# Savant Integration

## Tech Note 102

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## Introduction

This Tech Note 102 Savant Integration Guide was developed for you, our Integration partner, and your clients. We have provided this simple guide to help assist in the design and integration of a Screen Innovation shade system, and to a provide some best practices which can help yield the best possible performance from deployments.

Control, your way; at Screen Innovations we provide complete control of all your shade and screen products via both wireless and wired technologies.

Screen Innovations® has developed the most innovative shade system available on the CEDIA® market. Our revolutionary Shade Builder tools, ultra-high-quality interior and exterior motorized shades, and the most extensive control and power options in the industry with our SICON ecosystem provide an unmatched level of performance. We built our shade products to be at a world-class level and the absolute best you can buy.

We engineered the system in Austin, Texas, and our products are all engineered and manufactured in the USA. We have exclusive partnerships with world-class raw parts suppliers such as Somfy, the world leader in motors. These partnerships, combined with our innovations and patent pending technologies, mean not only do our shade products look amazing in your client's home, but more importantly, "they just work."

This Screen Innovations Tech Note will help with integration to a Lutron system. We provide step-by-step details and screen shots to enable rapid deployments and testing.

This Tech Note may also contain data sheets that may be helpful for your shade integration project. Scan the QR code at the top any page to download the latest datasheet(s).

For the latest information on our products please visit our website at http://www.screenInnovations.com or please call our technical support and sales teams for additional help and information.

## How To Use This Tech Note

QR Codes – Scan this image on your phone or tablet to receive the latest version of the corresponding document.

Zigbee – This logo indicates the product uses Zigbee 3.0 Mesh RF protocol.

Radio Technology Somfy® (RTS) – This logo indicates the product uses one-way Radio Frequency commands for control of the shade/screen.

485 – This logo indicates the product uses an RS-485 network to allow full two-way control and status of the motor(s). SDN is a proprietary term Somfy uses to describe 485 networks.

## Common Control Nomenclature

The control system and user interface(s) are generally connected to the local area network and connect with our shades from one or both of the following networking topologies:

### One-Way Radio Frequency

Control signals are routed to a series of WIFI to RTS bridges such as the SI Link Pro Z.
Each RTS to WIFI gateway can control up to sixteen RTS channels. Each channel can have an unlimited number of shades/screens associated with it.
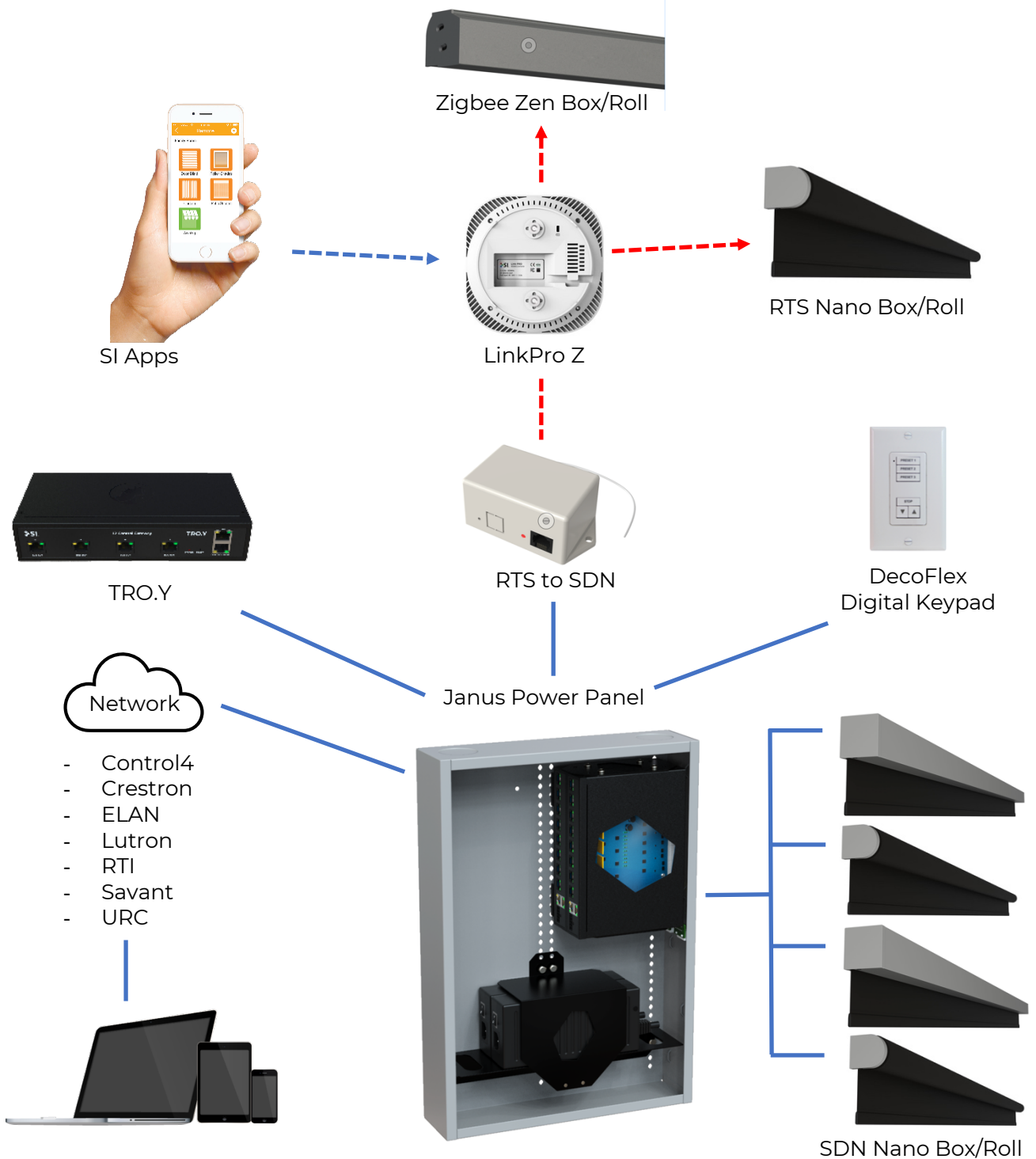Each project can have up to ten RTS to WIFI gateways.

### Two-way RS-485

When two-way control is required, control signals are routed to the Screen Innovations IP gateway over the local area network using Internet Protocol and PoE.
These systems are partitioned into isolated bus segments. Each segment can support up to 255 devices (shades, screens, and other node devices).

LAN

SI.FI.

Control Processor

Nano Roll/Box

GUI

LinkPro Z/ TaHoma
433MHz
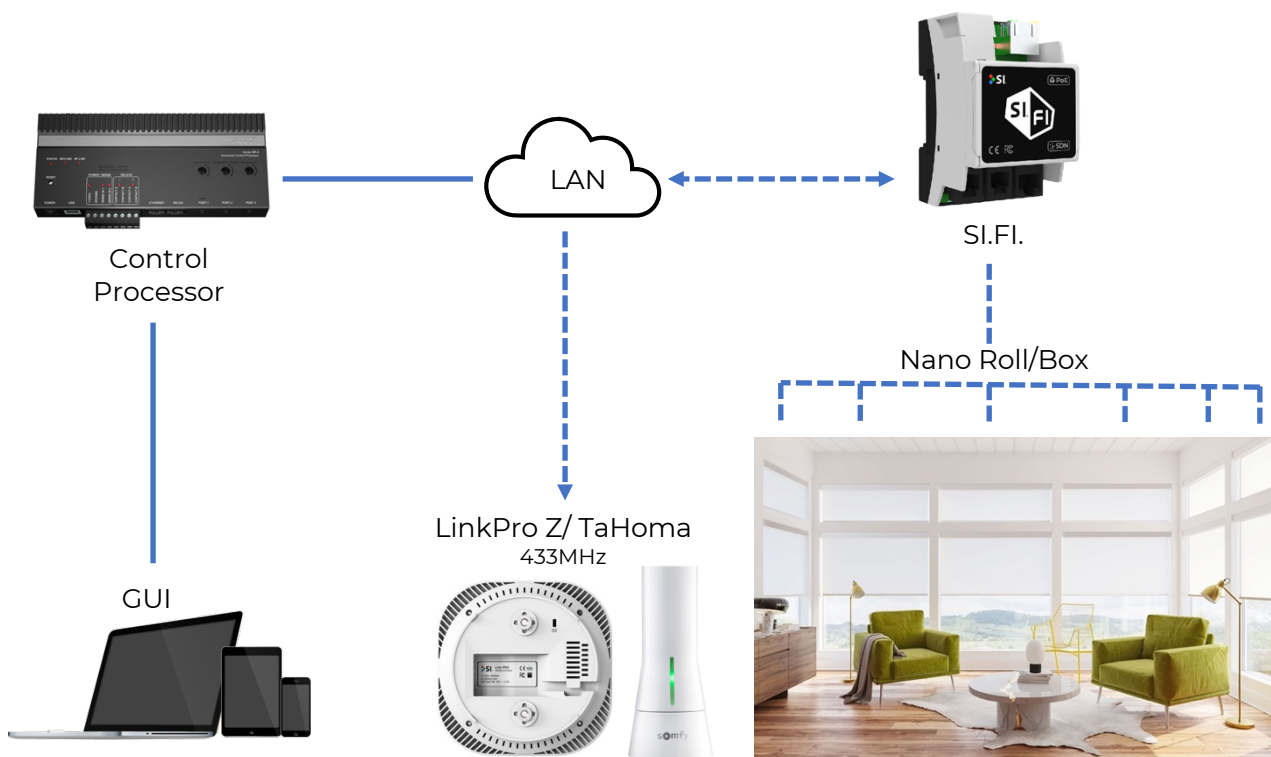
## Screen Innovations Shade/Screen System Control Options

