API and Instrument Integration Guide

Labstep's R&D platform has all the tools and integrations you need for easy bench-side execution, data capture, inventory management and reporting, so you can effortlessly connect the dots at your desk.

Unifying your tech-stack through API connections is at the foundation of a seamless experience at the bench and subsequently at your desk. Labstep allows you to connect your lab instruments, devices and analysis softwares as well as data storage systems let you skip the manual work and save time through effortless data entry and offers instant access to context-rich data sent from instruments. With live data, collaboration experiences no delays: scientists can easily share and access real-time data from across the organisation.

Managing Devices

- Labstep allows you to manage all instruments and devices used in your workflow.
- Track relevant metadata such as the Manufacturer, Model and Serial Number.
- Keep a record of recurring events such as services or calibrations and schedule the next service date.
- Save files such as instruction manuals, risk and hazard guides and other important documents.
- See and search through all the datasets sent to Labstep by the device.

Sending Data from a Device

Devices can send 3 different types of data to Labstep.

- Simple numeric measurements consisting of a number and a unit i.e. Temperature, Concentration, Weight etc.
- Files such as CSV files with raw data, output reports generated by larger instruments or even images.
- Free-form text.
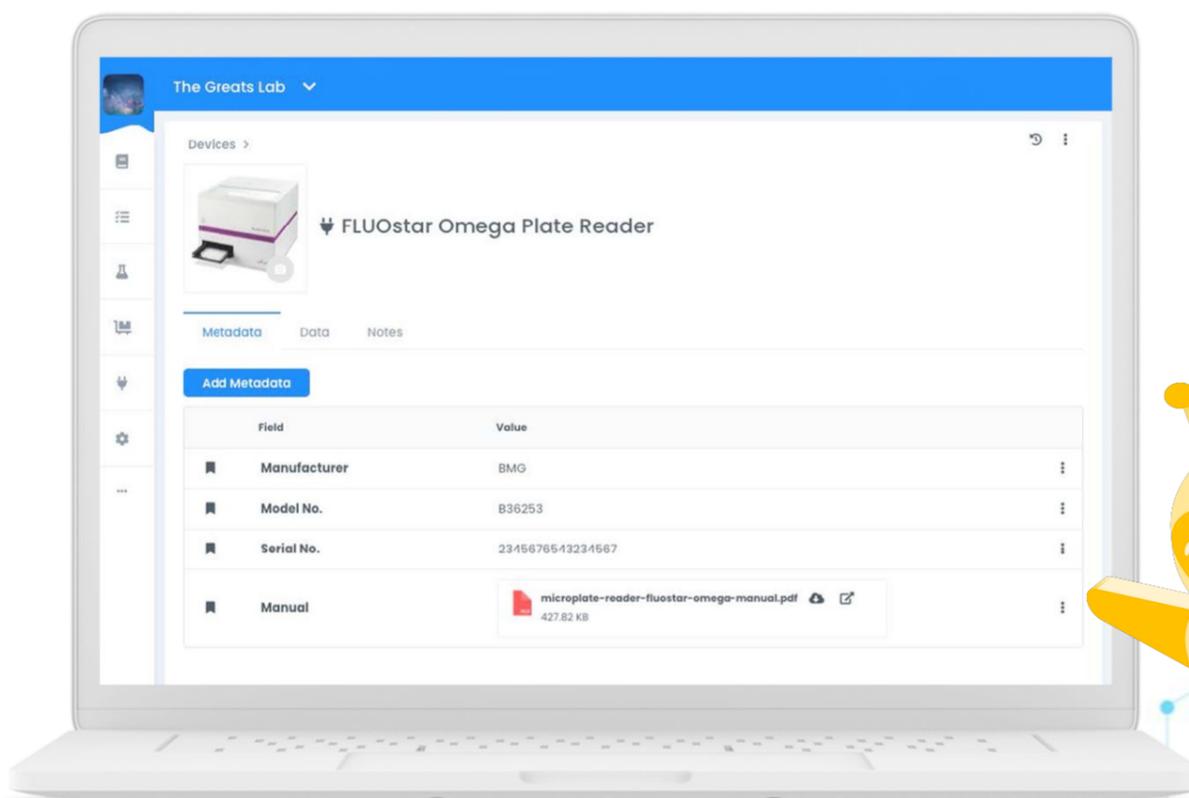
Labstep API

To send numeric measures or free-form text from your device you will need to use the Labstep API. We provide a Python SDK to make this easy along with some examples to get you started on **https://labsteppy.readthedocs.io/en/latest/**
The Labstep support team is always available to help you get started with the API, provide technical support in setting up your connections and troubleshoot when issues arise. You can contact us at **info@labstep.com** or use the in-app chat to directly speak to the team.

```python
import labstep

# Login to your Labstep account
user = labstep.login('myaccount@labstep.com', 'mypassword')

# Get a list of your experiments
experiments = user.getExperiments(count=10)

# Get a specific experiment
my_experiment = user.getExperiment(23973)

# Get a specific protocol
my_protocol = user.getProtocol(4926)

# Attach the protocol to the experiment
result = my_experiment.addProtocol(my_protocol)
```

The Labstep Devices Client

If you aren't comfortable working with the API you can still send files from your devices with no coding required. The only thing that's needed is for your instrument to be connected to a desktop. You can download the latest version of the Device Client for PC or Mac by going to **Help.labstep.com**.

To connect your instrument via the Devices client, you will need to download the software package and authenticate the Device Client with a valid Labstep API key from your Labstep account. Then, you can select the device connected to the computer that you want to send data from and select the folder where the device outputs data to.

Benefits of the Devices Client

- Removes manual work: whenever a file is saved to the folder, the Device Client detects it and will automatically upload it to Labstep.
- Seamless connections: If multiple instruments are connected to the same desktop, The Device Client is able to watch different folders for the devices.
- Easy teamwork: multiple members of a team can use the Device Client on the same desktop or for the same instrument.