POEM IoTa Quickstart Guide

Instructions for Running Serial Port Commands

(NOTE: This document is derived from the documentation for the Hologram DASH. References to the DASH as a module as now replaced by IoTa, but software names will still contain the legacy "dash" nomenclature. (e.g. "dash_repl_basic").

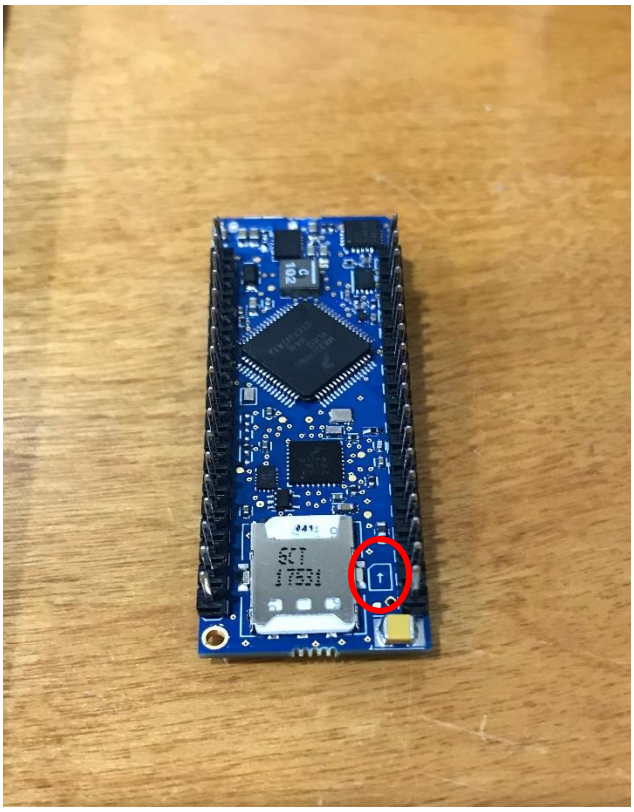
Contents

I. SIM Card Management

Inserting SIM Card:

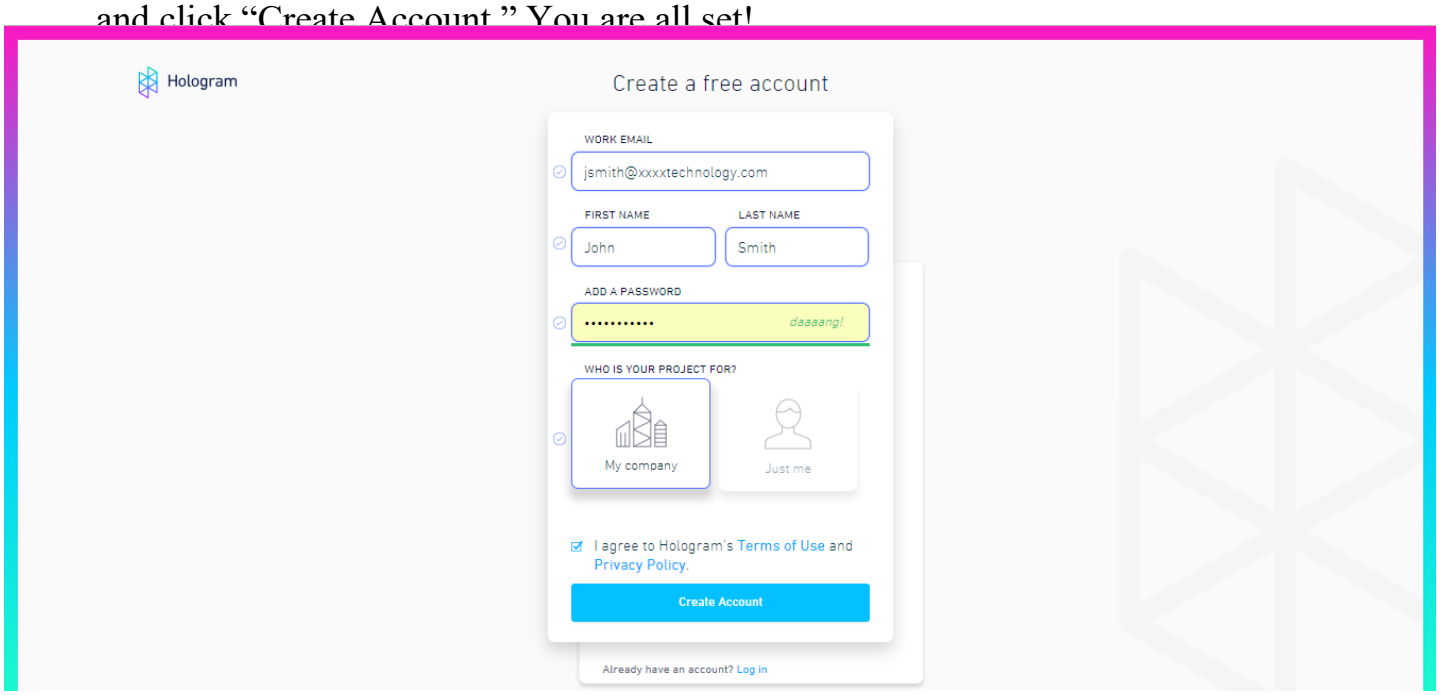
To properly insert your SIM card, pop it out of the carrier card and insert it into the back of the IoTa in the small silver compartment that is the same size as the SIM. There is a small image of the SIM card next to the compartment that details the orientation it should be inserted.

Orienting SIM Card:



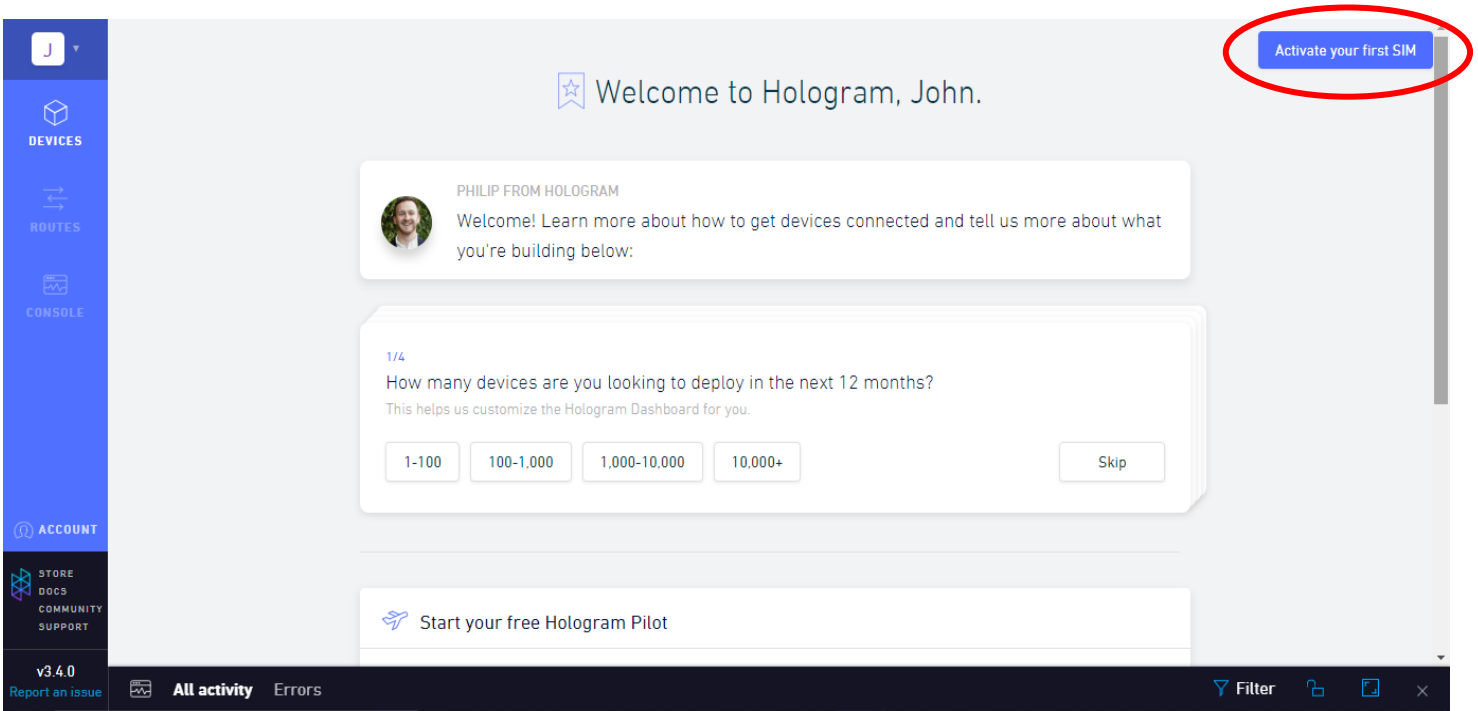
Creating a Hologram Account:

Go to https://dashboard.hologram.io/ and create a new account. Enter your personal information and create a password. Select if your project is for your company or for yourself. Agree to Hologram's Terms of Use and Privacy Policy, and click "Create Account." You are all set!