All connectivity types are not typically used in a single project.

Zigbee Zen Box/Roll

SI Apps

LinkPro Z

RTS Nano Box/Roll

TRO.Y

RTS to SDN

DecoFlex
Digital Keypad

Network

- Control4
- Crestron
- ELAN
- Lutron
- RTI
- Savant
- URC

Janus Power Panel

SDN Nano Box/Roll

## Zigbee 3.0 & RTS via TaHoma Deployment

**Zigbee 3.0/RTS via LinkPro Z Drivers**

- Control4
- Crestron
- ELAN
- RTI
- Savant
- URC

## Before Integrating with Zigbee

A fully operational SI Zigbee system is required with all shade limits set (including the MY position if desired) and at least one SI Zigbee transmitter.

The Link Pro Z system must be fully operational and programmed using the Somfy TaHoma app.

Any changes to number of motors, scenes, or smart plugs in the system will require enabling or refreshing the integration in the TaHoma App.
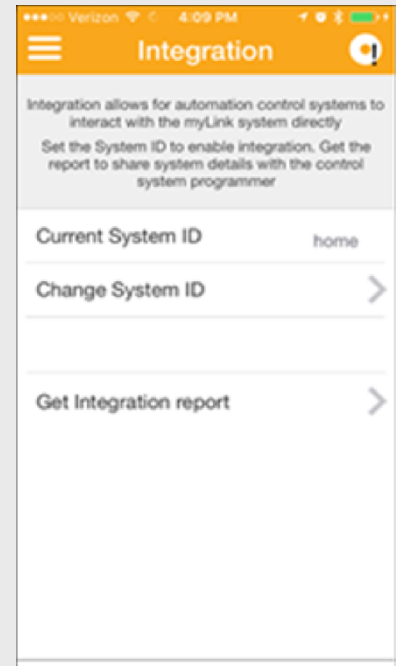


Compatible with LinkPro Z and TaHoma with firmware 4.06 and higher, this driver set enables control of both RTS and ZigBee 3.0 shades connected to a Link Pro Z or TaHoma from the Savant Pro 8 app.
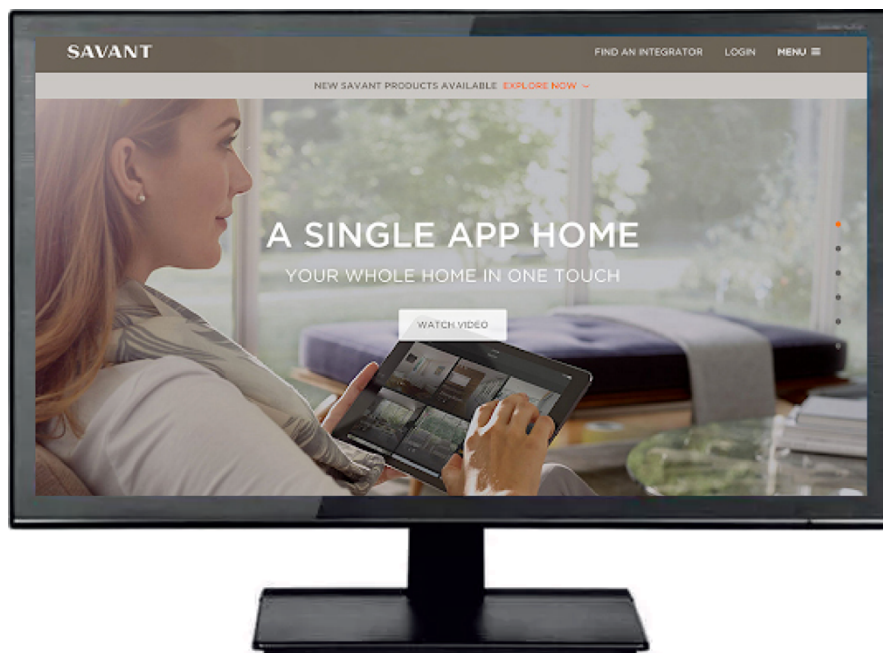
## Integration With Zigbee via LinkPro Z

Download TaHoma App from Apple App Store or Google Play.



- Situo Remote on Your Phone
- Scalable
- Scenes and schedules
- Easy to program
- Local and remote access

- Over the air firmware updates
- Integration Support
- Demo mode
- English, Spanish, and French
- Requires fully operation Zigbee installation w/ limits set

## Step Process – Integration with Zigbee LinkPro Z



Note: Be sure to use Savant blueprint version 9.2.2 or newer as the communication TCP/TLS is not included in earlier versions.

1. To import the profile into your custom profile's library, see the KB Article on the Savant community on "App Note Profile Import Tool Setup Guide."

2. After importing the profile into your custom library, you may search for the profile under Somfy Tahoma.
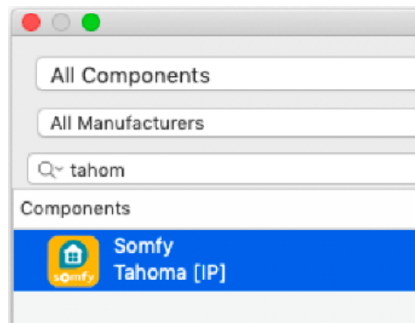


3. Place the component into your blueprint and name it.

4. Repeat step 2 for each TaHoma/LinkPro Z installed.
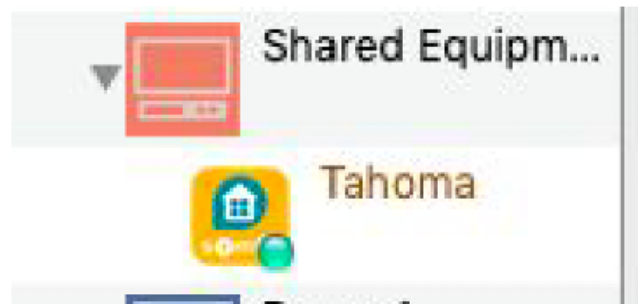
5. Use a software program such as Advanced IP Scanner to find the IP address of your TaHoma/LinkPro Z. Ensure it is configured with an IP address reservation. The gateway will show up as "Gateway-####-####-####," e.g., "Gateway-1602-3377-8057."

6. Make the ethernet connection to the TaHoma/ LinkPro Z and enter the IP address for the device.

7. Using the Somfy Tahoma App, set up and configure all shades to be connected to the gateway.

8. Inside the app, go to "Settings," "Third Party Integration," and click on the **Control 4** icon. Use this new screen to get the list of shades to enter into the "Shade" data table.



Note: While you are using Savant for your integration, please note Control 4 is the only option to use in the TaHoma app.

