



Foundation Portal User Guide

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Foundation Portal User Guide

Introduction

The Foundation Portal provides cloud-based software to program Hatch Foundation Series LED Drivers. Registered users can utilize the portal to program LED Drivers, save profile settings, read driver settings, and view historical activity. Foundation LED driver specifications can also be accessed through the Portal. The Portal is accessed using Google’s Chrome Browser on a PC or Android device¹ with an internet connection.

Accessing the Portal and Registration

To begin the registration process go to foundation.hatchlighting.com. There is a button at the top right of the login screen to request Access.

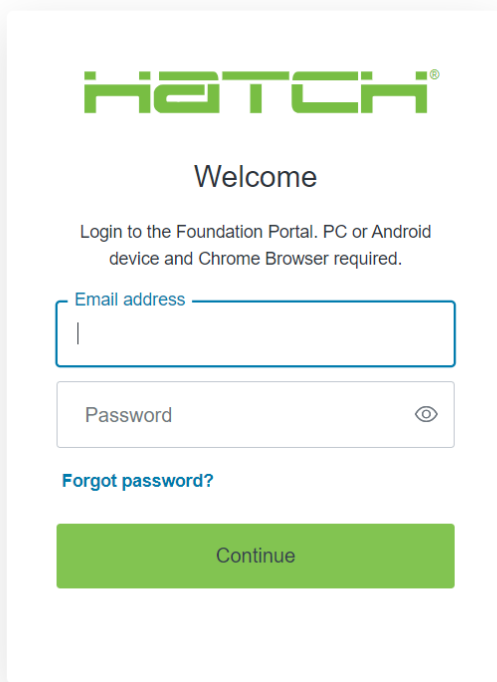
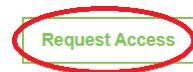
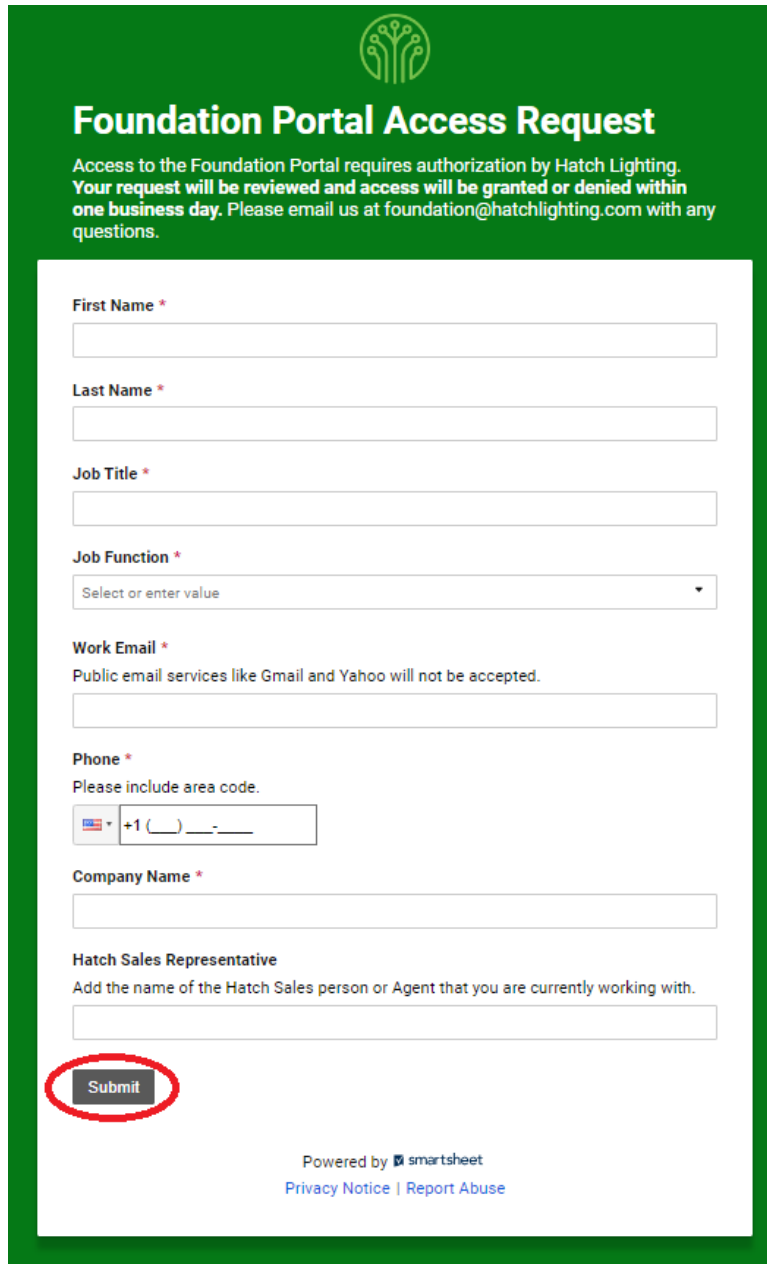


Figure 1 Request Access

A registration form will open. Complete the registration form and click submit. Access to the Portal requires authorization by Hatch Lighting. Your request will be reviewed, and access will be granted or denied within one business day. Please email us at foundation@hatchlighting.com with any questions.

¹ Due to the variability of manufacturers and model numbers Hatch cannot guarantee operability of all mobile devices employing Android OS.



The image shows a registration form titled "Foundation Portal Access Request" on a green background. At the top center is a logo of a stylized tree with three leaves. Below the title is a paragraph of text: "Access to the Foundation Portal requires authorization by Hatch Lighting. Your request will be reviewed and access will be granted or denied within one business day. Please email us at foundation@hatchlighting.com with any questions." The form itself is white and contains several fields: "First Name *", "Last Name *", "Job Title *", "Job Function *" (a dropdown menu with "Select or enter value" and a downward arrow), "Work Email *" (with a note: "Public email services like Gmail and Yahoo will not be accepted."), "Phone *" (with a note: "Please include area code." and a field containing "+1 () - -"), "Company Name *", and "Hatch Sales Representative" (with a note: "Add the name of the Hatch Sales person or Agent that you are currently working with."). A "Submit" button is located at the bottom left of the form and is circled in red. At the bottom right of the form, it says "Powered by smartsheet" and "Privacy Notice | Report Abuse".

Figure 2 Registration Form

Entering The Portal

When the registration application is approved, the user will receive an email with a link to set up login information. This is the login screen to the portal. The first time a new user accesses the portal a password must be entered that meets the password criteria. The functionality and appearance of the home page is dependent on the user's privilege level, which is determined by the User Role as assigned by the Organization Manager.

User Roles

Users of the software have three designated roles for access:

Organization Manager

This role is designated by an organization to a person who will manage and authorize users and roles within a company. The Organization Manager can add users within the organization by inviting them via the software, delete users and set the invited user's role. The Organization Manager can edit, view, and create programming profiles and program LED Drivers as well as view/download analytics and driver specifications.

The home screen of the organization manager has an additional button that allows the organization manager to create and invite new users. Helpful tip prompts are displayed when the user hovers over an active button or item.