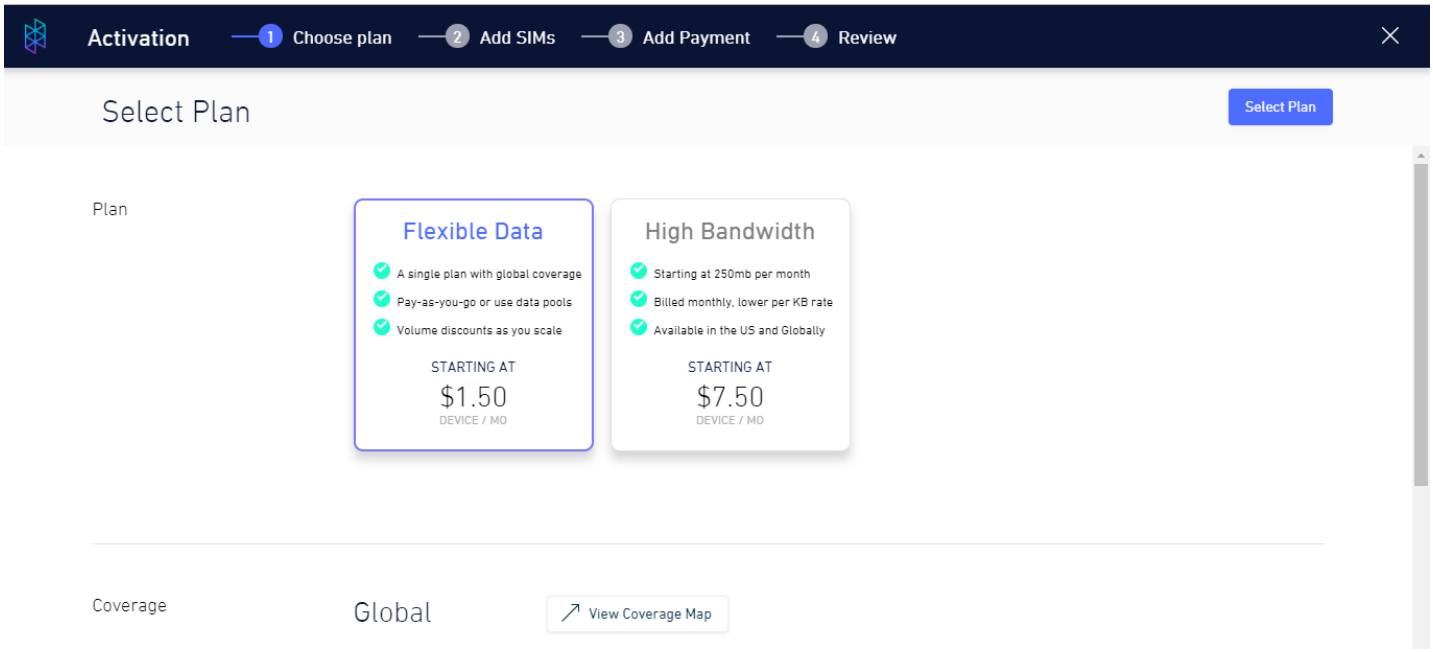


Activating SIM Card:

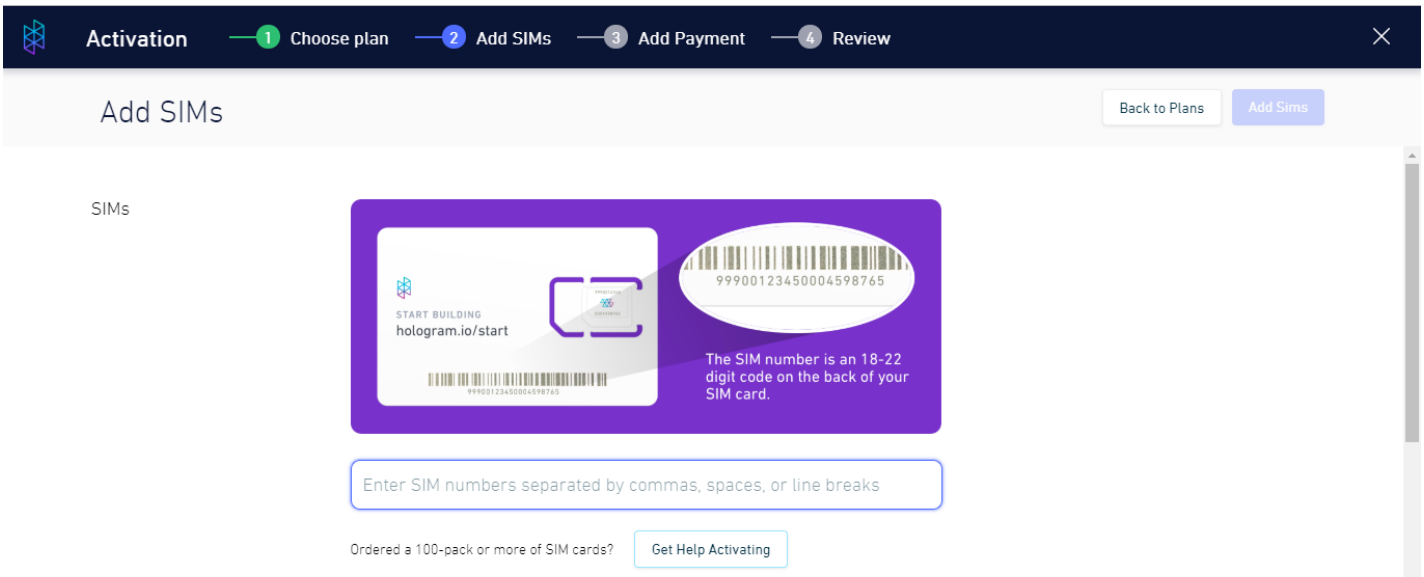
Once you log in, there is a blue button at the top right corner labeled "Activate your first SIM." Click this button to get started.



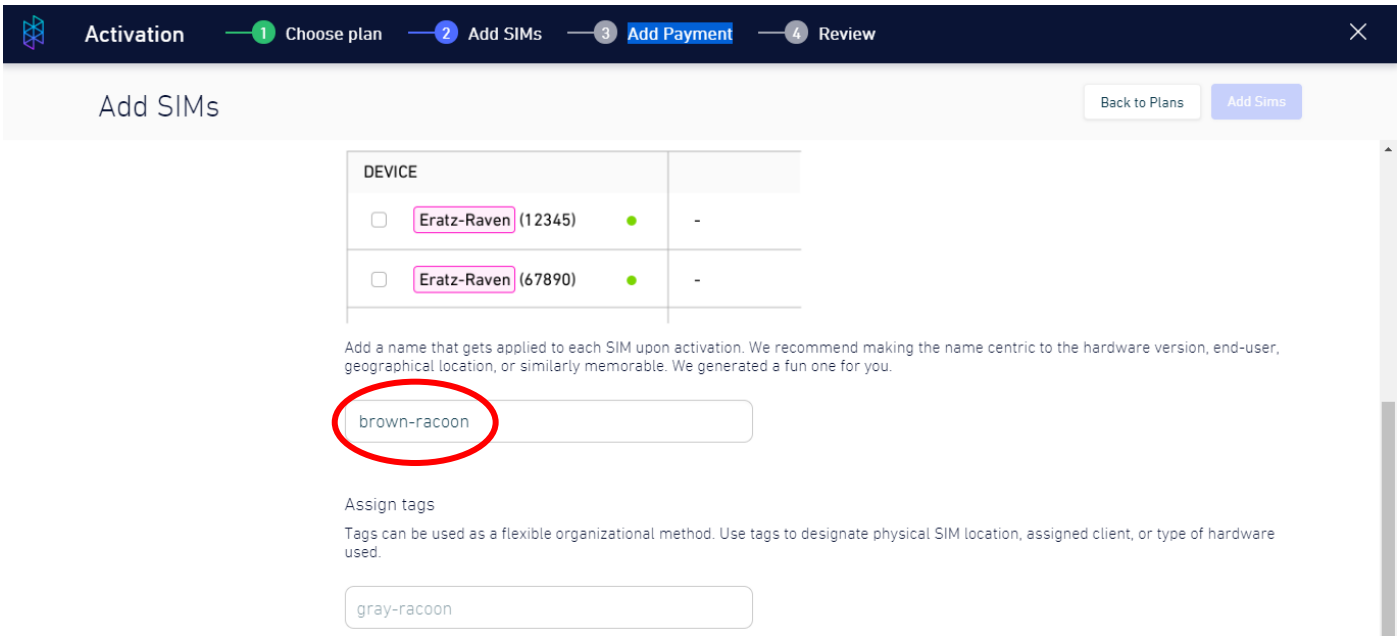
There are multiple payment plans to choose from, including a free Pilot Plan for your first SIM. Other plans have various prices and data sizes.



The next step is adding your SIM card's number. This number is located below the gray barcode on the card your SIM came inside.



You have the option of customizing your SIM's name, or giving it a tag for future reference.



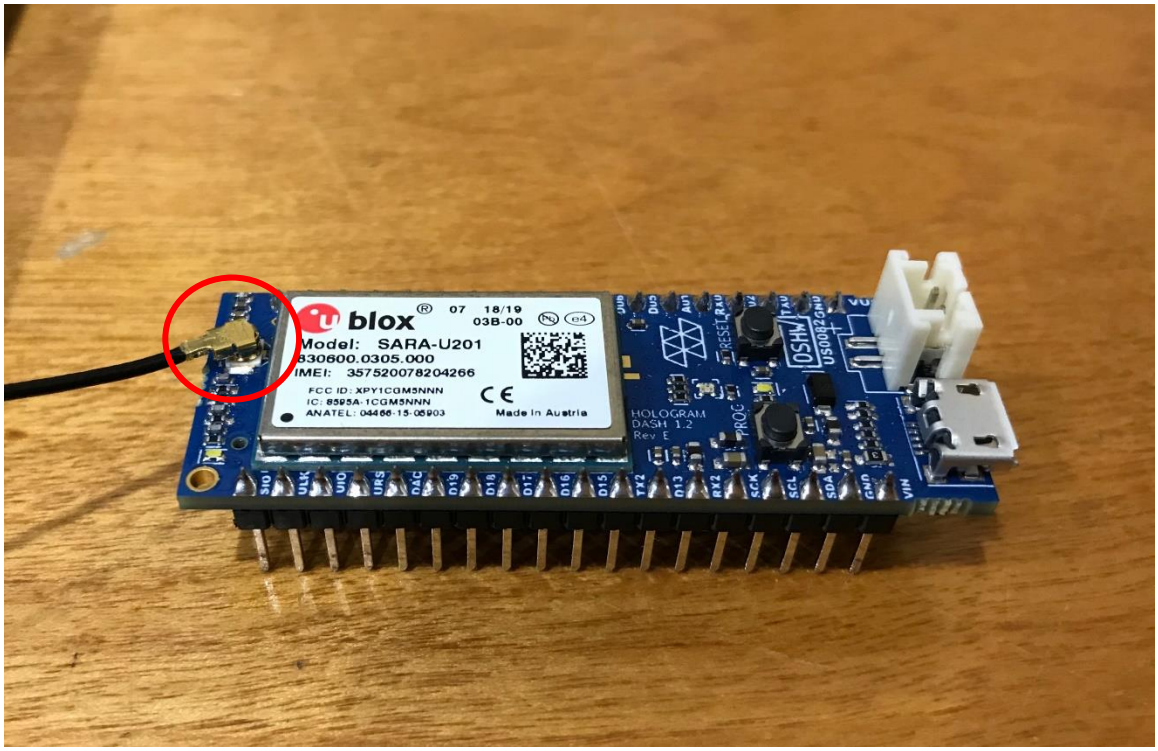
Enter your payment info. You can review your information before confirming your order. Congrats! You have activated your first SIM card.

