.9MB
- **Build Date:** 2022-05-10 13:22:02

macOS

- **Intel x86_64**
 - **Package:** Anaconda3-2022.05-MacOSX-x86_64.pkg
 - **Python Version:** 3.9
 - **Size:** 591.0MB
 - **Build Date:** 2022-05-10 13:22:02
- **Apple M1**
 - **Package:** Anaconda3-2022.05-MacOSX-arm64.pkg
 - **Python Version:** 3.9
 - **Size:** 316.4MB
 - **Build Date:** 2022-06-07 12:40:24

Linux

- **Package:** Anaconda3-2022.05-Linux-x86_64.sh
- **Platform:** 64-bit Linux
- **Python Version:** 3.9
- **Size:** 614.3MB
- **Build Date:** 2022-05-10 13:22:02

Prerequisites

Before proceeding with the installation, ensure you have:

- **Latest version of openQCM Wi2 software**
- Administrative privileges on your system
- At least 3GB of free disk space
- Internet connection for downloading packages
- For Linux users: Access to terminal and sudo privileges

Installation Procedure

Step 1: Download Anaconda Distribution

Choose the appropriate version for your system:

System	Download Link	Size
Windows 64-bit	Anaconda3-2022.05-Windows-x86_64.exe	593.9MB
macOS Intel	Anaconda3-2022.05-MacOSX-x86_64.pkg	591.0MB
macOS M1	Anaconda3-2022.05-MacOSX-arm64.pkg	316.4MB
Linux	Anaconda3-2022.05-Linux-x86_64.sh	614.3MB

Step 2: Install Anaconda

Windows and macOS

- Run the downloaded installer
- Follow the installation wizard instructions

Linux

1. Navigate to the download directory
2. Make the installer executable:

```
chmod +x Anaconda3-2022.05-Linux-x86_64.sh
```

3. Run the installer:

```
./Anaconda3-2022.05-Linux-x86_64.sh
```

4. Follow the prompt instructions

Step 3: Install Python Dependencies

Open Anaconda Prompt (Windows), Terminal (macOS), or Shell (Linux) and run:

```
conda install pyserial
conda install pyqt5
conda install pyqtgraph
conda install numpy
pip install --upgrade pip --user
```

Step 4: Configure Serial Port (Linux Only)

For Linux systems, set up serial port permissions:

```
sudo usermod -a -G uucp $USER
sudo usermod -a -G dialout $USER
```

Note: Log out and log back in for these changes to take effect.

Step 5: Launch Application

Navigate to the openQCM Wi2 directory and execute:

```
python main.py
```

Dependencies

Required Packages

PySerial

- Version: 3.5
- Purpose: Serial port communication library
- License: BSD-3-Clause
- Resources:
 - [Anaconda Package](#)
 - [GitHub Repository](#)

PyQt5

- Purpose: Cross-platform GUI toolkit
- License: GPL v3
- Resources:
 - [Documentation](#)
 - [PyQt5 Reference](#)

PyQtGraph

- Purpose: Scientific Graphics and GUI Library
- License: MIT
- Resources:
 - [Documentation](#)
 - [GitHub Repository](#)

NumPy

- Purpose: Numerical computing library
- License: BSD-3-Clause
- Resources:
 - [Documentation](#)
 - [GitHub Repository](#)

Technical References

Anaconda Resources

- [Anaconda Distribution 2022.x release notes](#)
- [Repository Archives](#)
- [M1 Support Information](#)

Installation Guides

This page provides instructions for installing Anaconda Distribution on Windows, macOS, and Linux.

[Installing Anaconda Distribution](#)

Package Statistics

- Windows 64-bit: 678 supported packages
- macOS Intel: 727 supported packages
- Linux x86_64: 725 supported packages