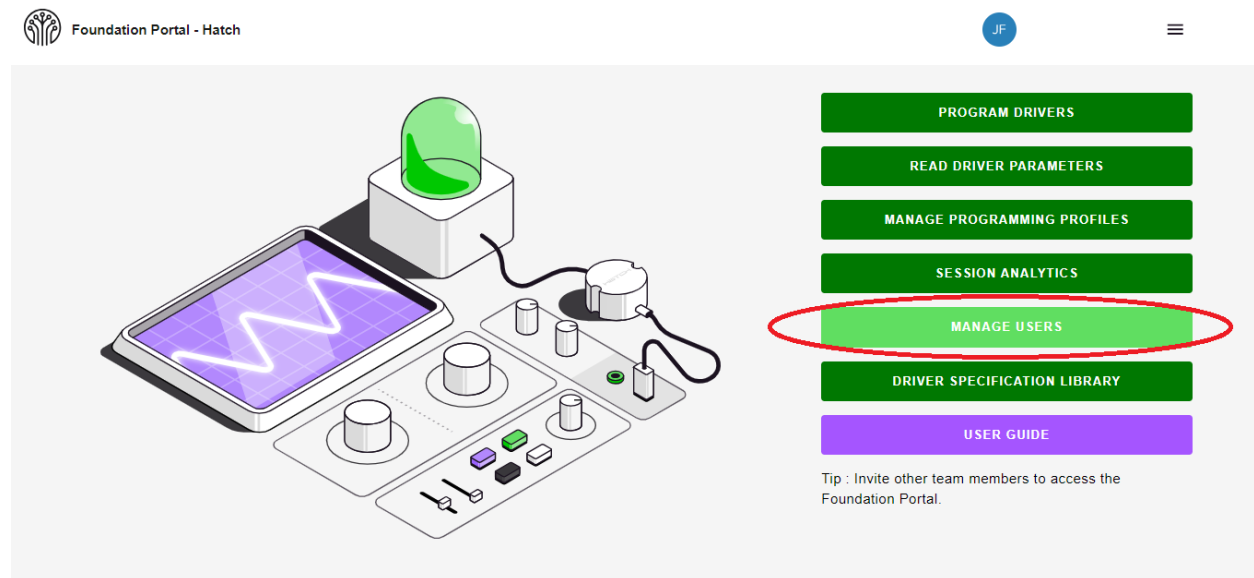


Figure 3. Organizational Manager Home Screen

Clicking on the Manage Users button produces the screen for creating a new user. The organization manager must enter the new user email address and the new user role and then send the invitation. Note that hovering over a menu selection will display helpful tips throughout the application.

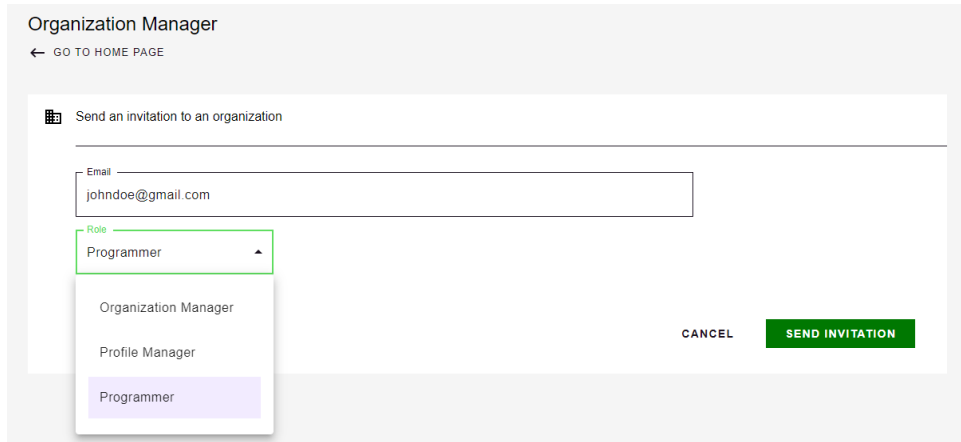


Figure 4 Organization Manager Screen

Profile Manager

The Profile Manager role is designated by the Organization Manager and has permissions to edit, view, and create programming profiles and program LED Drivers as well as view/download analytics and driver specifications.

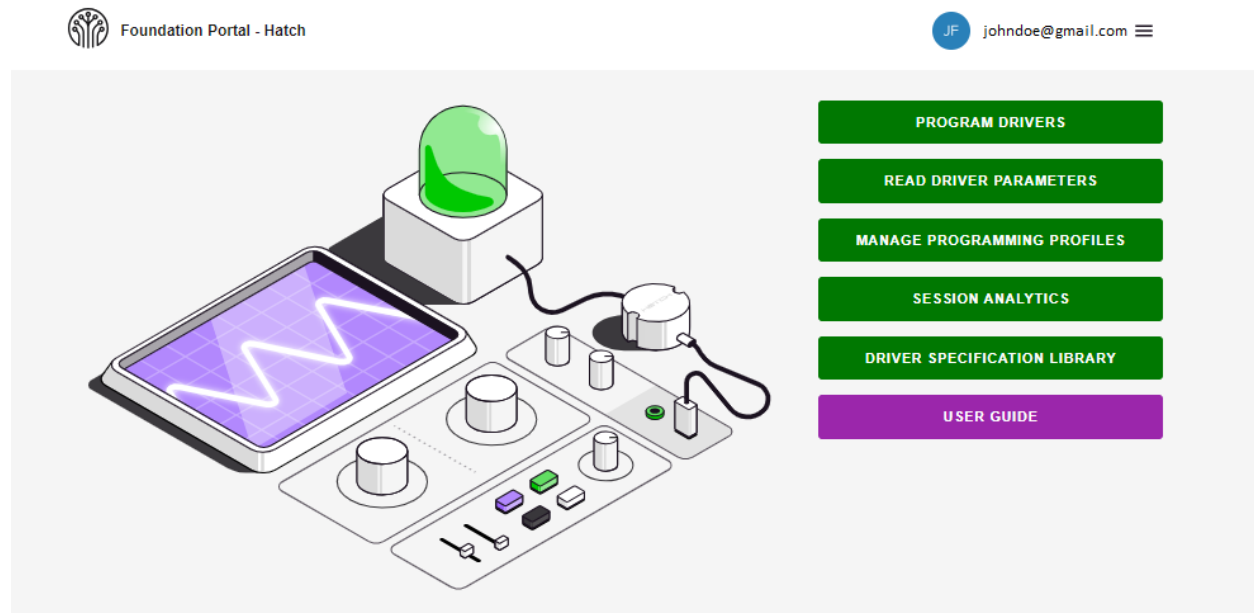


Figure 5 Profile Manager Home Screen

Programmer

A Programmer role designated by the Organization Manager allows a user to view programming profiles within the organization and program LED Drivers as well as view/download analytics and driver specifications. This role is not permitted to edit or create profiles. A Programmer role has the same screen options as a Profile Manager although functionality for Manage Programming Profiles is different.

Table 1 summarizes the privileges based on the role as assigned by the organization manager.

	Authorize Users	Edit/Create Programming Profiles	View Programming Profiles	Program LED Drivers	View/Download Analytics	View/Download Driver Specifications
Organization Manager	•	•	•	•	•	•
Profile Manager		•	•	•	•	•
Programmer			•	•	•	•

Table 1 Role Access Overview

Main Menu Overview

After logging into the portal using the credentials established during registration, the below screen will be displayed.

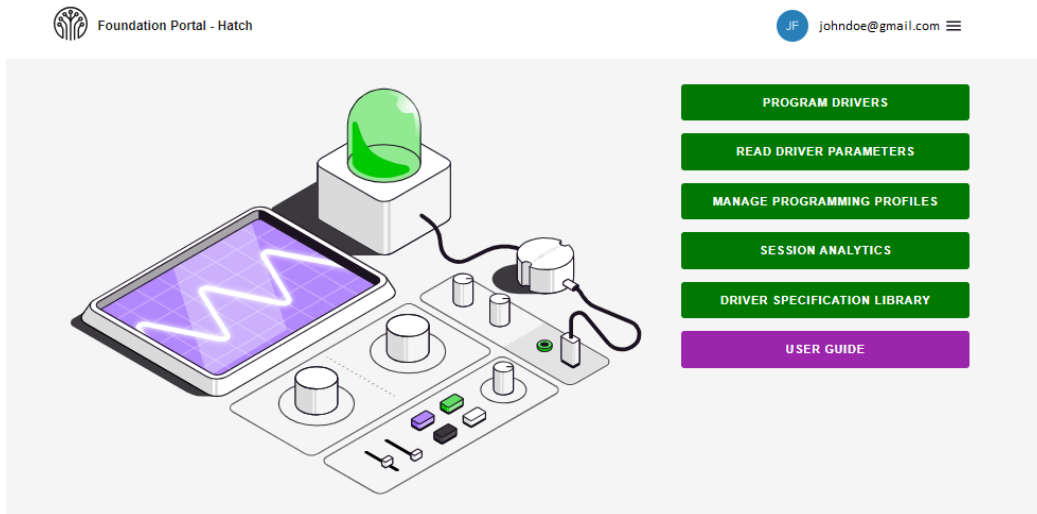


Figure 6 Main Menu

Program Drivers

This selection is for programming Foundation LED drivers. This menu area shows the connection status to a Foundation Link, the driver model that is connected via USB-C cable if a link has been established, as well as an option to choose a programming profile. If a profile has been selected, programming parameters of that profile are displayed in this section.