II. IoTa Setup

Plug the supplied USB cable onto the IoTa and then into a port on your computer.

Attach the u.fl connector from the antenna to the mating connector on the IoTa to the left of the white ublox modem. The connector should mate with a snap or a click.
Your IoTa is set up!

Attaching the antenna:

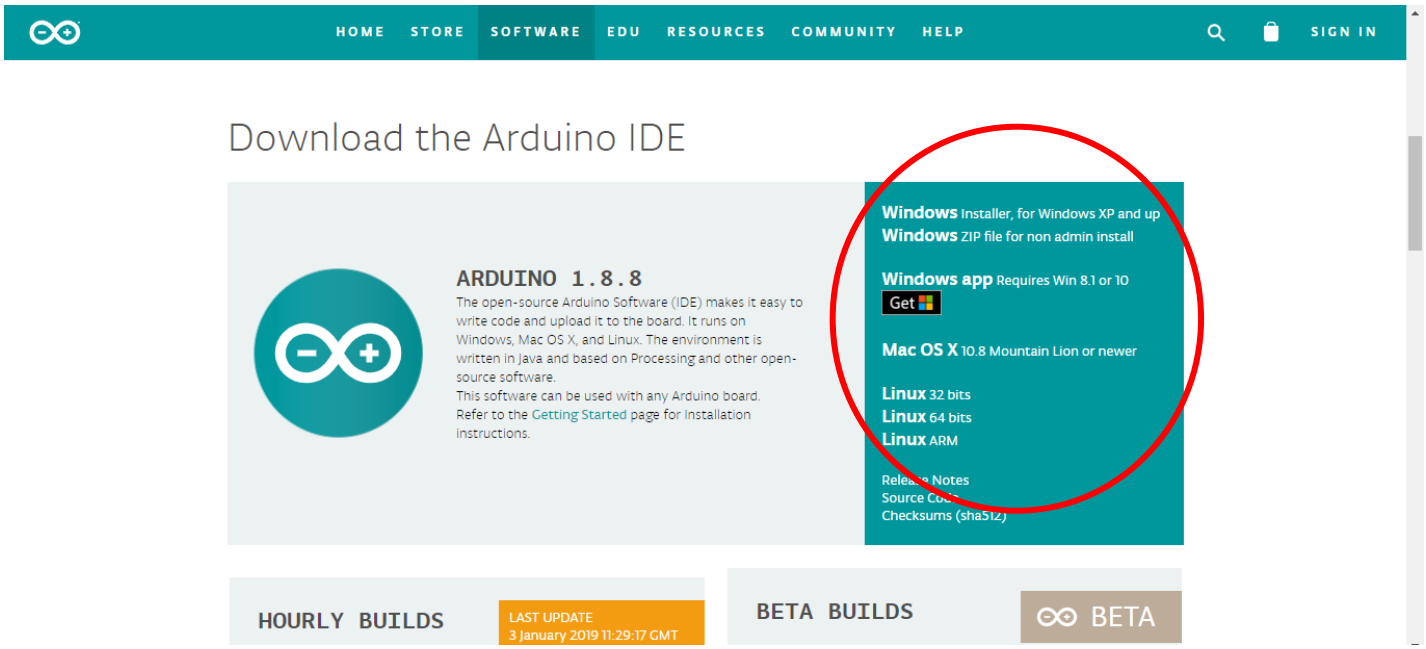


Plugging in the USB cable:

III. REPL Program

Installing the Arduino IDE:

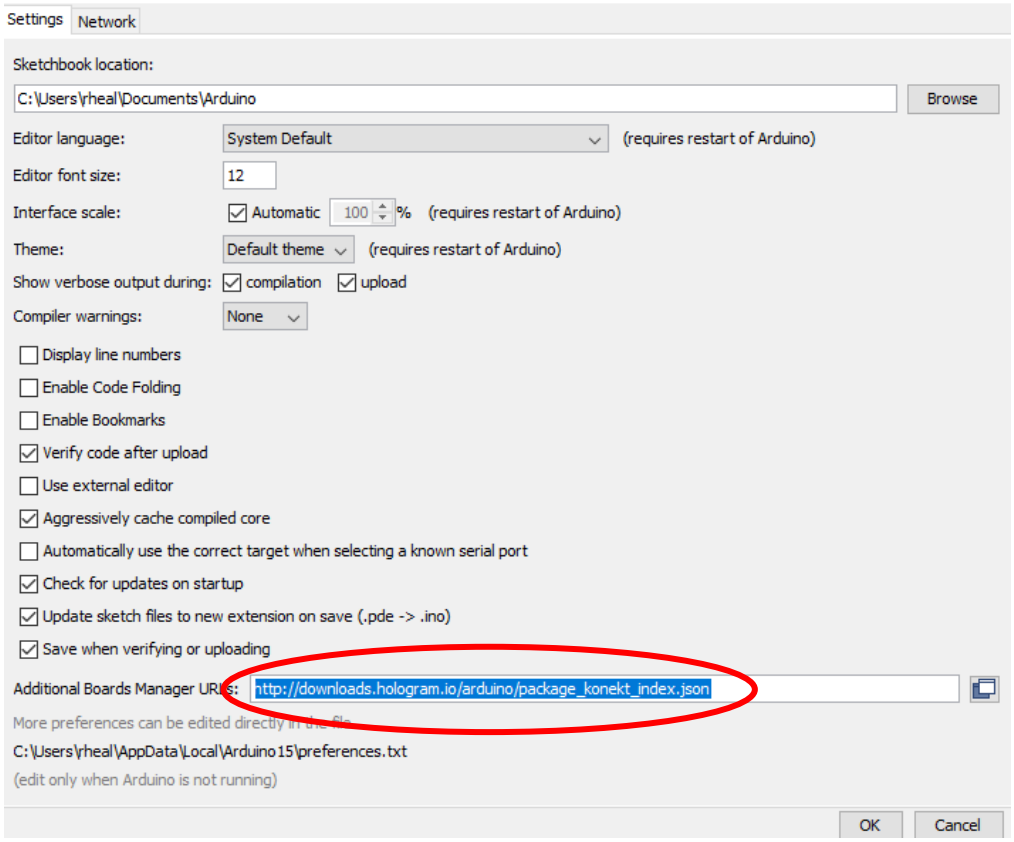
Use the link Arduino.cc to begin installation. Choose the Windows, Mac, or Linux option that works best for you.



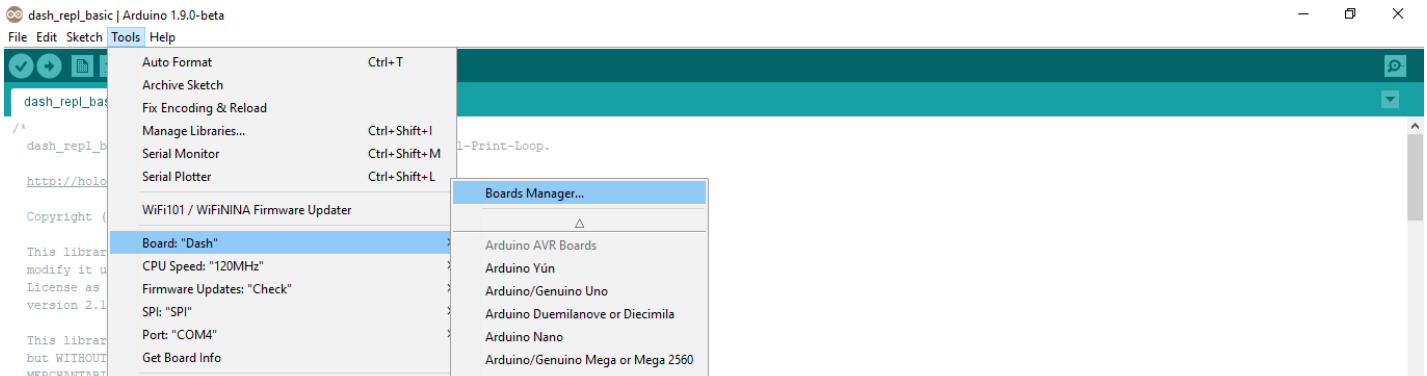
Go to the “Preferences” window (under “File” for Windows and Linux users).

Enter the following URL in the input labeled “Additional Board Manager URLs:”:

http://downloads.hologram.io/arduino/package_konekt_index.json



Install the IoTa’s board files by opening the “Board Manager.” This tab is under “Tools,” and then under “Board.”