9. In Savant, enter each shade you wish to control into the data table. In the Savant software, go to "Tools," "Settings," then "Shades." In the "Shade" data table, press the plus sign in the lower-left corner to add a new line for each shade you wish to control. For each shade, be sure to set the following:
   a. Controller – name of the gateway that will be controlling the shade
   b. Location – Savant zone for this shade
   c. Entity – see table below for proper selection:

| Shade Type | Entity to Use | Feedback and Scenes |
|---|---|---|
| RTS Shade | Individual Shade | NO |
| Zigbee Shade | Individual Variable Shade | YES |
| Zigbee Shade Group | Shade | NO |
| Zigbee to Wired Shades | Variable Shade | YES |
| Zigbee Lighting Devices | Dimmer or Switch | YES |

d. Label – name of the shade as you want it to appear in the Savant Pro App
e. Address 1 – should be the number after Zigbee or RTS and before the # or /

| Enabled | Identifier | Controller | Location | Entity | Label | Address [1] |
|---------|-----------|-----------|----------|--------|-------|-------------|
| ☑ | 0 | Tahoma | Room 1 | Individual Variable Shade | Motor 1 | 57152 |
| ☑ | 1 | Tahoma | Room 1 | Individual Variable Shade | Motor 2 | 64109 |
| ☑ | 2 | Tahoma | Room 1 | Shade | Zigbee Group | 4325 |

10. If you are using RTS shades, you MUST change the state variable on the TaHoma profile to RTS for it to operate properly:
     a. Open the TaHoma profile "Inspector."
     b. Change the drop down to "State Variables."
     c. Under "Type," change to "RTS." It MUST be in all caps.
     d. If you want to control RTS and Zigbee shade groups, you MUST place two TaHoma profiles in your project and set one up for RTS and one for Zigbee shade groups.

11. Once you have finished the data table entry, click "Done," "Generate Services," "Save your Config," and upload.

12. Once the host has started, you will need to authorize the host to communicate with the Tahoma/ LinkPro Z. To do this, enter the third-party integration page in the Tahoma app from step 7. Once here, click the "Enable/Refresh Integrations" button.

13. Open system monitor to the "System State" tab.
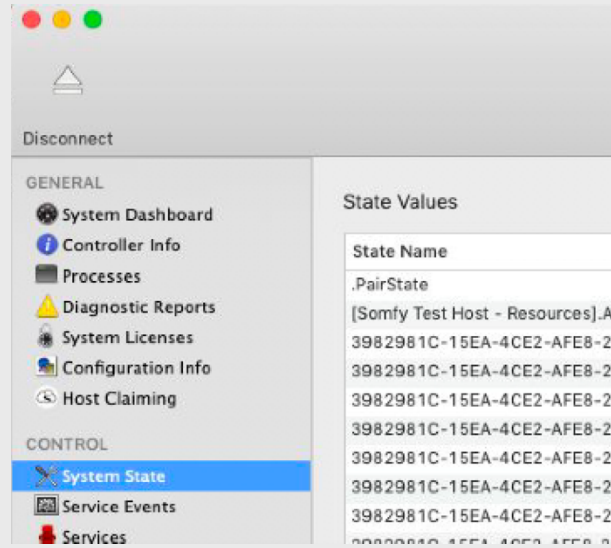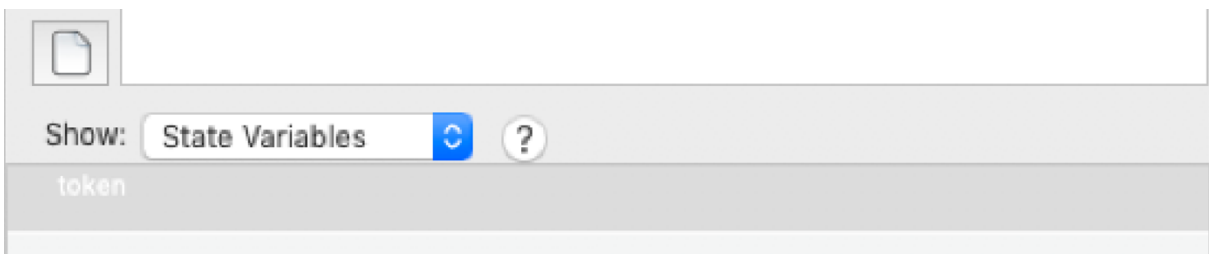


14. In the search box, enter "Token."
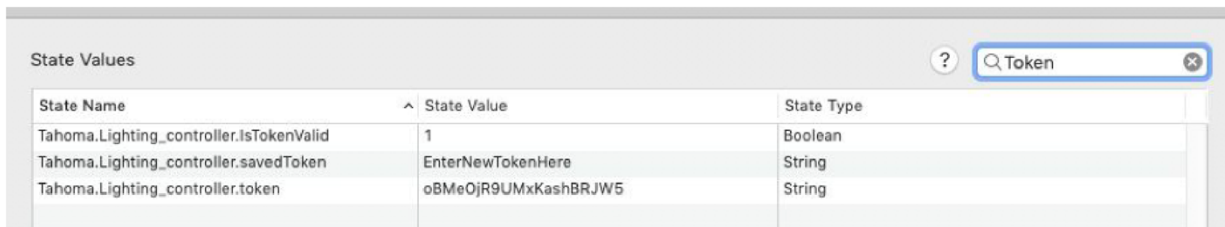


15. Locate the state named <GatewayName>.Lighting_controller.token

16. Highlight this value and copy to a textedit.

17. In the Savant software, open the "Inspector Window" for the Tahoma/LinkPro Z and change the drop-down menu "Show" to "State Variables."

18. Copy the token from the TextEdit window located between the <string> tags and only the token into the "Initial Value" space
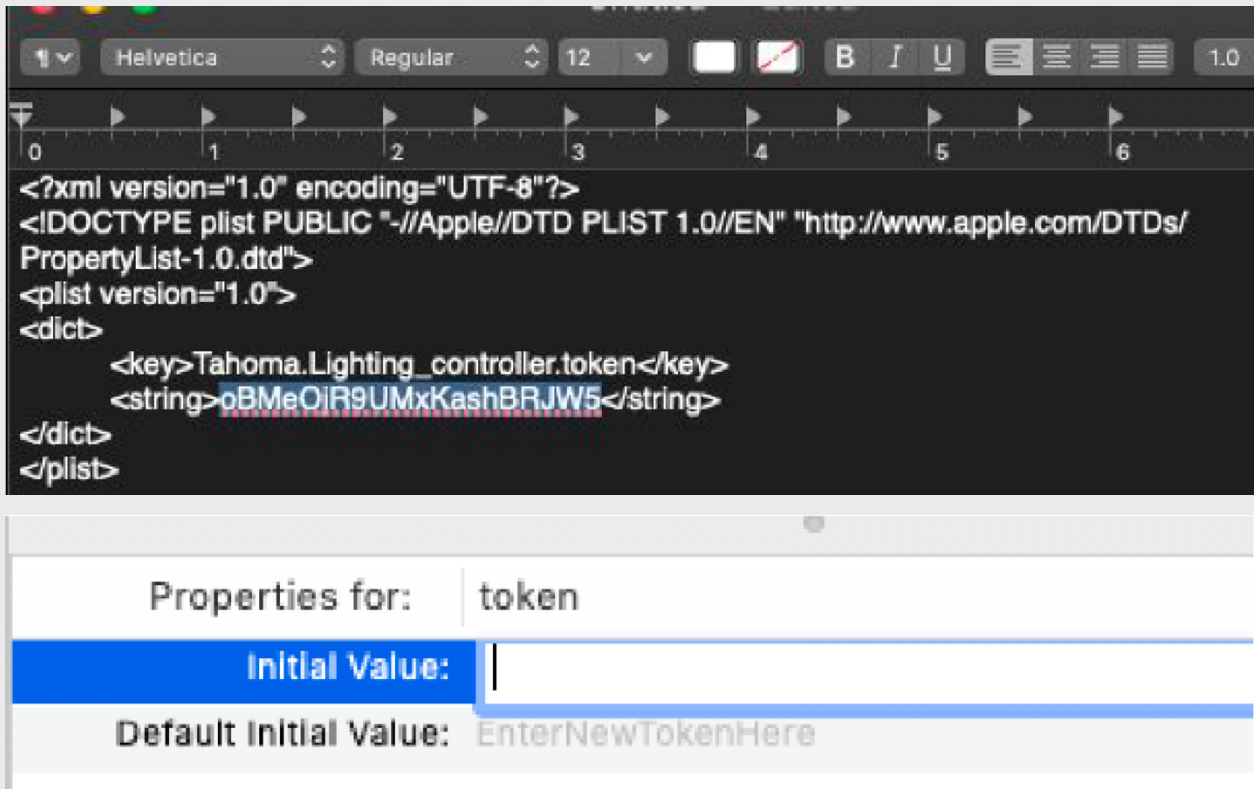


19. Close the inspector window and Generate services if needed, Save your config and upload to the host.

20. Test your shade control

**Troubleshooting**

Shades aren't moving:

- Check for communication from Savant to the Tahoma/ LinkPro Z.
- Check Gateway IP address (Step 5).
- Check that your token is entered correctly (Steps –17).
- Check that the shade addresses are entered correctly (Steps 7–8).