Read Driver Parameters

This menu selection allows a user to read the set parameters of a LED driver. When an LED Driver is connected to the Foundation Link, the parameters stored in the driver are automatically downloaded and displayed.

Manage Programming Profiles

Manage Programming Profiles is for creating and managing programming profiles. Profiles are sets of programming parameters stored in the user's secure Portal cloud. Through the Profile Manager menu, programming profiles can be created, saved, and recalled for later use or deleted. Unless using the ENABLE QUICK PROGRAMMING function, programming a driver always requires creating a profile of parameters first or loading an existing profile. It is not necessary to connect a driver to create or edit profiles.

Session Analytics

This menu selection is for viewing programming session data. Programming session data is stored on the user's secure cloud account and can be viewed and downloaded from this section. This includes the model, and total number of Foundation drivers programmed in the session as well as all driver date code, firmware version and unique serial numbers of each driver programmed.

Manage Users

The Manage Users menu permits an individual with Organization Manager credentials to send invitations to use the Foundation Portal, remove users or set a user's access role. This menu option is only visible to individuals with the role of Organization Manager.

Driver Specification Library

The Driver Specification Library contains a list of Foundation Series LED Driver part numbers with links to their specifications on the Hatch Lighting website.

Pull-Down Menu

Beside the username in the top right area is a pull-down navigator that includes the menu selections available.

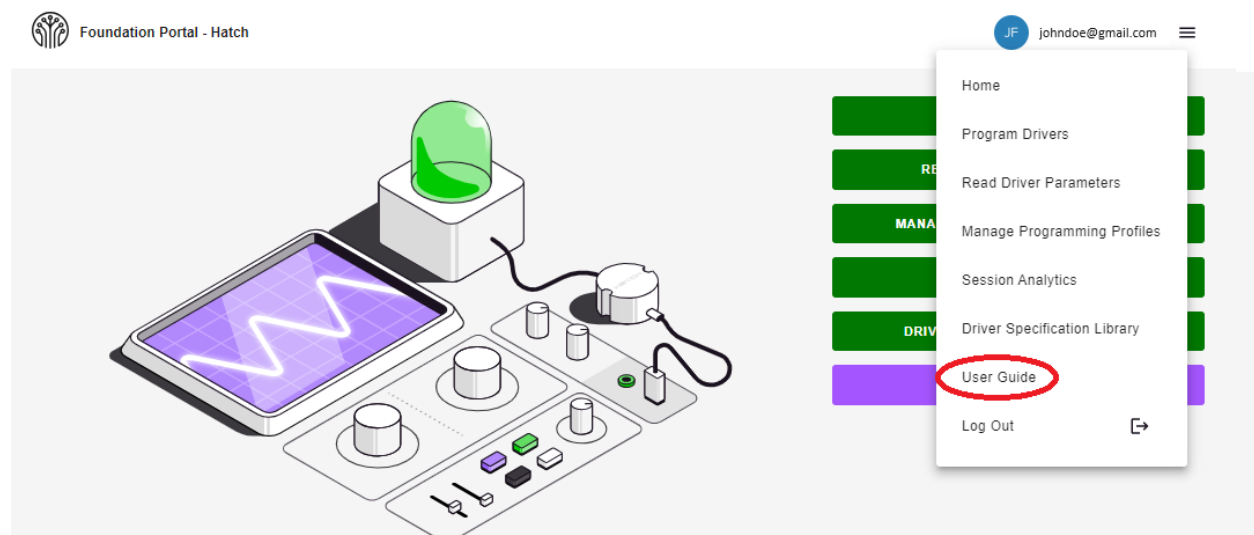


Figure 7 Home Screen Pull-down Navigator

Tech Support

In addition to an integrated user guide, the portal also includes a tech support function that is activated in the lower right portion of the application. The tech support function is monitored from 9:00am – 5:00pm Monday through Friday. Hatch’s customer service team and engineering team constantly monitor the chat window so service during the hours listed above will be immediate. For inquiries outside these hours a Hatch team member will respond the next business day.

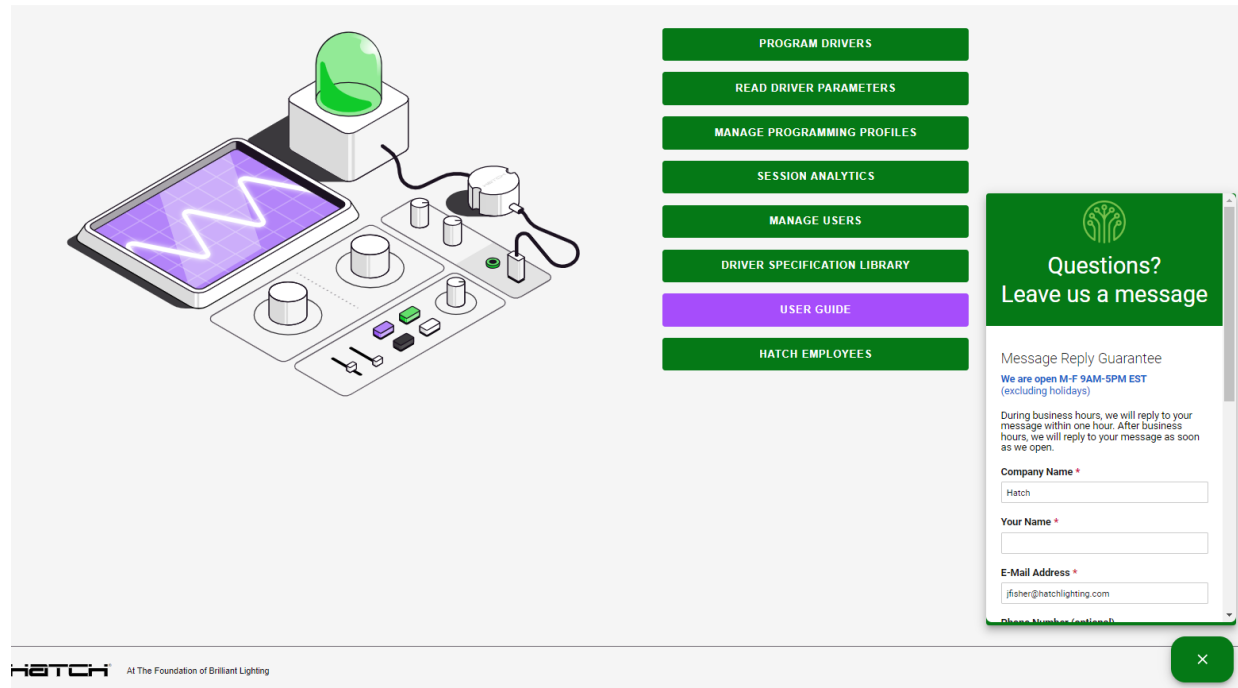


Figure 8 Tech Support Access

Manage Programming Profiles

Foundation Series LED Drivers are programmed via programming *profiles*. A driver is not required to be connected to create a programming profile. The profile name is established by the user and can be any combination of letters, numbers, and symbols. Once completed the profile is stored in the cloud in the organization’s account. To create a profile, click on Manage Programming Profiles.