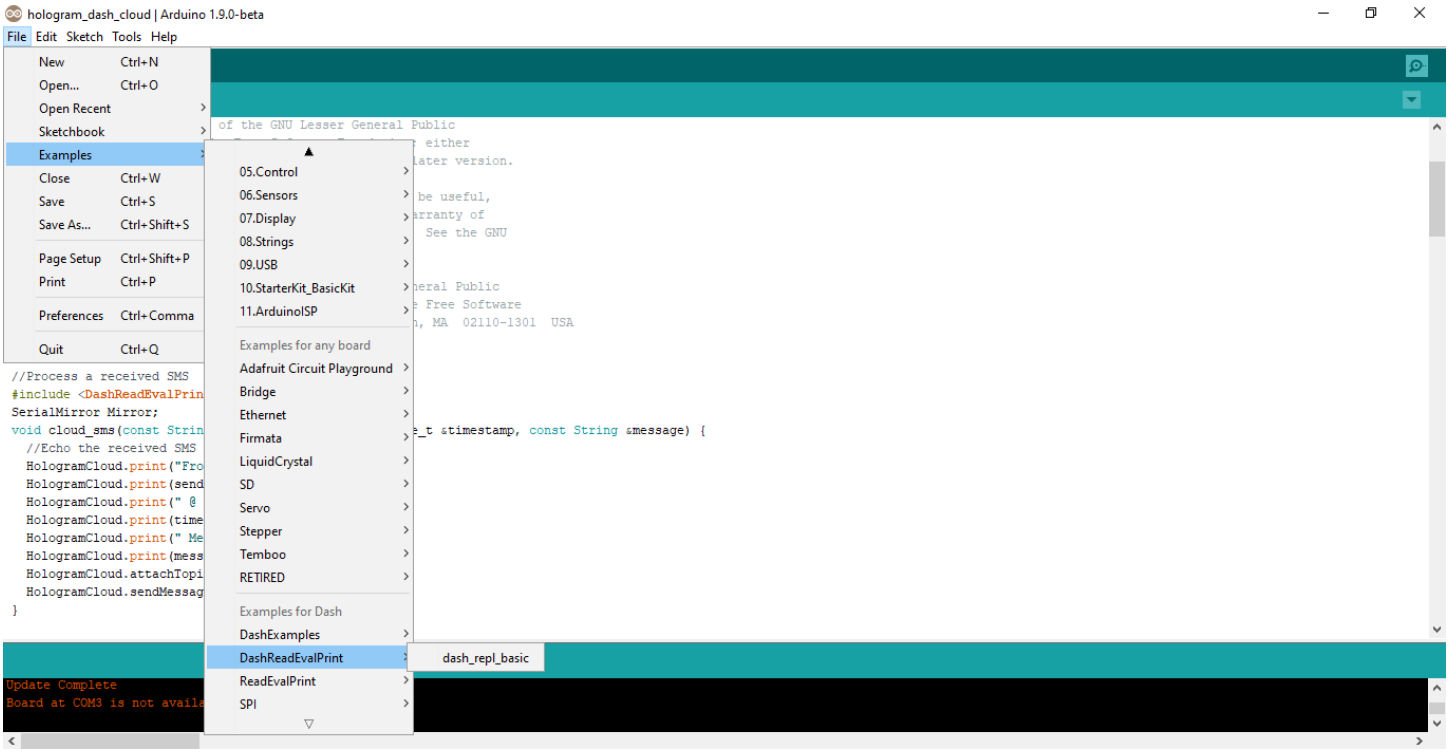


Choose the “Contributed” option in the “Type” drop down menu. Then, select “Konekt Dash/Dash Pro Boards.” Click “Install” and close the Boards Manager when installation is finished.

Confirm you have the latest version of the IoTa libraries by going to “Boards Manager” again (“Tools” → “Board” → “Board Manager”). Click “Updateable” in the “Type” dropdown menu and if the list contains “Hologram Dash,” update to the most recent version.

Uploading dash_repl_basic:

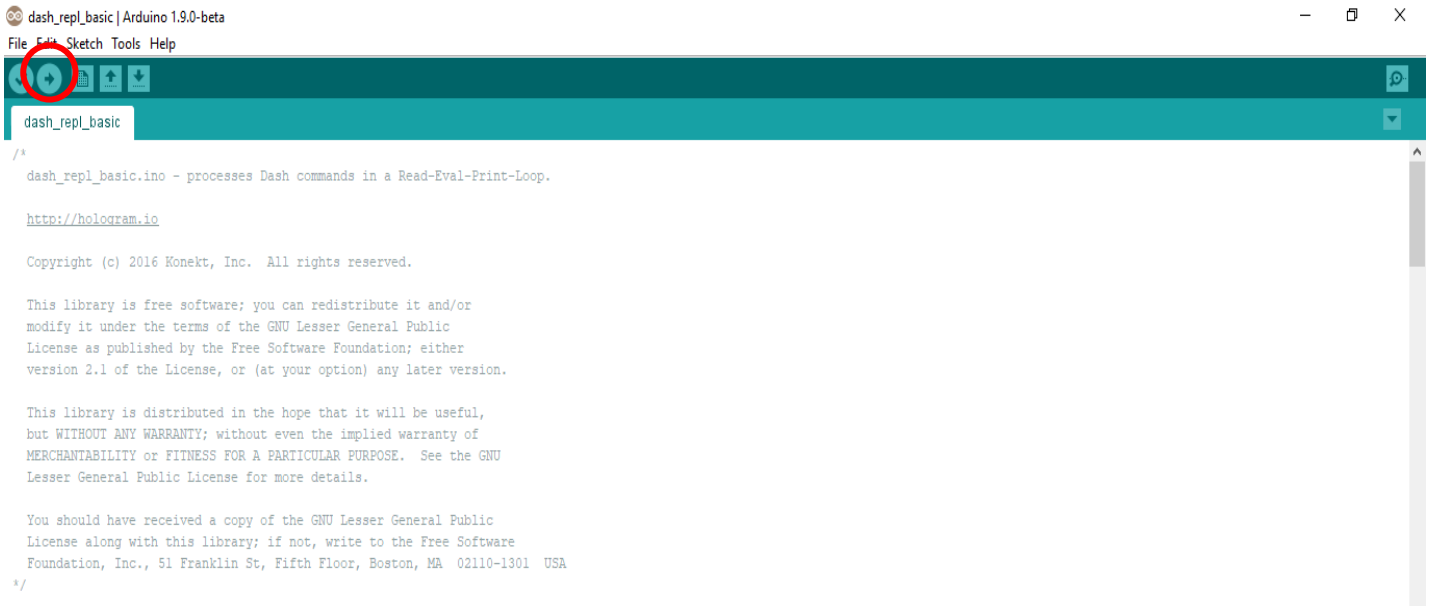
Go to “File,” “Examples,” and “DashReadEvalPrint.” There is a program called “dash_repl_basic” in this tab, and this program will let you send commands directly to the IoTa. Open this program.



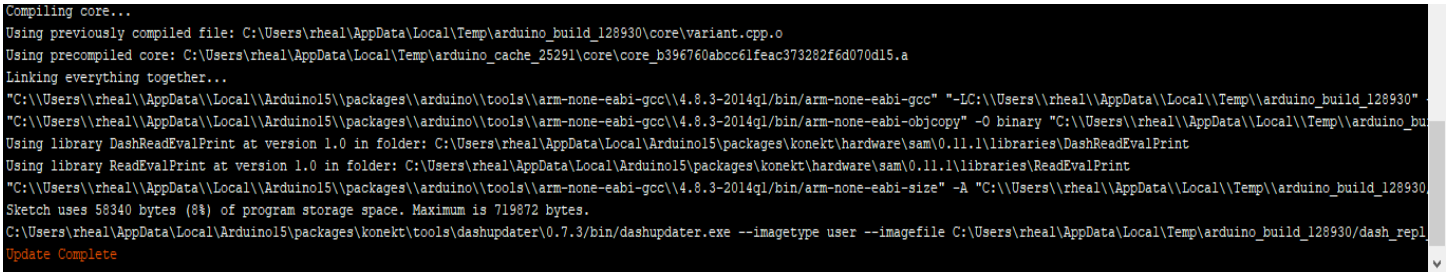
Connecting the IoTa:

Press the “PROG” button on the IoTa, which is the small black pushbutton that says PROG in white letters above it. A white LED light should start flashing on the IoTa.

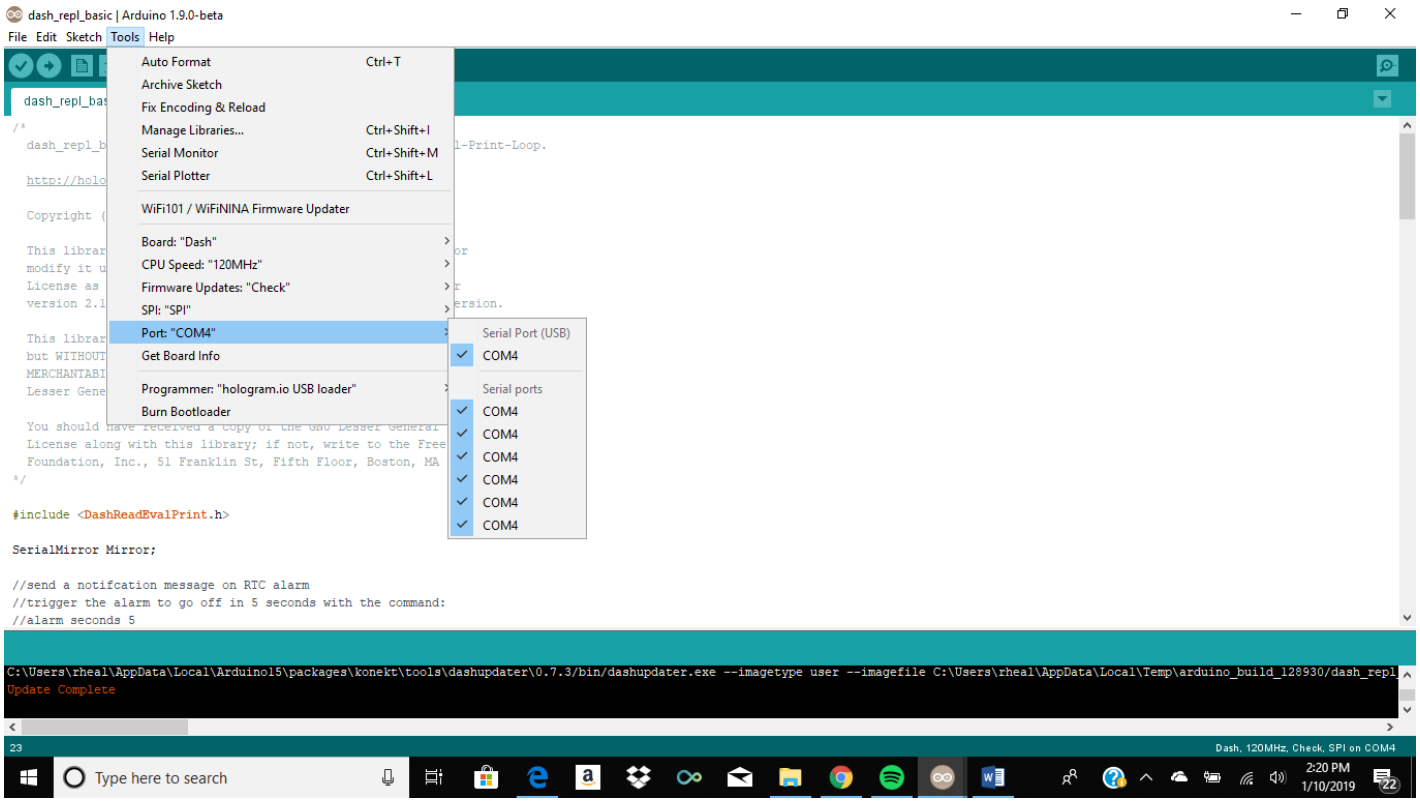
Click the dark blue arrow at the top left of the Arduino IDE, which should automatically compile and upload the program to your device.