## Notes from Profile

Savant version 9.2.2 or later is required for communication between Savant and the Tahoma/ LinkPro Z to work.

Use a software program such as Advanced IP Scanner to find the IP address of your TaHoma/LinkPro Z and ensure it is configured with a IP address reservation. The gateway will show up as "Gateway-####-####-####" e.g., "Gateway-1602-3377-8057."

For RTS devices (no feedback and will not work in Scenes):
- Select entity type "Shade."
- Enter the device ID after "RTS.xxxxxxxx" into Address 1.
- Change the State variable from "ZIGBEE" to "RTS."

Note: You can only control RTS or Zigbee groups in one profile, you cannot control both.

For Zigbee Shades (feedback and will work in Scenes):
- Select entity type "Individual Variable Shade."
- Enter the device ID after "zigbee.xxxxxxxx/1" into Address 1 excluding the "/1" at the end.

For Zigbee Shade Groups (no feedback and will not work in Scenes):
- Select entity type "Shade."
- Enter the device ID after "zigbee.xxxxxxxx#20" into Address 1, excluding the "#20" at the end.

For Zigbee to Wired Shades (feedback and will work in Scenes):
- Select entity type "Variable Shade."
- Enter the device ID after "zigbee.xxxxxxxx/10" into Address 1, excluding the "/10" at the end

For Zigbee Lighting Devices (feedback and will work in Scenes):
- Select entity type "Dimmer" or "Switch."
- Enter the device ID after "zigbee.xxxxxxxx/1#1" into Address 1, excluding the "/1#1" at the end

Use "Custom Commands" to send commands using workflows. The commands in the "Shade Controller" are named specific for the UI and may not act as you intend.
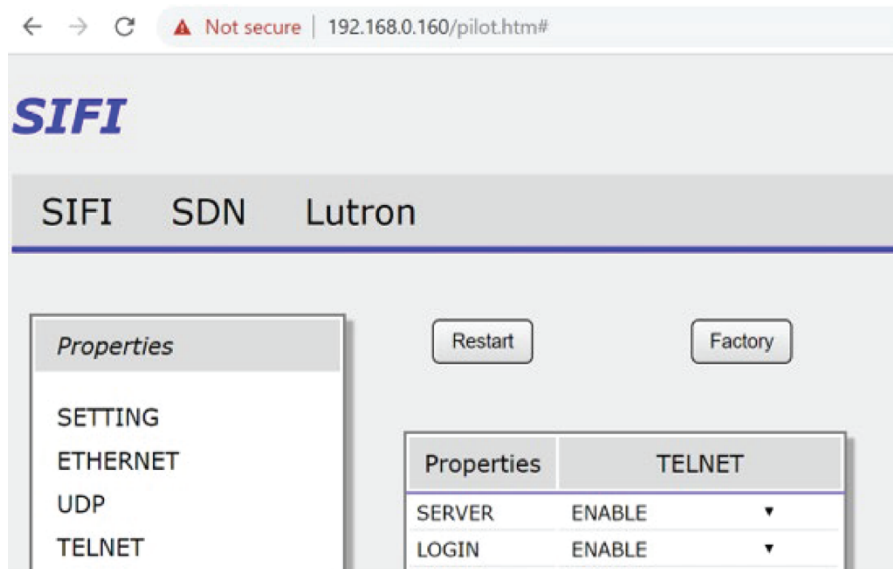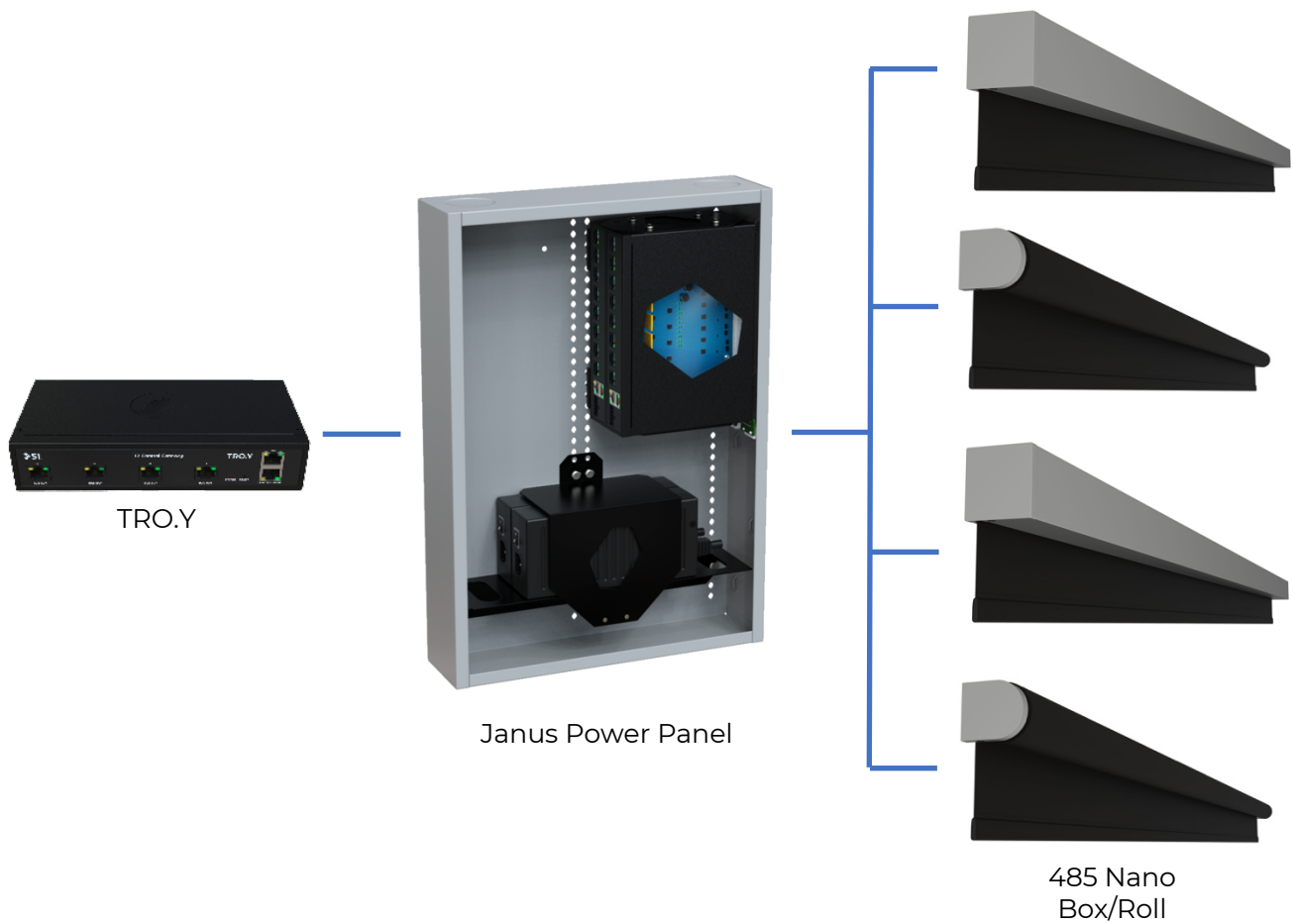
# 485



## 485 via IP Gateway Drivers

- Control4
- Crestron
- Crestron Home | OS 3
- ELAN
- Lutron
- RTI
- Savant
- URC

## Before Integrating with 485

Requires a fully operational SI 485 system with all shade limits set (including the MY position if desired) and a fully commissioned system using IP gateway (TRO.Y, SI.FI, UAI +).



TRO.Y

Janus Power Panel

485 Nano
Box/Roll

## 485 via IP Gateway (SIFI / UAI+)



Open a browser and connect with the IP address of your SI.FI and navigate to the "TELNET" tab.  You will need this telnet username and password for identification within the Blueprint software.

Compatible with Savant Pro host running Da Vinci 8.4 or higher Somfy myLink™ Drivers are available in the Savant Application Manager

## Integration with 485 via IP Gateway (TRO.Y)

The SI.FI 485 Gateway allows for commissioning and integrating a Somfy Digital Network™ (SDN) over Internet Protocol (IP).

Embedded motor commissioning software streamlines 485 system configuration.

## 485 via IP Gateway (TRO.Y)



Scan this QR code for accessing the extensive TRO.Y programming guide.

*To locate the TRO.Y on your network, see pages 4–5 in the TRO.Y programming manual.*

Open a browser and connect with the IP address of the TRO.Y and navigate to the "Integration Settings" button.