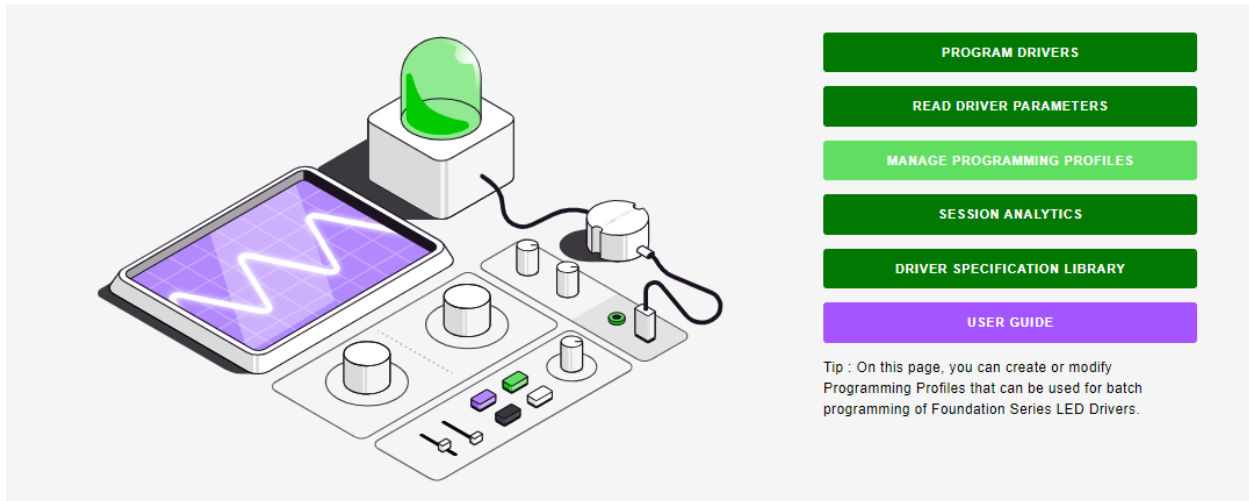


Figure 9 Home Page – Manage Programming Profiles

This will take the user to the main MANAGE PROGRAMMING PROFILES page. A list of existing profiles for the organization will be displayed. The list includes PROFILE NAME, DRIVER SKU, OUTPUT mA, MIN DIM, DIM TO OFF, 0-10V CURVE, CREATED BY and CREATED AT. A user with a profile manager role will have the option to select NEW PROFILE, EDIT or DELETE. These options will not be displayed for a user who has a programmer role.

Three filter functions are also included in the MANAGE PROGRAMMING PROFILES page. The drop-down filters allow the user to filter by driver model number or by who created the profile. The profile name filters by text entry.

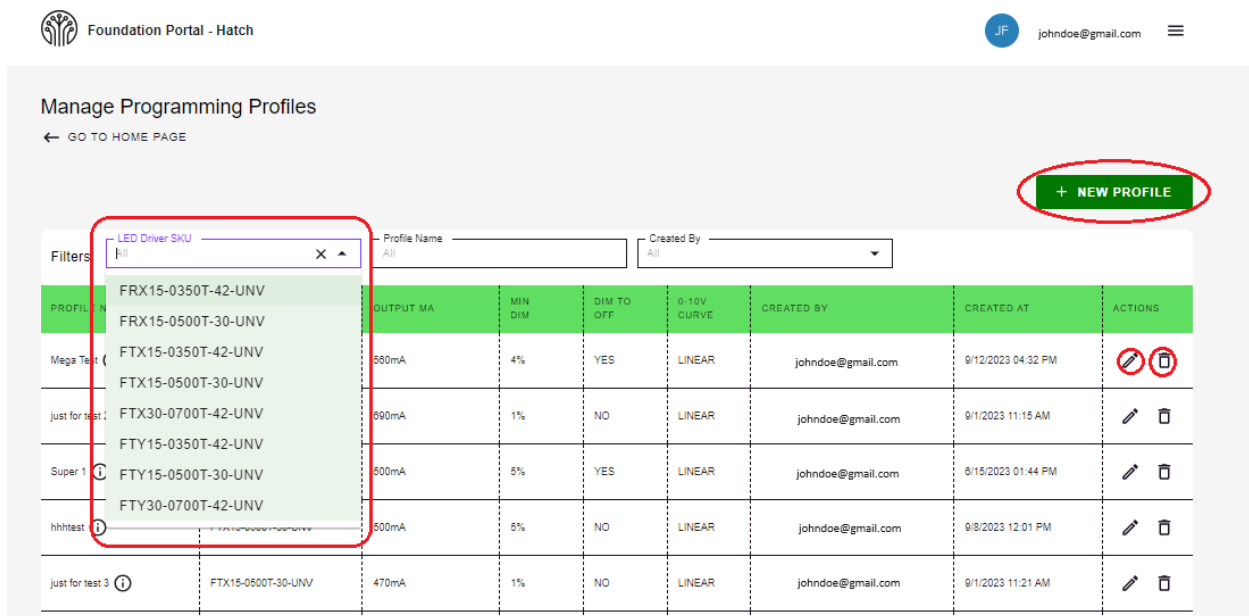


Figure 10 Profile Manager Home Page

After clicking on NEW PROFILE, the user will be prompted to enter a profile name. This can be any combination of characters.

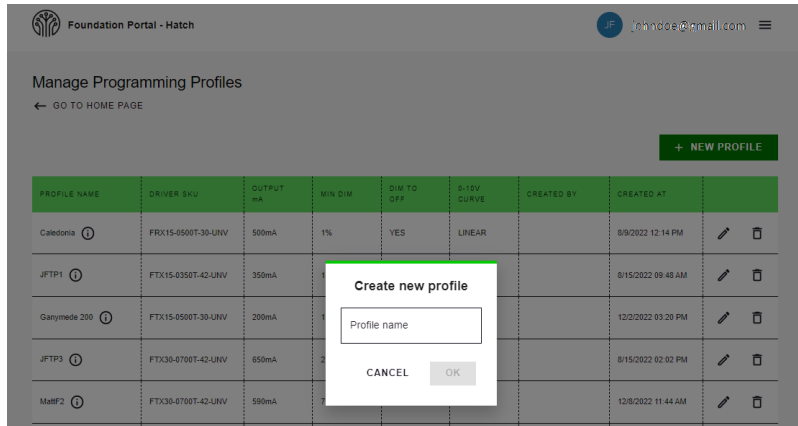


Figure 11 Profile Name Screen

Once a profile name is assigned, the Create new profile screen is displayed:

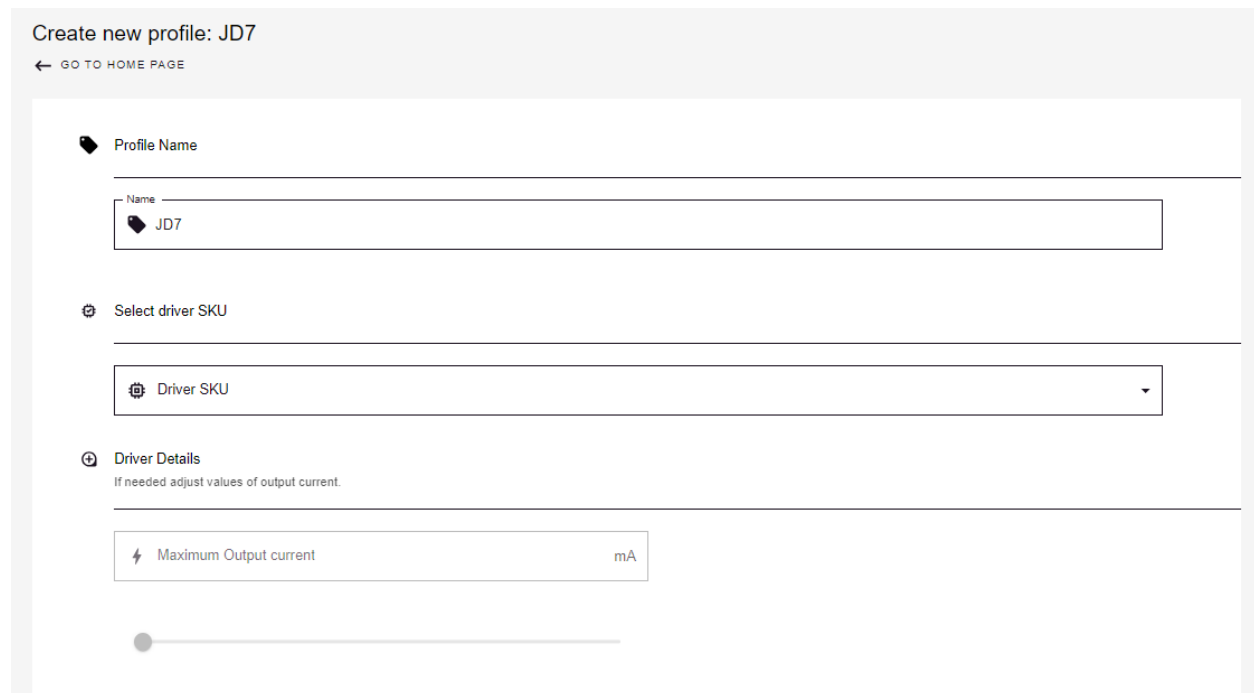


Figure 12 Profile Creation Screen

Select Driver SKU: The Driver Model is selected from a drop-down list. The list of available driver SKUs is populated and managed by Hatch Lighting.