If the program successfully uploaded to your device, an orange “Update Complete” message should pop up at the bottom of your screen.



At the top toolbar of your screen, click the “Tools” tab, and confirm that the correct PORT is selected by clicking on “Port,” and select the port you are using. The port number should appear in the blue tab on the bottom of your screen, on the far right side.

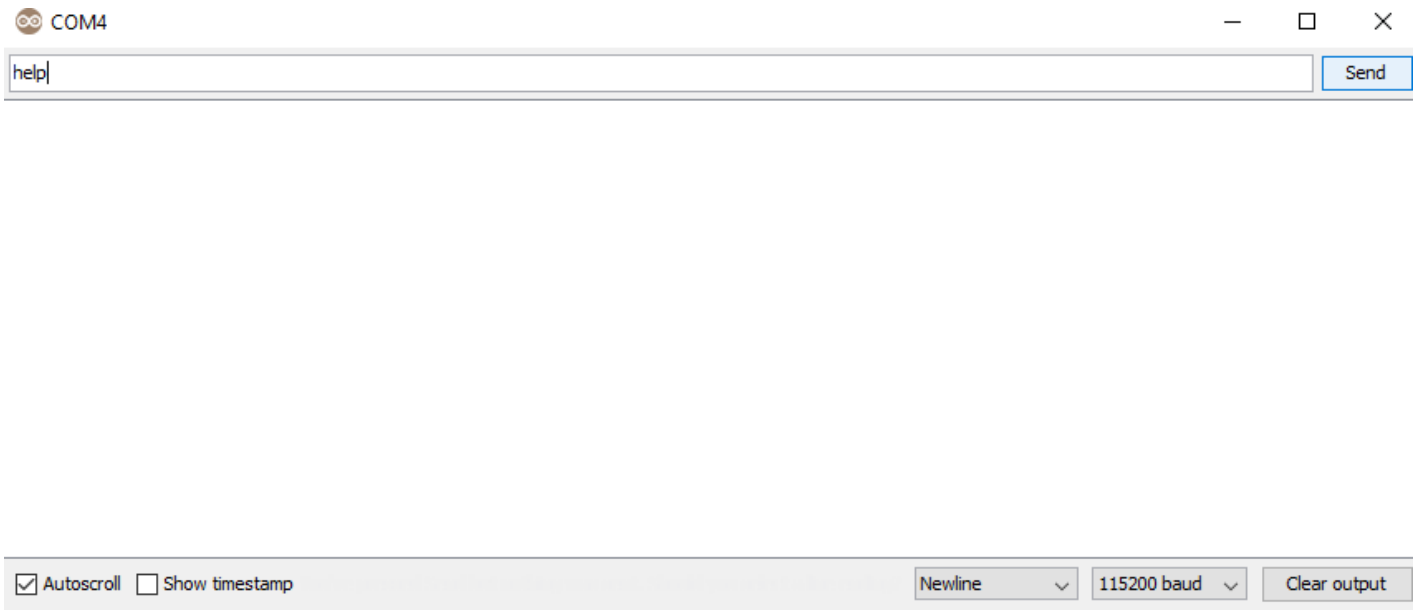


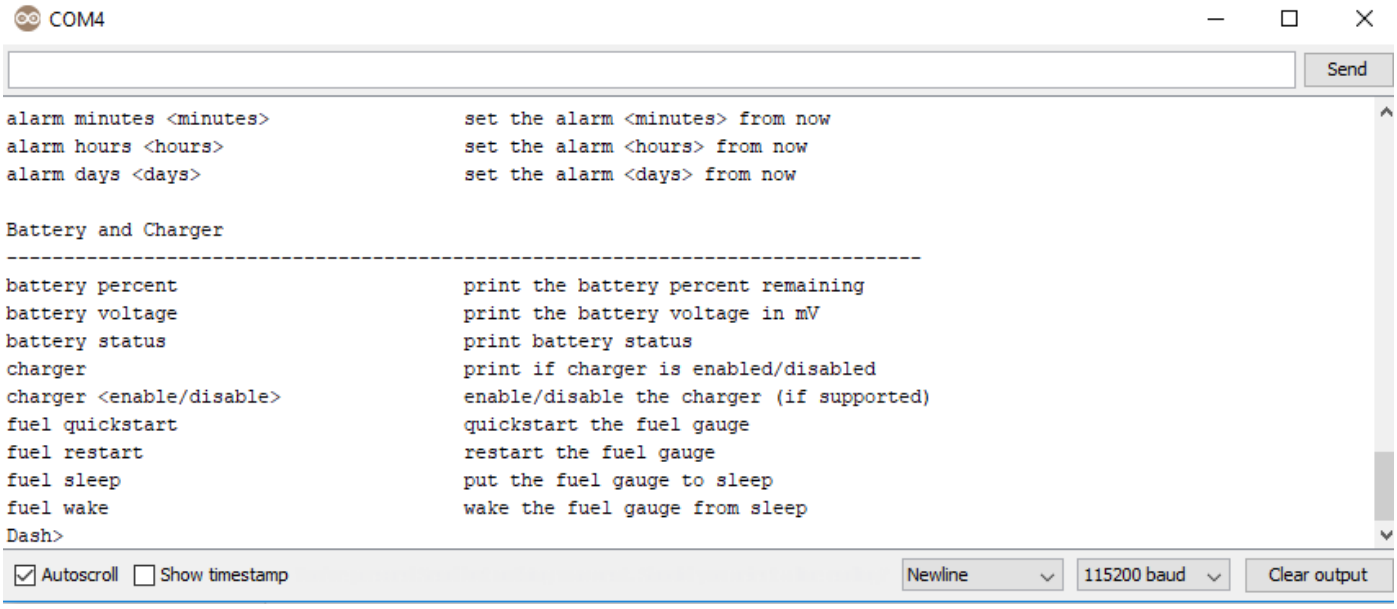
You are now ready to run serial port commands!

IV. Commands

All commands are executed through the Serial Monitor on the Arduino IDE. Click on the “Tools” tab again and click “Serial Monitor.”

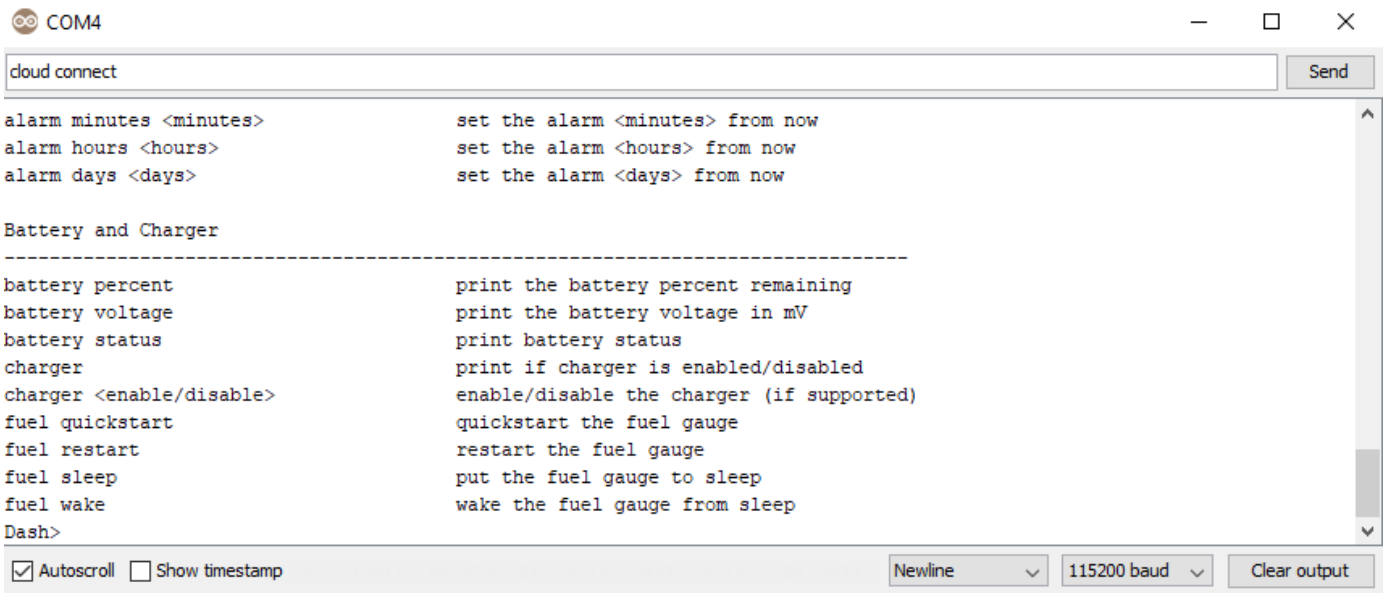
Type “help” into the search bar for a complete list of possible commands.