Enable Telnet server interface and enter TCP port username and password (default port is 23) for identification within Control4 Composer Pro.

Compatible with Control4 processors running OS 2.6 and higher, integration requires the Control4 Screen Innovations TRO.Y gateway, group, blind drivers, and requires SDDP to be enabled.

See driver details for more information.
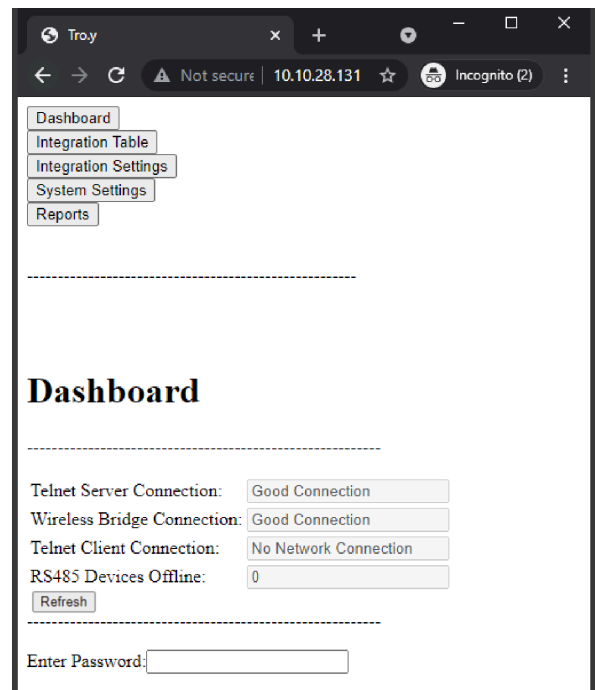
## Step Process – Integration with 485 via IP Gateway (TRO.Y/SI.FI/ UAI+)

Before you begin, please download the latest drivers from our site; https://www.screeninnovations.com/accessories/si.fi

1. Open the RacePoint Blueprint software and project, select the room that the Connect UAI+ or SI.FI. will physically reside.

2. Navigate to the "Show Library" menu in the toolbar at the top of the screen. When the menu opens search for the "UAI" driver from the search bar.
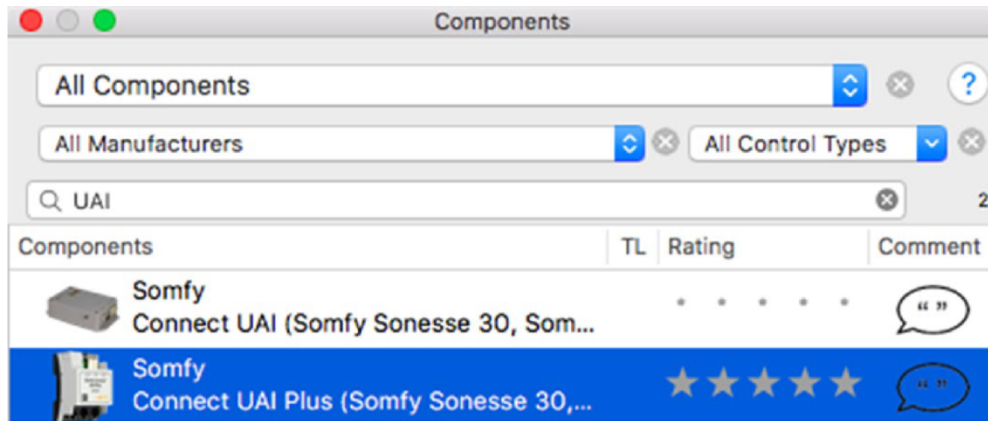


3. Click on the "Somfy Connect UAI Plus" driver and drag it into the desired room, then drag the device into the workspace.

4. In the workspace, drag a wire from the system switch, router, etc. to the Somfy Connect UAI Plus device. Enter the correct IP address of the Connect UAI Plus device when prompted.
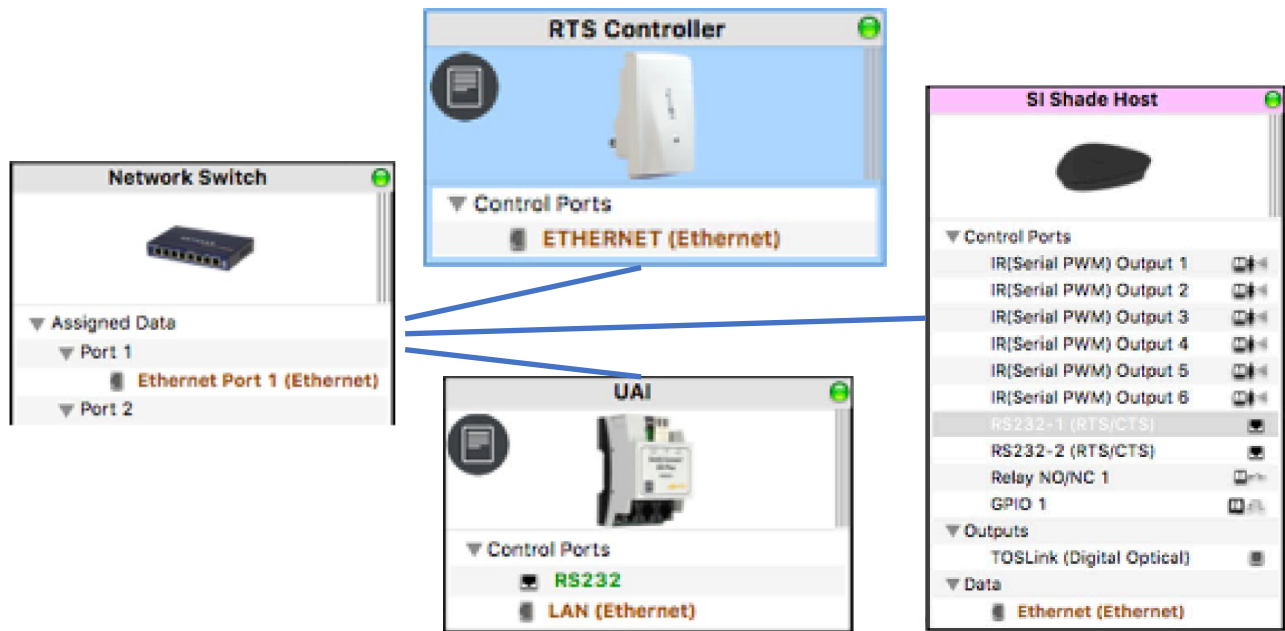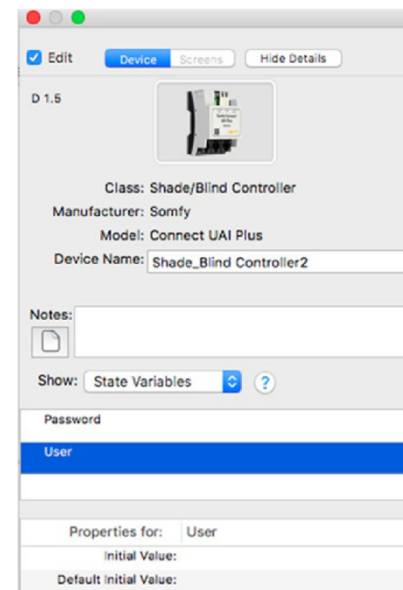
5. Double-click the Connect UAI Plus device in the workspace to open the "Inspector" for this device.

   From the drop-down menu select "State Variables" and enter the "Telnet User" and "Telnet Password" for the device.

6. Navigate to the "Tools" section in the toolbar at the top of the screen and select "Settings," then "Shades" from the list. This will open the data table for the Shades.

   In the data table, enter the "Shade ID" and then select the UAI+ as the controller (the "Shade ID" can be found on the motors and in the UAI+ Web Interface).