Driver Details:

- **Output Current:** The maximum available output current for the selected driver is automatically populated. A user can either enter the numeric value for the desired output current in the text

box or manipulate the line graph to set the output current. The output current is available in 10mA steps.

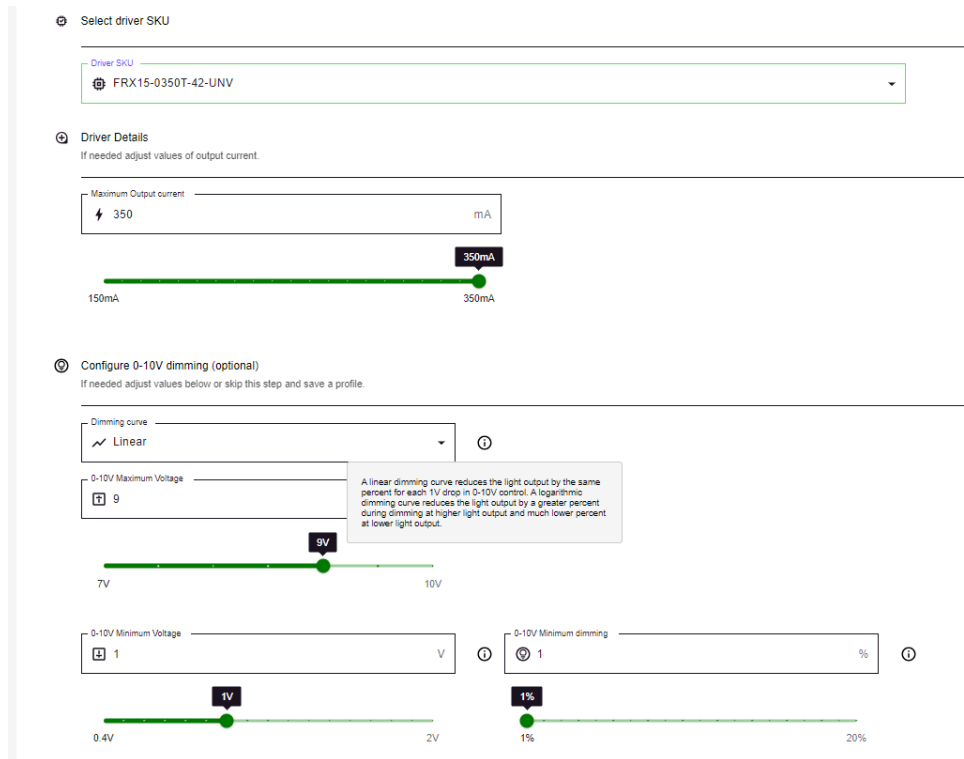


Figure 13 Profile Creation Screen 2

- Configure Dimming (optional):** Foundation Series LED Drivers are shipped with 0-10V configurations set to Linear Dimming, 9V maximum voltage, 1V minimum voltage, and Dim-to-Off disabled. The minimum dimming level is usually set to 1% by default and can be changed to match the user’s fixture configuration. The minimum dimming % can be set between 1% and 20% in 1% increments. Available minimum dimming settings and increments may vary by Foundation Series model.

If a user wishes to change these parameters, click on the box adjacent to the 0-10V Dimming Configuration to enable the menu options. See Figure 14 for a reference to the 0-10V operating parameters.

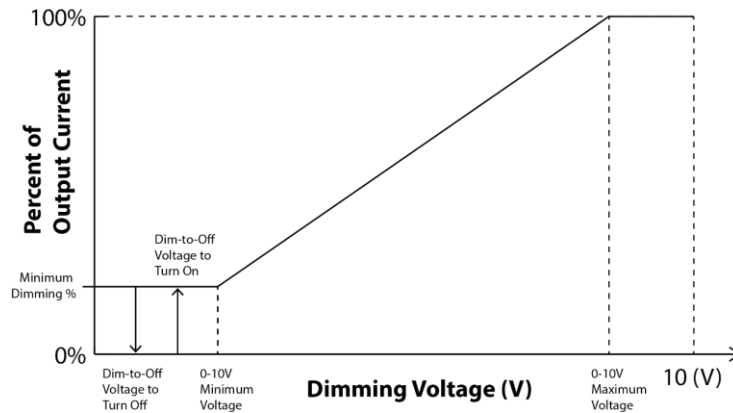


Figure 14 0-10V Linear Dimming Curve

- Dimming Curve:** The dimming curve shipped from the factory is set to linear. By clicking on the Dimming Curve, a user can select Linear or Logarithmic. A linear curve dims the LEDs in a linear slope between the lowest dim setting and the full light output. A logarithmic dimming curve accelerates the effect of dimming from full light output to 20% light output, then reduces the dimming effect for the remaining 20% of the dimmable range. A logarithmic dimming curve allows for more precise light output control when dimming to minimum light output compared to linear dimming.
- 0-10V Maximum Voltage:** The maximum voltage setting indicates the control voltage at which the LED driver will produce maximum programmed output current. Foundation Series LED Drivers are shipped with this voltage set to 9V. Users may change this voltage to values between 7V and 10V in 0.5V increments. This feature allows a user to match the fixture function to an external lighting control or match to the fixture series dimming characteristics for maximum control voltage.
- 0-10V Minimum Voltage:** The minimum voltage setting indicates the control voltage at which the LED driver will produce minimum programmed output current. Foundation Series LED Drivers are shipped with this voltage set to 1.0V. Users may change this voltage to values between .1V and 2.0V in 0.1V increments. This feature allows a user to match the fixture function to an external lighting control or match to the fixture series dimming characteristics for minimum control voltage.

Dim to OFF: Dim to OFF is a control feature that permits the 0-10V control to turn off the fixture rather than disconnecting the AC power. This feature is enabled by clicking the slider adjacent to the Dim to OFF menu item. When enabled, Foundation Series LED Driver will bring the output current to 0mA when the 0-10V dimming voltage falls below the “Voltage To Turn OFF” setting. The LED Driver will turn the output current back on to the minimum dim level set in the Profile when the 0-10V Voltage rises above the “Voltage to Turn On” value. The “Voltage to Turn On” values can be set between 0.6V and 1.8V in 0.1V increments. The “Voltage to Turn Off” values can be set between 0.4V and 1.6V in 0.1V increments. Please note that the “Voltage to Turn On” setting must be at least 0.2V greater than the 0-10V Minimum Voltage setting. The “Voltage to Turn Off” must be at least 0.2V less than the “Voltage to Turn On” setting.



Figure 15 Dim to Off Settings

Additional notes can be entered for other purposes. When entering parameters is complete, click on the SAVE PROFILE button and the profile will be saved in the PROFILE MANAGER menu.

Linking the Portal to a Foundation Series LED Driver

To use the portal to program a driver or read a driver’s parameters it must be connected using the Foundation Link USB Connector. The Foundation Link is a serial device that plugs into the female USB-A port of a PC or laptop. A male USB-C to male USB-C cable then connects the Foundation Link to the driver’s female USB-C programming port. See Figure 16.