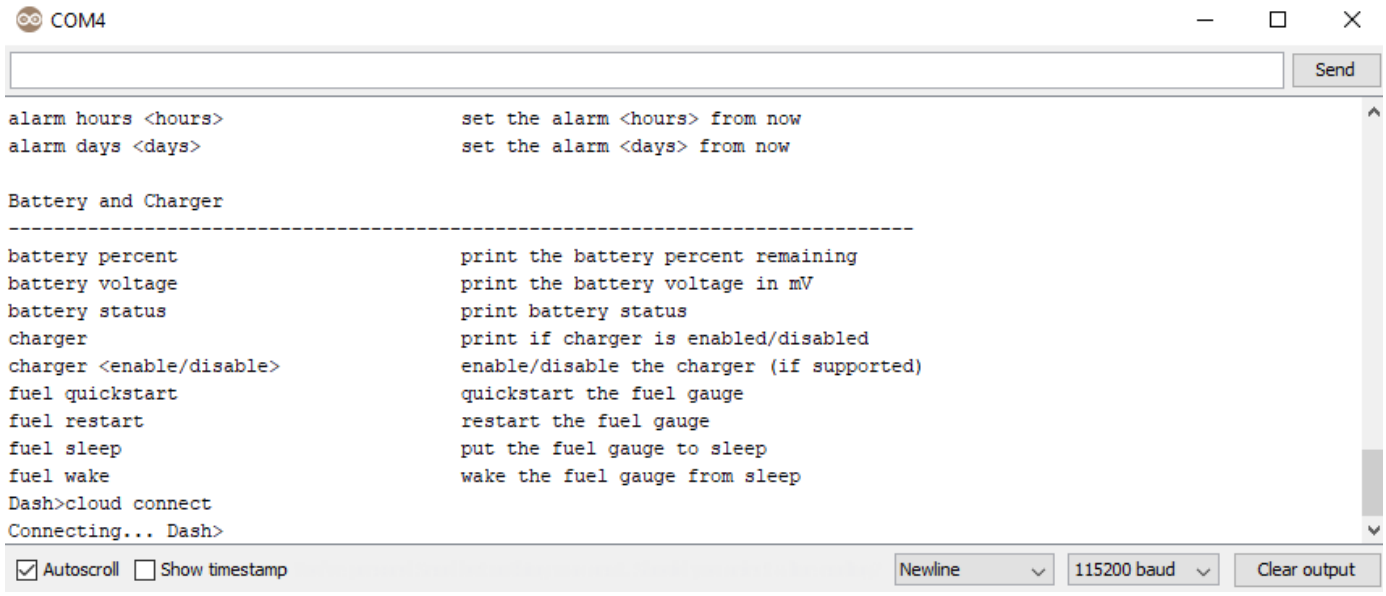


Cloud Connect:

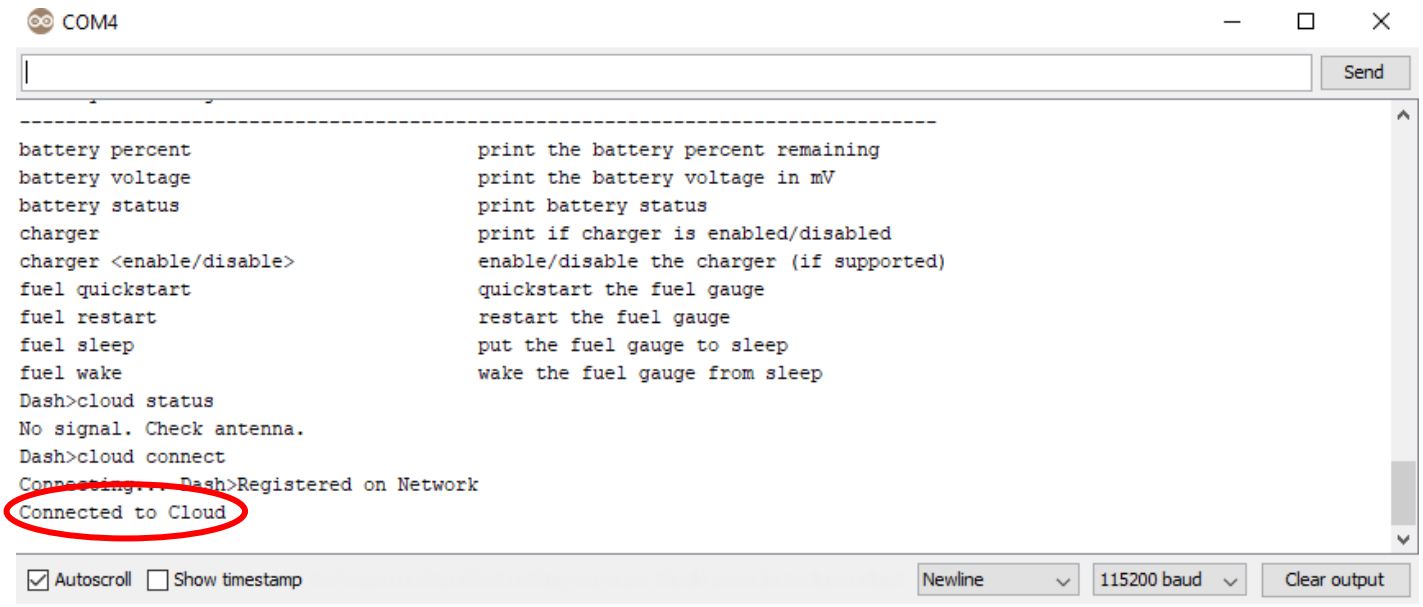
This will connect your device to the cloud, which is the first step in sending messages to/from your device. Type “cloud connect” into the top bar.



A message will appear in the output window that says “Connecting…”



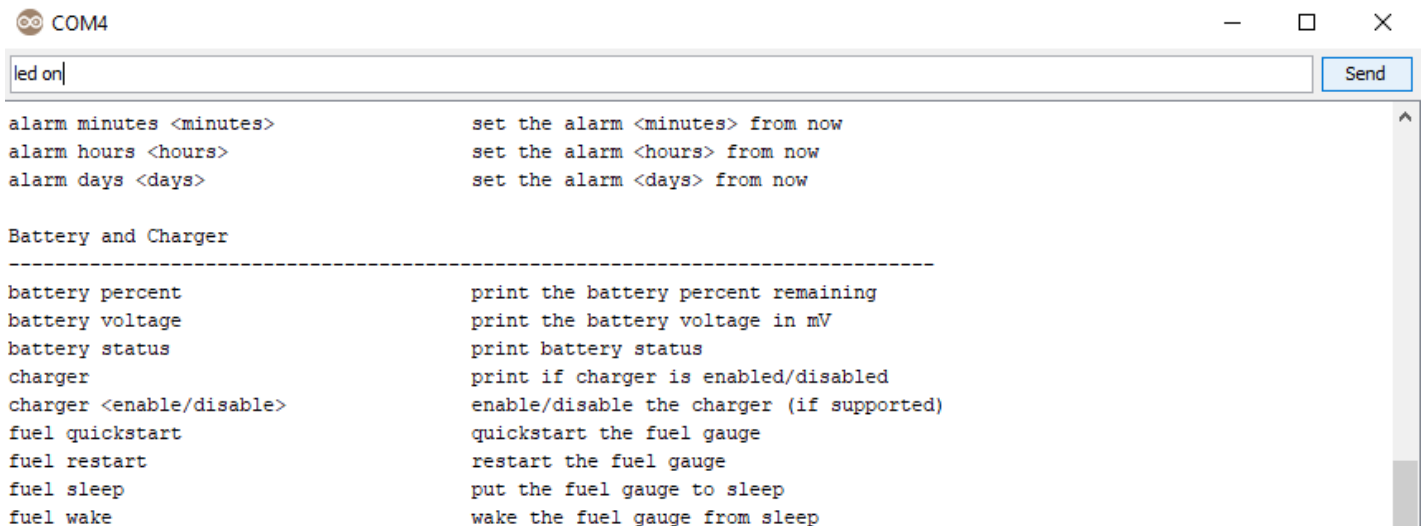
The following messages will appear if the IoTa successfully connected to the cloud.



LED:

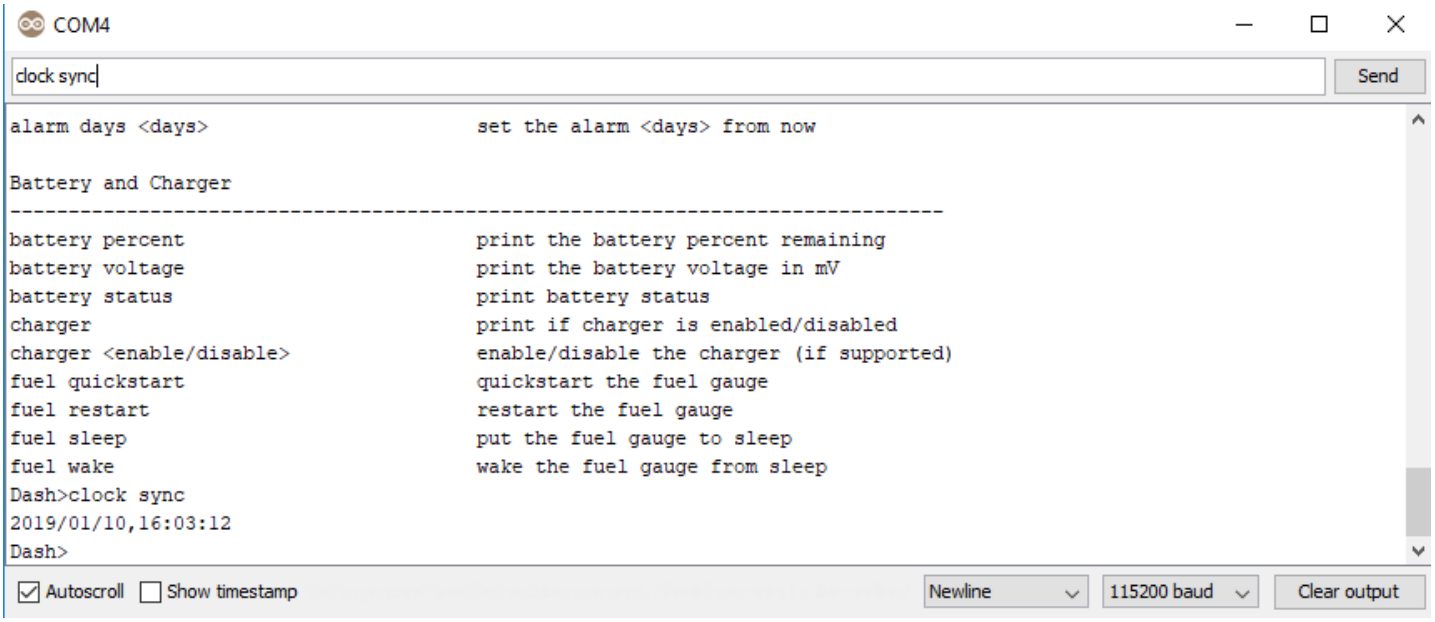
You can turn the LED on and off using the various LED commands.