## Shades Settings

| Enabled | Identifier | Controller | Location | Entity | Button L... | Toggle L... | Label | UI Type |
|---------|-----------|-----------|----------|--------|-------------|-------------|-------|---------|
| ✔ | 1 | UAI | SDN | Shade | Right Shade | | Right Shade | Shade Buttons |
| ✔ | 2 | UAI | SDN | Shade | Left Shade | | Left Shade | Shade Buttons |
| ✔ | 3 | RTS Cont... | RTS | Shade | Top Shade | | Top | Shade Buttons |

7. Close the data table and select the "Generate Services" to finalize.

## Controlling a 485 Shade or Screen without an IP Controlled Gateway
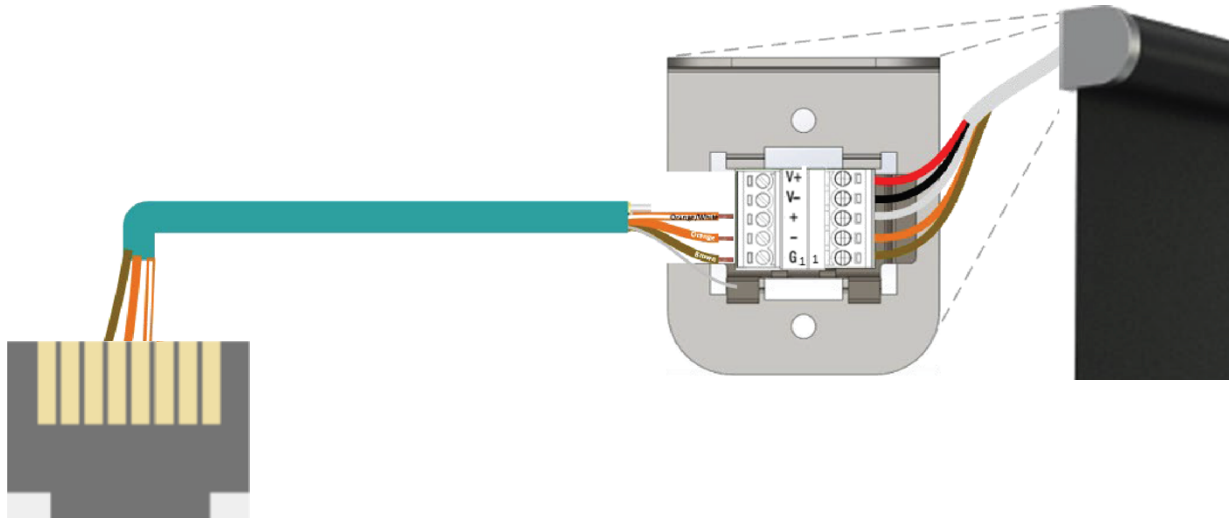


| | |
|---|---|
| 1 RX + | 5 RXD |
| 2 RX - | 6 TX -/TXD |
| 3 TX + | 7 CTS |
| 4 GND | 8 RTS |

Controlling a 485 shade without an IP controlled gateway is possible but requires more expertise and service to simplify programming and lessen maintenance.

Ensure you have a fully commissioned 485 screen or shade with all limits set before you begin any direct control. It is not necessary to have a permanently installed 485 gateway such as SI.FI. But you will need to set all limits with an IP gateway or a hard-wired limit setting tool.

In order to do this, you must have a control system capable of direct serial communications for RS-485.
Connect pin #1 to orange, pin #3 to orange and white, and pins #2 and #6 to brown.

Next, navigate to the 485 String Calculator to gather your HEX strings to allow for all controls and status feedback.

This software is free and available at the URL below:

https://files.screeninnovations.com/Downloads/Software/ccsetup_1.4.msi.zip

# RTS via myLink Deployment (Archived)



## RTS via MyLink Drivers

- Control4
- Crestron
- ELAN
- RTI
- Savant
- URC

## Before Integrating with RTS

A fully operational SI RTS system is required with all shade limits set (including the MY position if desired) and at least one SI RTS transmitter.

The Link PRO system must be fully operational and programmed with all desired RTS channels using the Somfy myLink app.

The app must also be used to assign a system ID for identification within Blueprint configuration software.

Any changes to number of channels, scenes, or myLinks in the system will require update in system configuration in Savant's Blueprint configuration software.
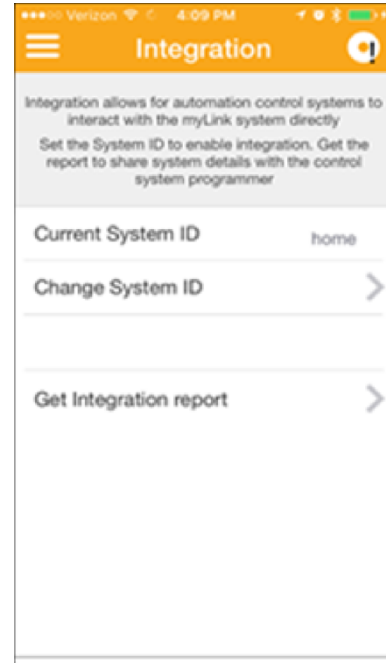
- Compatible with Savant Pro host running Da Vinci 8.4 or higher

- Compatible with Link Pro Zs, myLinks, and legacy myLinks running firmware 4.06 and higher.

- Somfy myLink™ Drivers are available in the Savant Application Manager

- MyLink™ scenes are NOT currently supported in this driver

- See driver details for more information

# RTS myLink



## myLink Hardware Overview

- Compatible with qualified WIFI networks (see RTS Guide for more details on qualified networks)
- 2.4 GHz & 5GHz WIFI compatible with a/b/g/n routers
- WPA2, WEP, TKIP open, and mixed mode encryption
- Real Time Clock (RTC) for timed events without app/server connection
- Supports Up/Down/My/Stop commands and incremental control
- All Screen Innovations RTS gateways are rated for interior use only
- LED indicates WIFI status and RTS transmission
- Latest firmware version: 5.16

## Integration with RTS

Download myLink App from Apple App Store or Google Play.



- Telis Remote on Your Phone
- Scalable
- Scenes and schedules
- Easy to program
- Local and remote access
- Easily add users

- Over-the-air firmware updates
- Integration support
- Demo mode
- English, Spanish, and French
- DOES NOT set limits or "copy and paste" new transmitters
- Requires fully operational RTS installation with limits set and at least one programmed RTS transmitter.
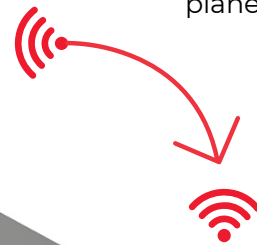
# WIFI and RTS Device Range
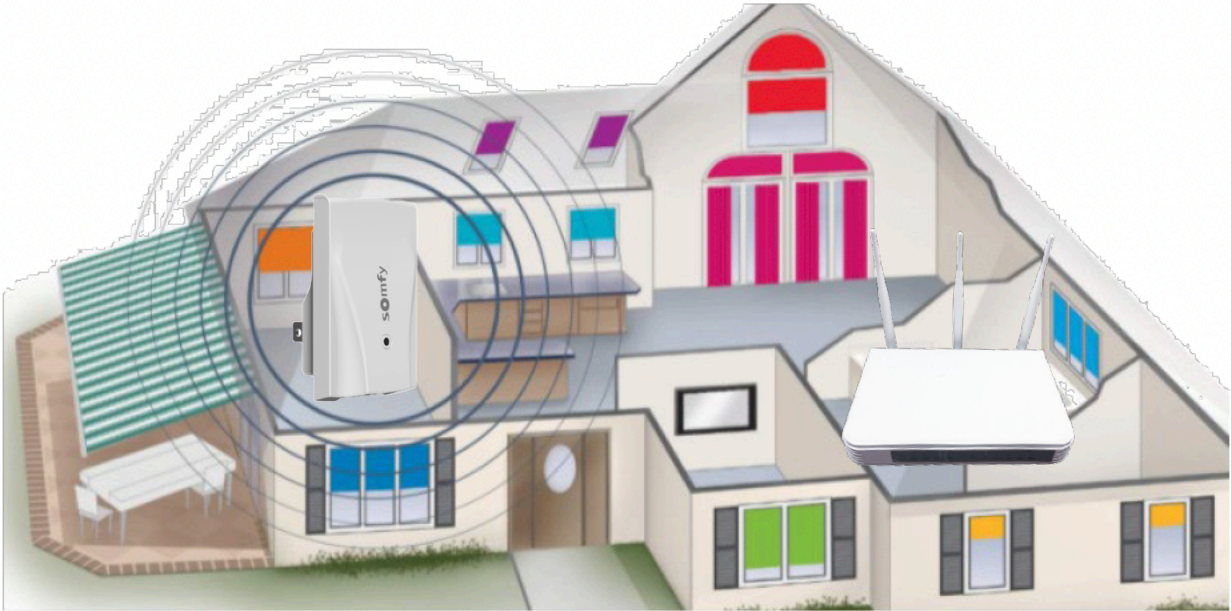
Must be located as close as possible to the nearest WAP

-65dBm or better

Works best within 30 feet of shades and the horizontal plane of myLink

## Step Process – Integration with RTS via MyLink

Ten steps to Integrate myLink or Link PRO with Savant Pro App 8.