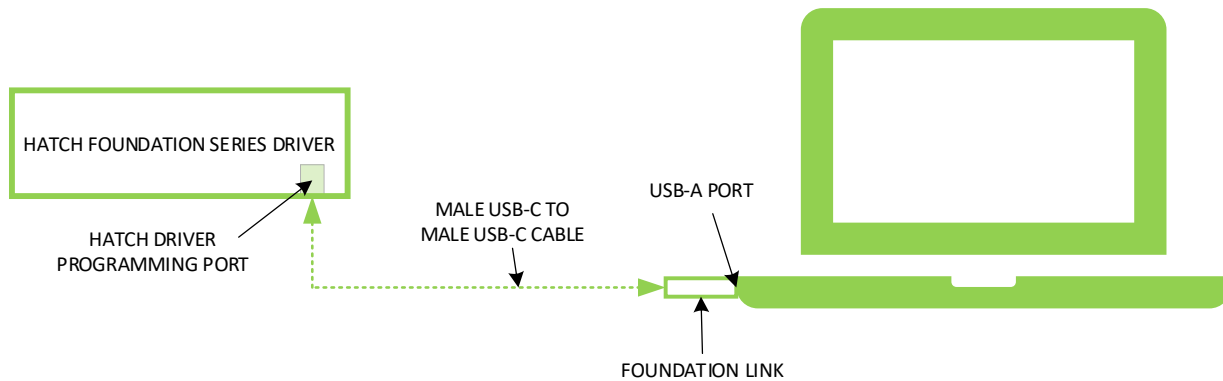


Figure 16 Foundation Link Connection Diagram for PC

Selecting PROGRAM DRIVERS or READ DRIVER PARAMETERS requires pairing the Foundation Link with the PC. It is not necessary to connect a driver to establish connection between the Foundation Link and the PC. Figure 17 is displayed when either of the two menu items listed above are selected and the Foundation Link has not been paired. Ensure the Foundation Link is connected as above and select PAIR FOUNDATION LINK.

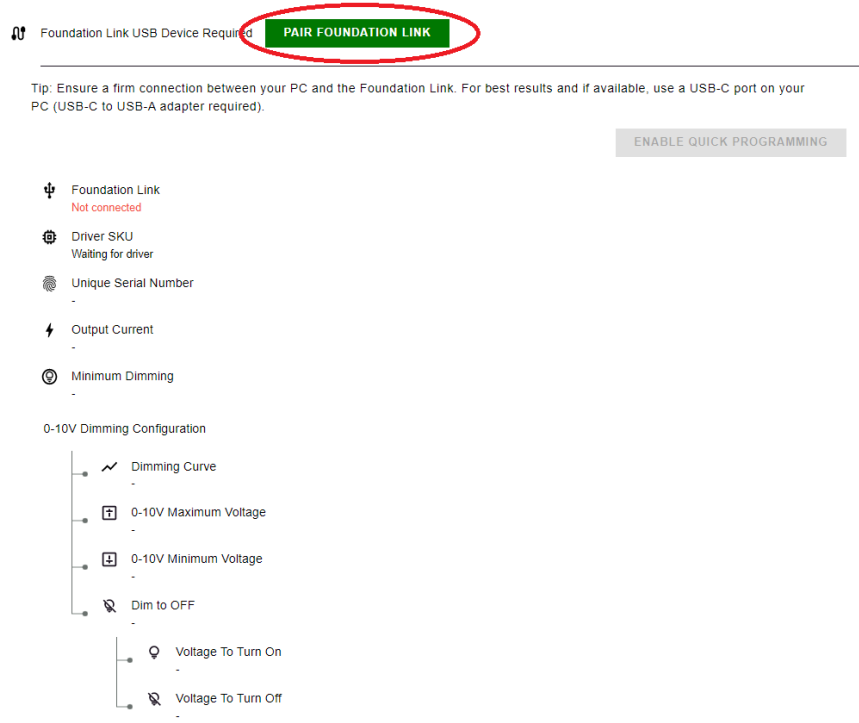


Figure 17 Foundation Link Pairing Screen

When SERIAL PORT CONNECT screen (Figure 18) appears, select USB Serial Port and then CONNECT.

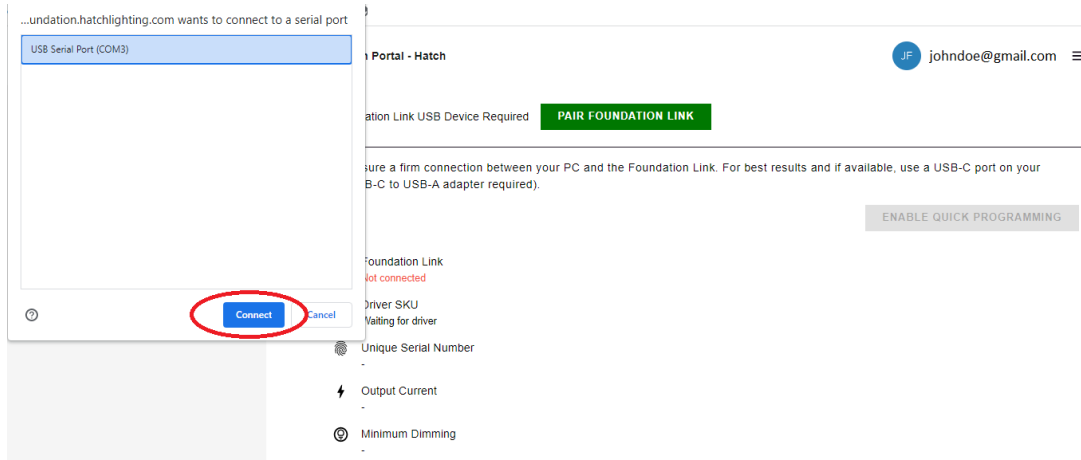


Figure 18 USB Serial Port Connect Screen

Successful pairing will be indicated in green on the READ DRIVER PARAMETERS screen.

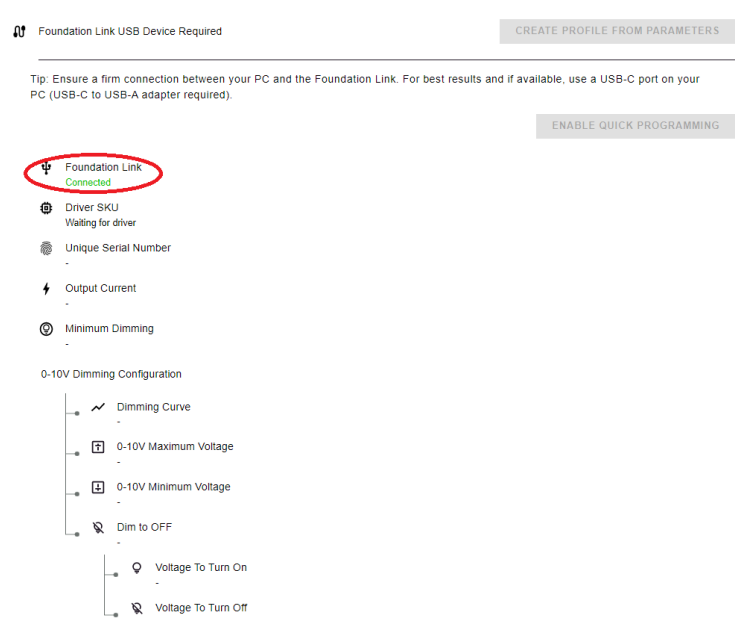


Figure 19 Successful Pairing

Reading a Driver's Parameters

Once pairing is successful a driver can be connected and the portal will automatically read and display the driver parameters including Driver SKU, unique driver serial number and all programmable driver parameters. See Figure 20, illustrating that a driver model number FRX15-0350T-42-UNV has been connected. CREATE PROFILE FROM PARAMETERS is only visible to users with a Profile Manager role.