Typing “led on” or “led off” into the top search bar will power the LED on and off.



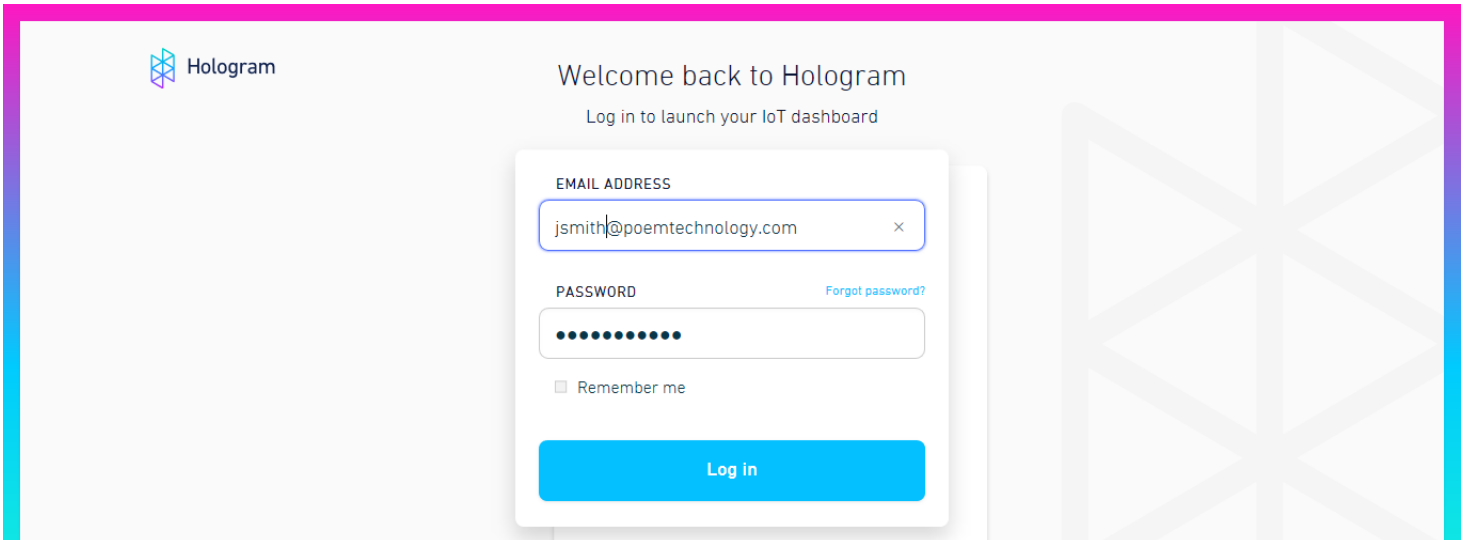
Clock:

Type in “clock sync” to obtain the current time, which is synced with the network time.

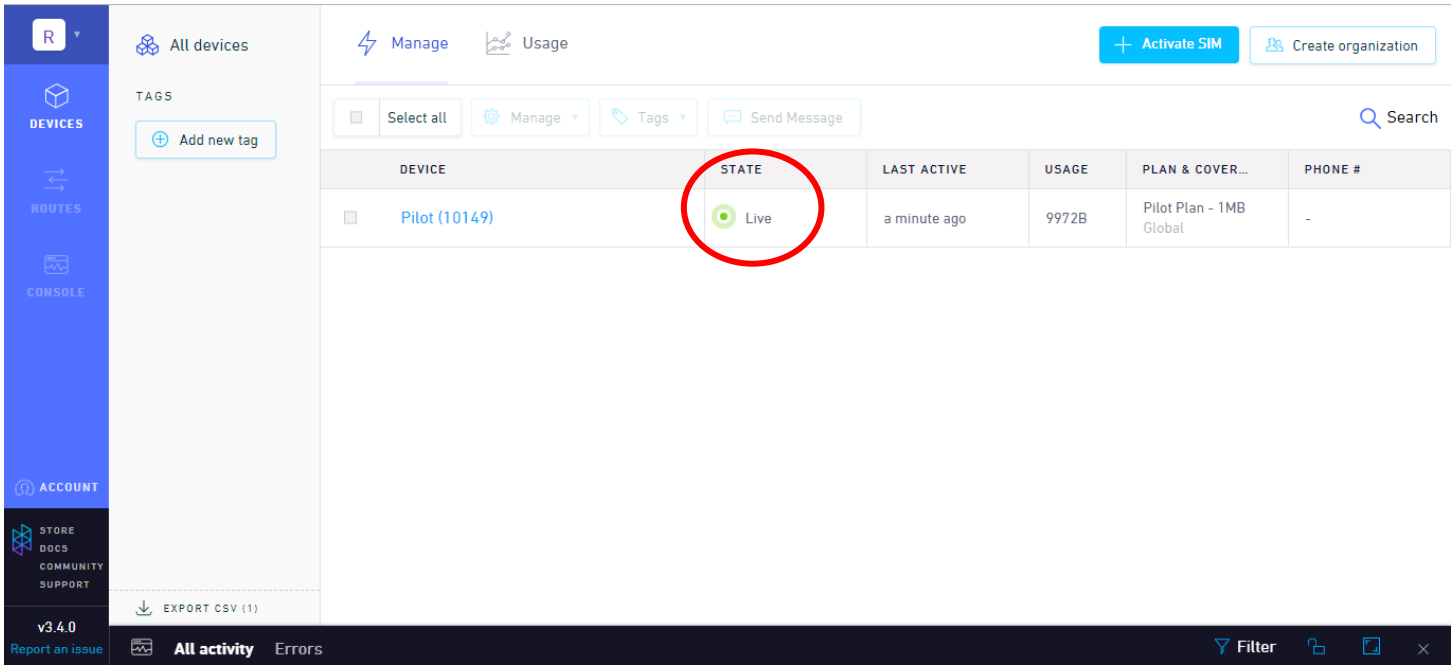


V. Messages

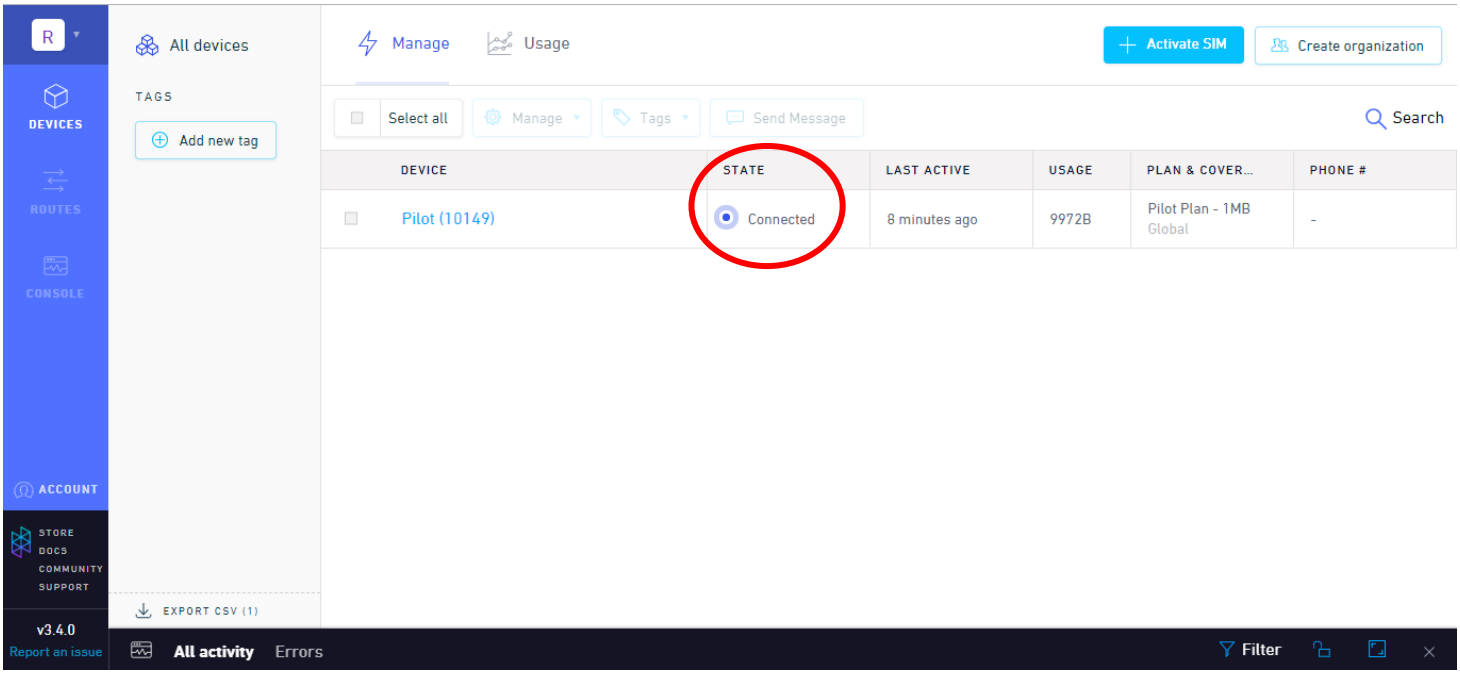
Sending personalized messages to the IoTa is easier than ever using the REPL console. Using the link https://dashboard.hologram.io/log into the Hologram site.