Before you begin, please download the latest drivers from our site:
https://www.screeninnovations.com/accessories/linkpro-z/

1. Open the RacePoint Blueprint software and Project, select the room that the myLink will physically reside.

2. Navigate to the "Show Library" menu in the Toolbar at the top of the screen. When the menu opens, search for the "myLink" driver from the search bar.
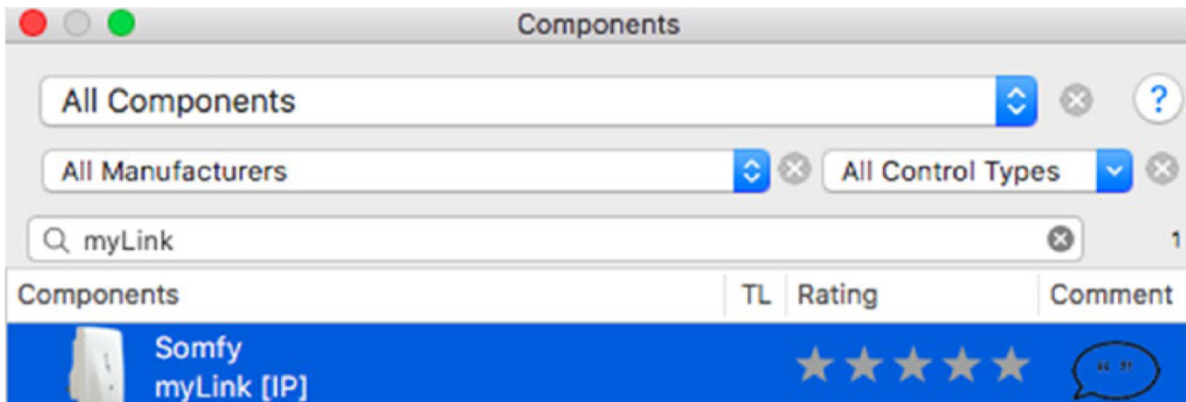


3. Click on the "Somfy myLink" driver and drag it into the desired room, then drag the device into the "Workspace."

4. In the "Workspace," drag a wire from the system switch, router, etc. to the Somfy myLink device. Enter the correct IP address of the myLink device when prompted.
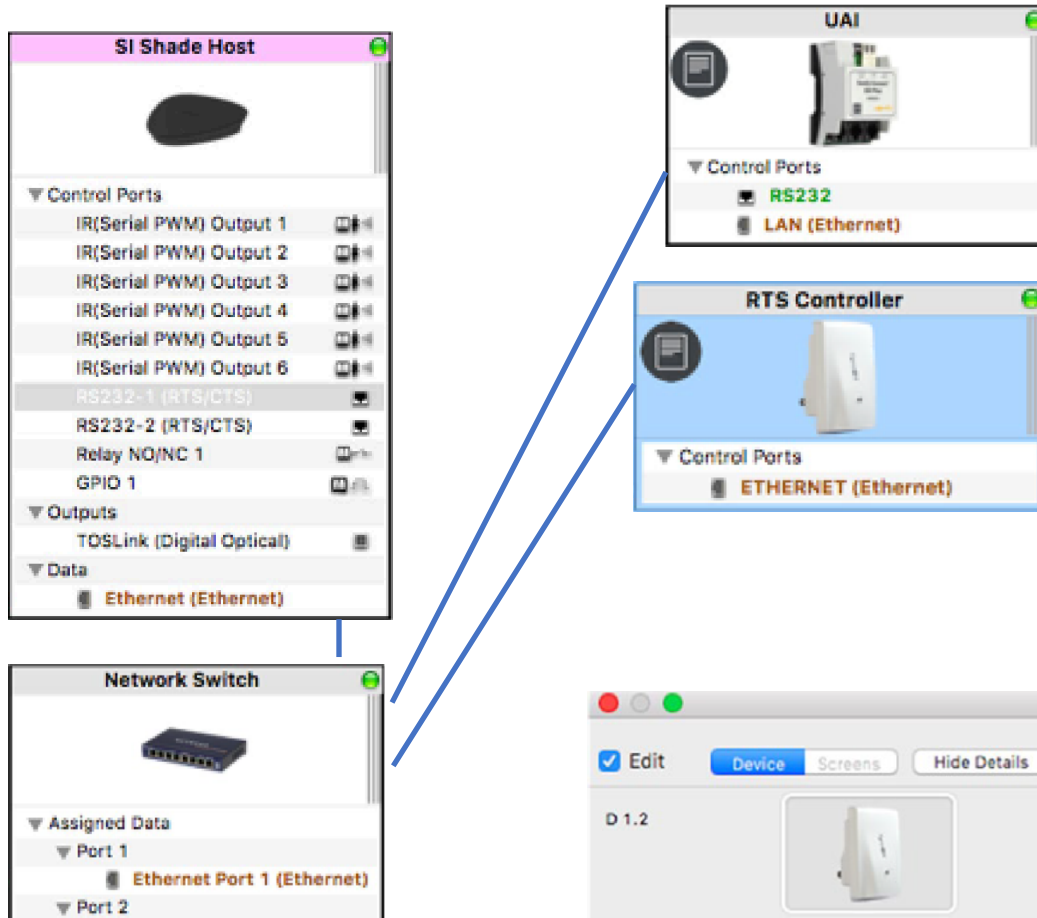


5. Double-click the myLink device in the workspace to open the "Inspector" for this device. From the drop-down menu, select "State Variables" and enter the "System ID" for the device.

   Note: To successfully Integrate with Savant, all myLink devices must use the same System ID, "Savant," as the System ID.
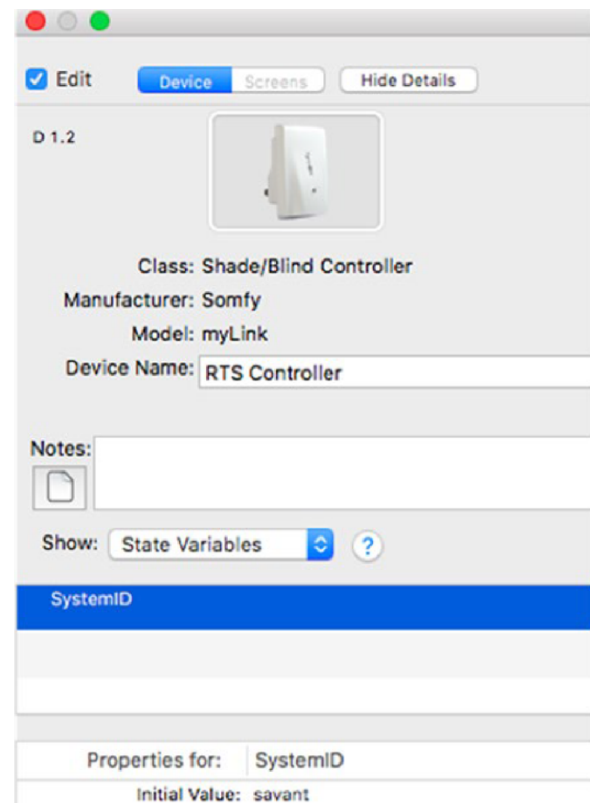
6. Navigate to the "Tools" section in the toolbar at the top of the screen and select "Settings," then "Shades" from the list. This will open the data table for the shades.

   In the data table, enter the Shade ID and then select the myLink as the controller (the Shade ID can be found in the myLink Integration Report).

**Shades Settings**

| Enabled | Identifier | Controller | Location | Entity | Button L... | Toggle L... | Label | UI Type |
|---------|-----------|-----------|----------|--------|-------------|-------------|-------|---------|
| ☑ | 1 | UAI | SDN | Shade | Right Shade | | Right Shade | Shade Buttons |
| ☑ | 2 | UAI | SDN | Shade | Left Shade | | Left Shade | Shade Buttons |
| ☑ | 3 | RTS Cont... | RTS | Shade | Top Shade | | Top | Shade Buttons |

7. Close the data table and select the "Generate Services" to finalize.

   Note: As mentioned in the "Before Integrating with RTS" section of this document, before any attempts to Integrate Link PRO products, the RTS system will need to be completely setup including the System ID and System PIN and paired to the RTS devices that you want to control.

## Savant Integration Steps for Savant End-user Scenes Function

1. From the "Show Library" function, search for and select the "Somfy Connect UAI Plus" from the library and drag into the needed room in the project.

2. Drag the needed items from the room list on the left into the canvas and then drag a network connection from the LAN port on each device to the switches in the canvas (you will need to know the IP addresses of every device being connected).