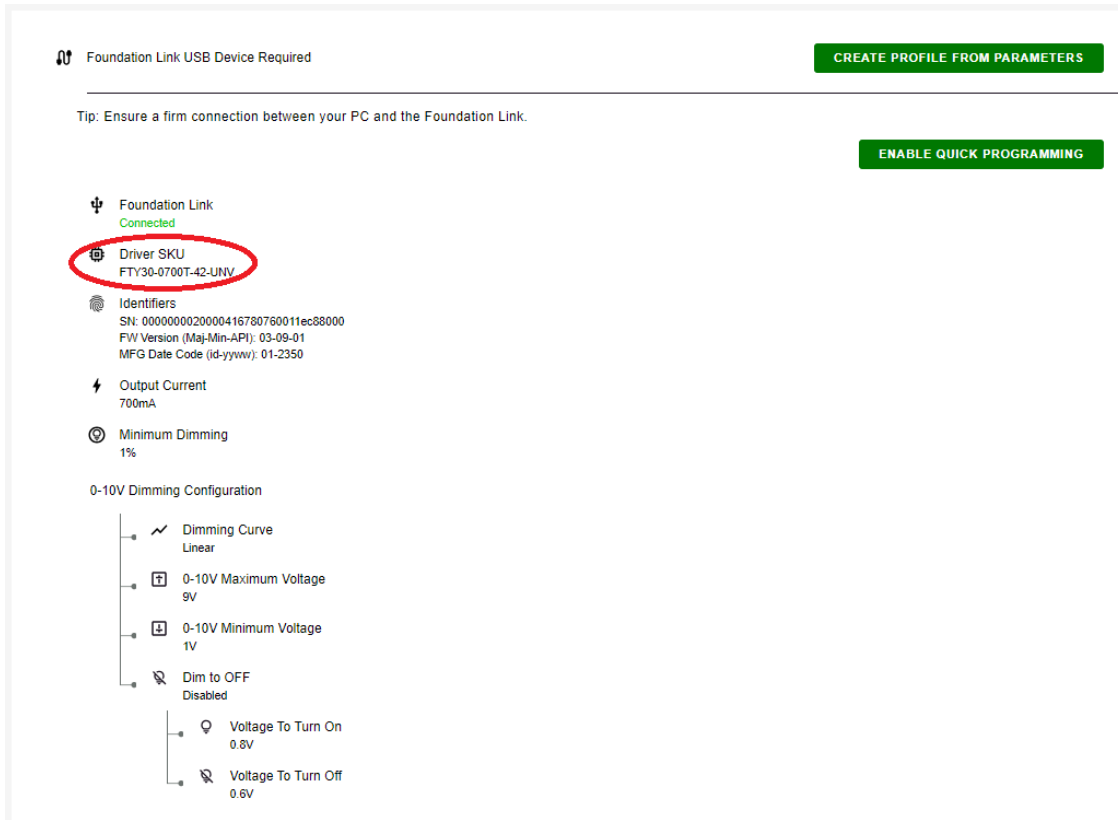


Figure 20 READ DRIVER PARAMETERS Screen

A profile can be conveniently generated at this point by selecting **CREATE PROFILE FROM PARAMETERS**. The driver parameters that have just been read will be loaded into a window for creating a new profile. These parameters can either be saved as-is or adjusted. Simply enter a profile name and click save.

The screenshot shows the 'Create Profile from Parameters' screen in the HATCH software. It consists of the following sections:

- Profile Name:** A text input field containing 'JD03'.
- Select driver SKU:** A dropdown menu showing 'FTY30-0700T-42-UNV'.
- Driver Details:** A section titled 'If needed adjust values of output current.' It features a 'Maximum Output current' slider set to 700 mA, with a range from 350mA to 700mA.
- Configure 0-10V dimming (optional):** A section titled 'If needed adjust values below or skip this step and save a profile.' It includes:
 - 'Dimming curve' dropdown set to 'Linear'.
 - '0-10V Maximum Voltage' slider set to 9V, with a range from 7V to 10V.
 - '0-10V Minimum Voltage' slider set to 1V, with a range from 0.4V to 2V.
 - '0-10V Minimum dimming' slider set to 1%, with a range from 1% to 20%.

Figure 21 Create Profile from Parameters

Quick programming can also be enabled by clicking on the ENABLE QUICK PROGRAMMING button from the READ DRIVER PARAMETERS screen. This allows a user to use an existing driver as a programming model, and parameters to be adjusted as needed. The driver can then be re-programmed without having to create a new profile.

Programming a Driver and Programming Sessions

Selecting DRIVER PROGRAMMING from the main menu opens the driver programming menu. Connect a Foundation LED Driver to the Foundation USB Connector using a USB-C cable.

Look to ensure the software has recognized the Foundation USB Connector and the Foundation LED Driver SKU. See Figure 22

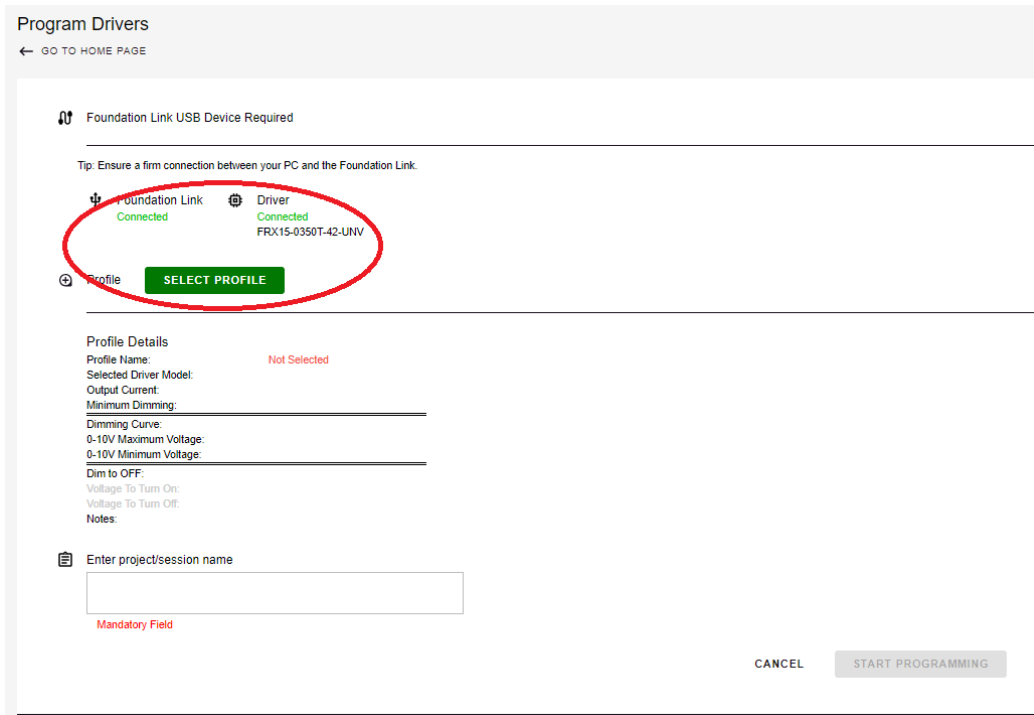


Figure 22 Driver Programming Screen

Click SELECT PROFILE to be taken to the list of profiles available and select one by clicking on the SELECT button on the right side of the table. Once a profile has been selected the Driver Programming screen will be updated. See Figure 23. The parameters to be programmed into the driver based on the profile selected will be displayed.

The user has the option to select a different profile. Once the desired profile is displayed, enter Project or Session name.

Click on the START PROGRAMMING button. The active programming session window will then open, and the application will then program the parameters from the profile into the Foundation LED Driver. Along with notification of successful programming, the window will also report the accumulated number of unique LED Drivers successfully programmed. To program additional drivers with the same profile, simply disconnect the Foundation LED Driver and connect the next driver. The software will automatically program the next driver.

NOTE: DO NOT SWITCH TO OTHER BROWSER WINDOWS OR OTHER APPLICATIONS DURING PROGRAMMING SESSION. THIS CAN RESULT IN AN INCORRECT COUNT OF DRIVERS PROGRAMMED IN THE SESSION SUMMARY.