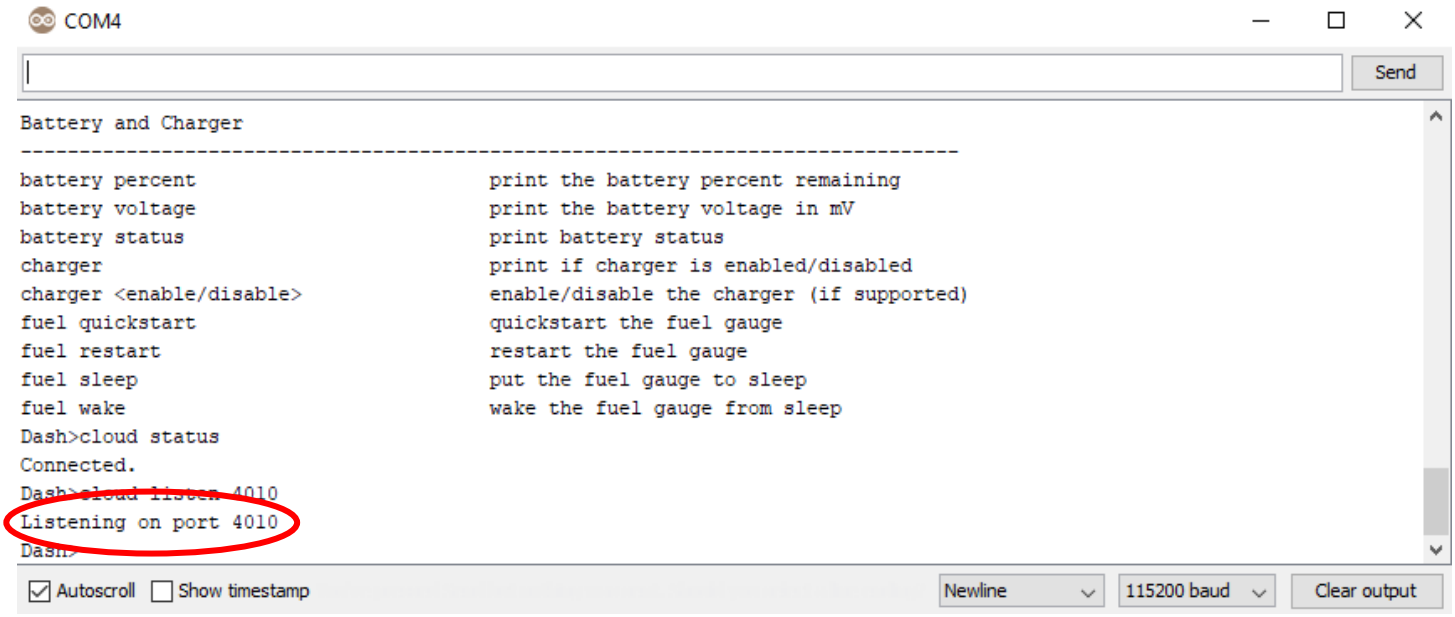
Under “Device,” your SIM card name should appear. The status of your SIM card will display under state. “Live” simply means your card is activated.



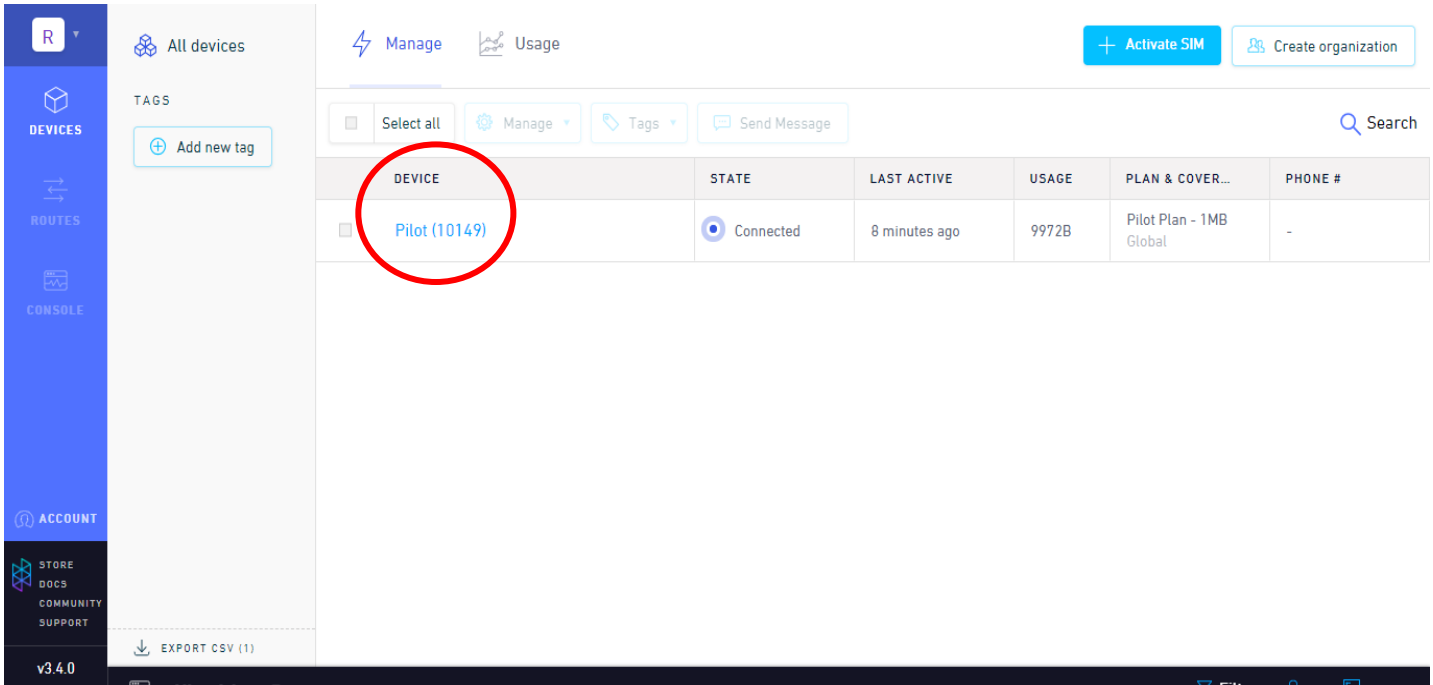
A “Connected” message means you are connected to the cloud.



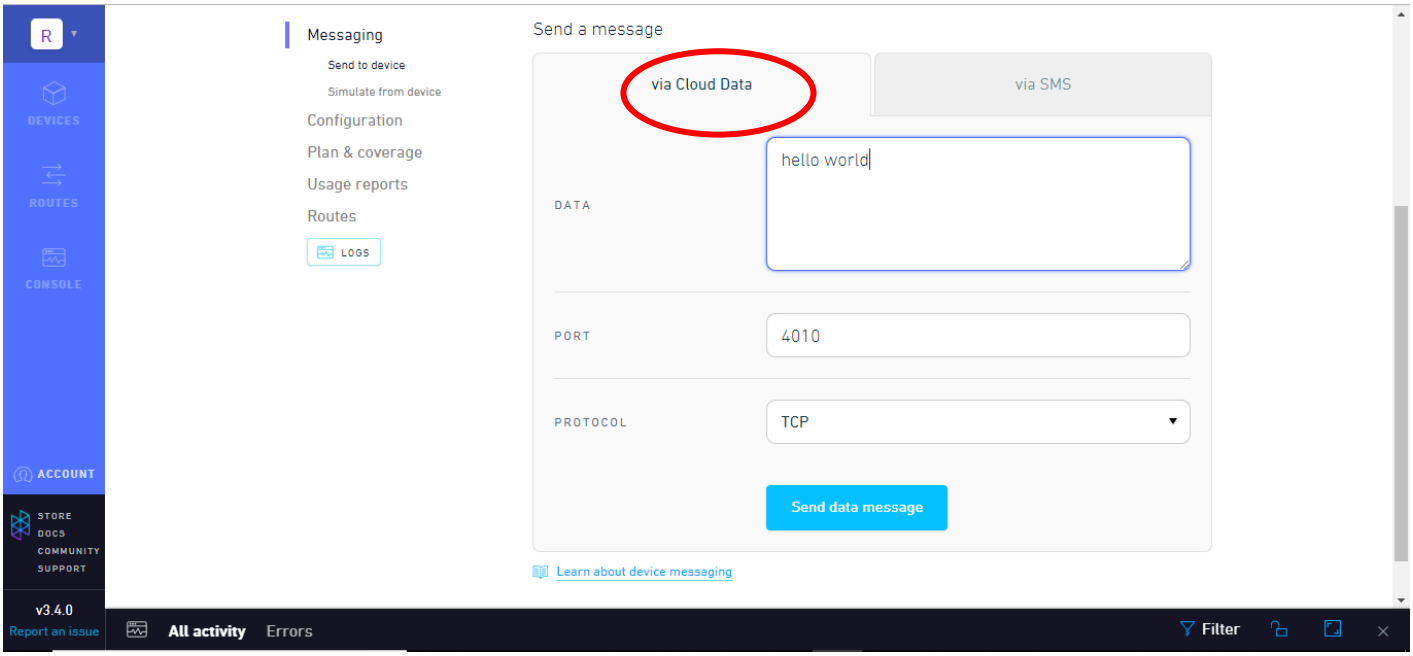
In the serial monitor, type “cloud listen xxxx” where xxxx is the port number. An output message should appear that says “Listening on port xxxx.”



Click on your device name on the Hologram website to send a message.



Using the “via Cloud Data” option will display a message onto the console. Confirm the port number is the same as the port number you are listening on. Type the message you want into the “Data” box and click the blue “Send data message” box.



Go back to your serial monitor, and your message should be displayed on the console.