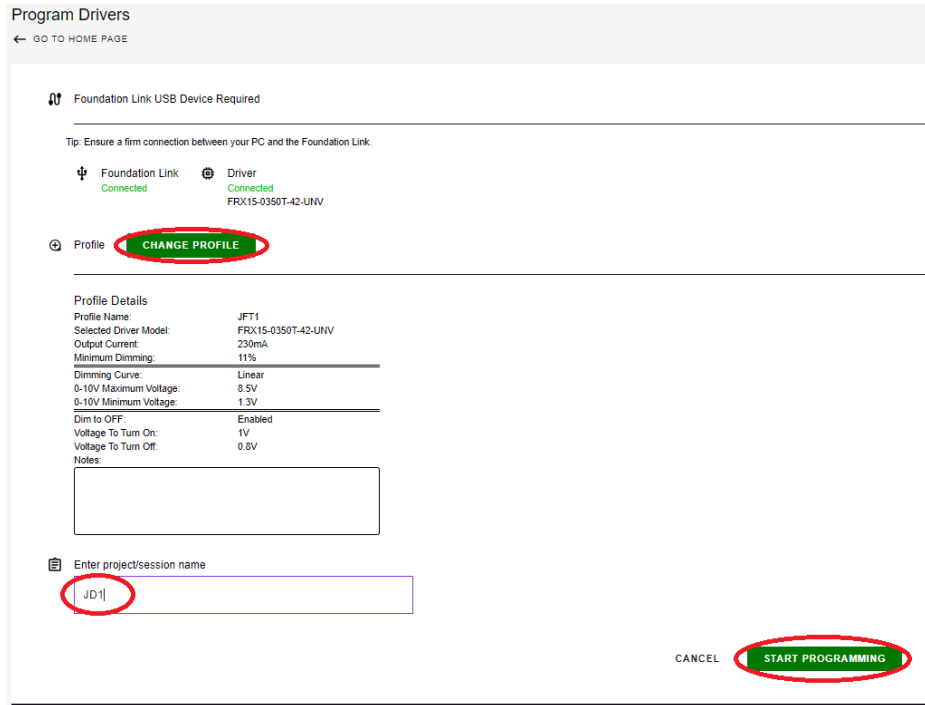


Figure 23 Driver Programming Screen

When the desired number of LED Drivers are programmed, click on END PROGRAMMING SESSION.



Figure 24 Active Driver Programming Session

A Programming Session Summary will be listed with data from the programming session including the programmed settings, Session or Project name if entered, and Session details noting how many LED Drivers were successfully programmed along with any errors encountered. The list of Foundation LED Drivers serial numbers with date/time, driver firmware version, manufacturing date code and

programming status will be displayed in a table format. This data is stored in a file on the cloud for future recall.

Programming session summary

← GO TO HOME PAGE

Project/Session Name: JF1
 Profile Name: JFT1
 Driver SKU: FRX15-0350T-42-UNV

Profile Details:

Output Current: 230mA
 Minimum Dimming: 11%
 Dimming Curve: Linear
 0-10V Maximum Voltage: 8.5V
 0-10V Minimum Voltage: 1.3V
 Dim to OFF: Enabled
 Voltage To Turn On: 1V
 Voltage To Turn Off: 0.8V

Drivers programmed in this session: 1

PROGRAMMED AT	SERIAL NUMBER	FW VERSION (M-J-MN-API)	MFG CODES (ID-YYWW)	PROGRAMMING STATUS
1/19/2024 02:45:44 PM	00000000.20000414.1e094016.401d0000	00-01-01	255-2201	SUCCESS

GO TO HOME PAGE

Figure 25 Programming Session Summary

Session Analytics

Clicking on the Session Analytics option from the home page displays the Session Analytics summary page. Each programming session is recorded. The session information includes the profile name used for programming the driver(s), the driver SKU being programmed, the session name, the user ID of the individual that programmed the driver, date of programming, a unique session ID and the total number of drivers programmed. Convenient filter and sort functions are also built into the Session Analytics page. See Figure 26.

Session Analytics

← GO TO HOME PAGE

DOWNLOAD ALL SESSION DATA

Filters: LED Driver SKU: All, Session Name: All, Profile Used: All, Session Created By: All

PROFILE USED	DRIVER SKU	PROJECT/SESSION NAME	SESSION CREATED BY	CREATED AT ↓	SESSION ID	PROGRAMMED DRIVERS	HANDLED ISSUES	CSV
JFT1 ⓘ	FRX15-0350T-42-UNV	JF1	jfisher@hatchlighting.com	1/19/2024 02:45 PM	TR628IP1AR	1 VIEW	0	📄
JFT1 ⓘ	FRX15-0350T-42-UNV	JD1	jfisher@hatchlighting.com	1/19/2024 02:43 PM	UuzpTrJ2h1	1 VIEW	1	📄
JFTP2 ⓘ	FTX15-0350T-42-UNV	New Test	howard@hatchlighting.com	1/16/2024 10:58 AM	WondD63UEZ	3 VIEW	3	📄

Figure 26 Session Analytics

From the Session Analytics summary page, the user can download the entire Session Analytics database, individual session analytics or display an individual session analytics summary. Pressing the VIEW button in the PROGRAMMED DRIVERS column will display a list of the individual driver unique serial numbers, driver firmware version, manufacturing date codes of the drivers that were programmed in that specific session as well as the date and time of programming.

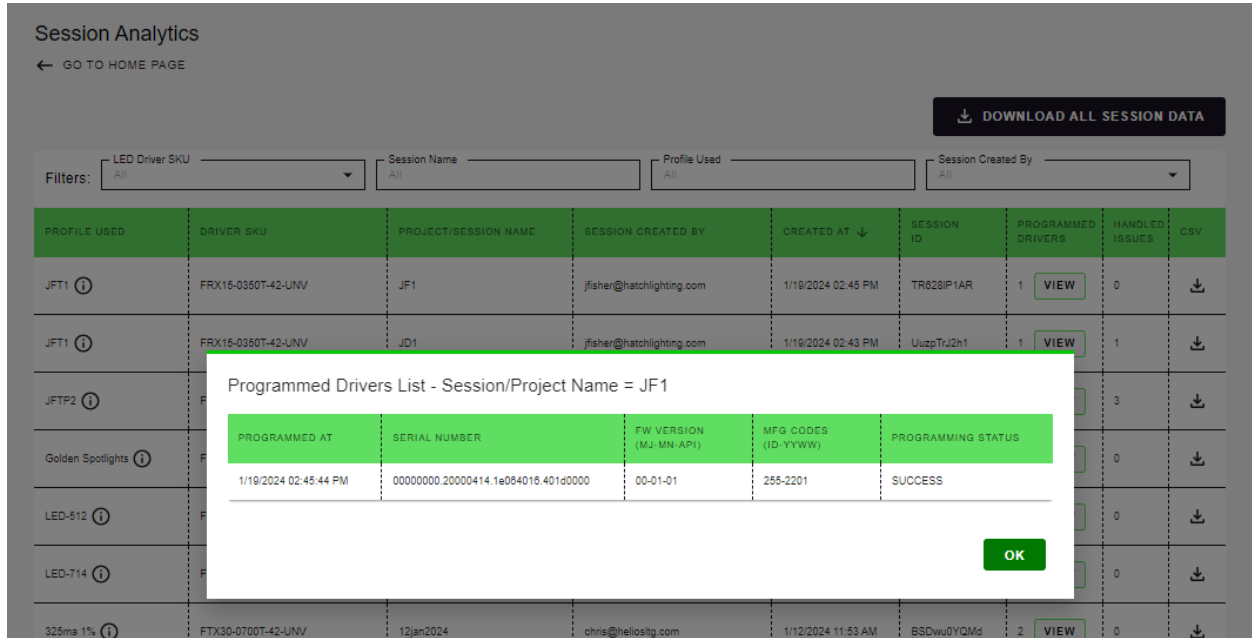


Figure 27 Programmed Drivers List

From the Session Analytics page, clicking on the download icon in a session record will result in downloading a .csv file that contains all the session data including the data from the Session Analytics page for that specific session as well as the Programmed Drivers List data. This list also includes all the following electrical parameters that were programmed into each driver:

- Output Current
- Minimum Dim %
- Dimming Curve
- 0-10V Maximum and Minimum Voltages
- Dim-to-Off Disable/Enable Status
- Dimming Turn-off/Turn-On Voltages
- Session Name
- Driver Model Number
- Programmer ID
- Date and Time of Driver Programming
- Unique Session ID
- Driver Serial Number
- Programming Status
- Driver Firmware Version
- Manufacturing Date Code