3. After creating the devices in the canvas, select the "Generate Services" function to complete the current changes. Then "Save" the project file again.
   a. If the SIFI option is used, you will need to set the "Telnet Username" and password. Open the Inspector function for the SIFI and select the "State Variables" function of the "Show" dropdown box.

      Select the password option and then add the correct password in the "Initial Value" space provided. Select the "User" option and add the correct username in the "Initial Value" space provided. Select the "Generate Services" option and then "Save the Project" again.

4. Set the Somfy Node IDs for the project in the "Tools," "Settings," then "Shades" section of the software. In the "Shades Settings" section, click on the plus icon in the bottom left-hand corner to add a new shade instance to the project.
   Add the following items to the created shades:
   a. "Controller"– Select the correct controller from the drop-down list.
   b. "Location"– Select the correct room location from the drop-down list.
   c. "Entity"– Select the correct entity from the drop-down list, in this case, "Shade." After all the needed shades have been added, select the "Done" function at the bottom of the screen to return to the main page; here, select the "Generate Services" option then "Save the Project" again.

5. Return to the "Tools," "Settings," then "Shades" section of the software.
   You will need to assign the following items to the newly created shades:
   a. "Label"– Assign a name to the button for the interface.
   b. "Address [1]"– Assign the correct Node ID to the correct shade for control (e.g., Node ID "06.29.F4." do not add the periods, only add the numbers "0629F4").
   c. After all the needed shades have been added, select the "Done" function at the bottom of the screen to return to the main page; here select the "Generate Services" option and "Save the Project" again.

6. Return to the "Tools," "Settings," "Shades" section of the software.
   You will need to assign the following items to the newly created shades:
   a. "Entity"– Change this function from "Shade" to "Scene;" this will change some of the previously made choices for the other options.
   b. "UI Type"– Change the UI Type from "Push" to "Slider;" this will change some of the previously made choices for the other options.
   c. "Savant App Scenes"– Set the checkbox to "True for this option.
   d. "Savant App Group"– Change this function from "Button" to "Variable;" this may change some of the previously made choices for the other options.
   e. "Entity"– Change this function from "Scene" to "Slider;" this will change some of the previously made choices for the other options.
   f. "State [1]"– Verify after changing the "Entity" option for the second time, that the "State [1]" options autofill with the correct shade controller, shade level, and address (Node ID) for the shade.
   g. "State [2]"– Verify that after changing the "Entity" option for the second time, that the "State [2]" options will autofill with the correct shade controller, shade level, and address (Node ID) for the shade.
   h. After all the needed shades have been added, select the "Done" function at the bottom of the screen to return to the main page.

7. Select the "Generate Services" option and then "Save the Project" again.

8. Select the "Upload to Master" option to complete the configuration.

# Integration FAQ

**What do the different colors on the LinkPro Z LED indicate?**

- Blinking Red to Solid Red: LinkPro Z is scanning for WIFI networks and will stop blinking when scan is complete; rescan WIFI by clicking on the "Setup" button.

- Solid Green: Connect to the configured WIFI.

- Slowly Blinking Green: LinkPro Z is trying to connect to the configured WIFI network but cannot connect or has been disconnected.

- Quick Red Flash: LinkPro Z is transmitting using the 433MHz radio.

- Solid Amber: Firmware is being updated.


**Should I choose 2.4GHz or 5GHz for LinkPro Z?**

- Choose 2.4GHz if the home construction is concrete, or multi-floor, or stucco walls.

- Choose 5GHz if the home is a single floor, has no concrete or stucco walls, and if the project has a high noise floor at 2.4GHz or many other networks such as Zigbee or large 2.4 WIFI deployments.
For more information on this please consult with the RTSDESIGN GUIDE available at www.screeninnovations.com


**Which SI Shade/screen products can I control with Lutron?**

All SI Shade/screen products including Nano and Zen 2 can be controlled with Control4.


**Which ports are needed for myLink control on my network?**

- 55050
- 44040
- 40045
- 20000
- 44100
- 44200
- 1902

## How do I update a LinkPro Z Network Settings to match my Savant?

In the myLink App, open the Menu.

1. Select ADD under "myLink Settings."
2. Follow the instructions shown on the device to connect to myLink.
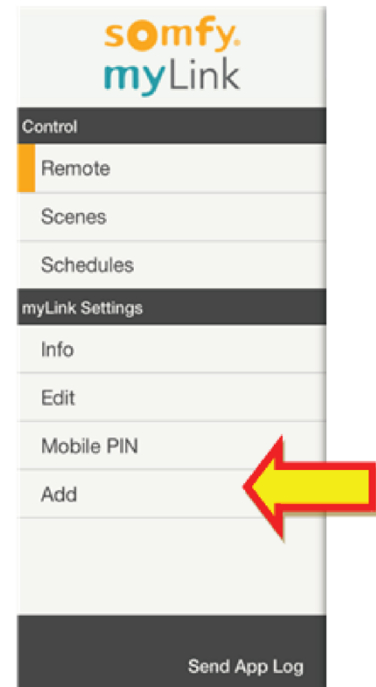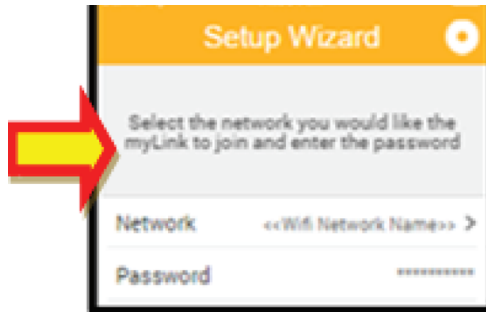


3. After selecting "Search for myLink," select the network and current password for the network.
4. Once the autoconfiguration steps are finished, "Erase" or "Continue" will populate.
5. Select "Continue," then the icon for current LinkPro Z device will appear.
6. Select "Next," then all current channels will appear.
7. Finally, select "Done," as all programming still exists.

Once the first LinkPro Z has been successfully added, repeat the process to add the rest of the LinkPro Zs.

## How can I delete a myLink from the myLink app?

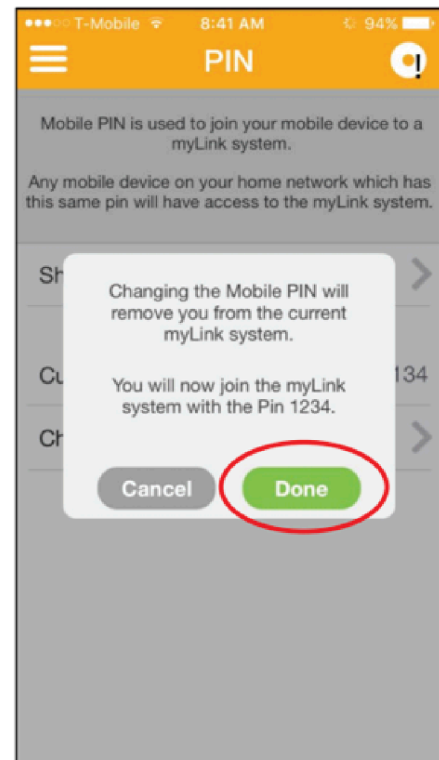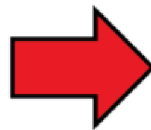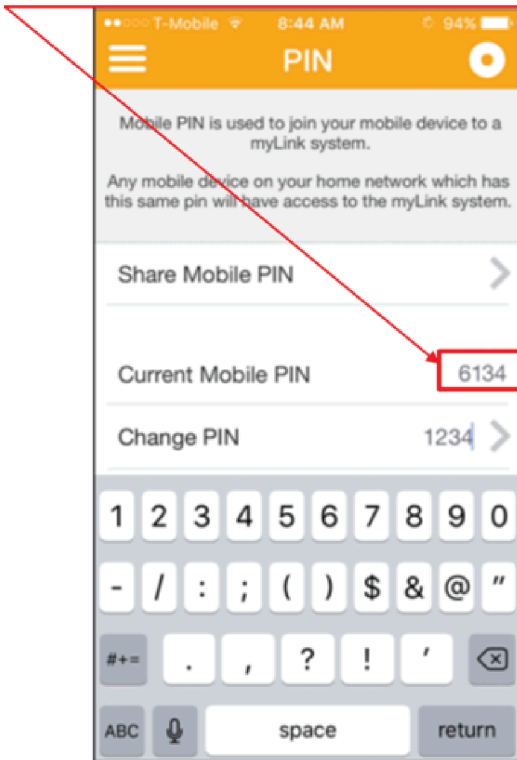1. Unplug myLink, and the Icon for it will go from blue to gray.
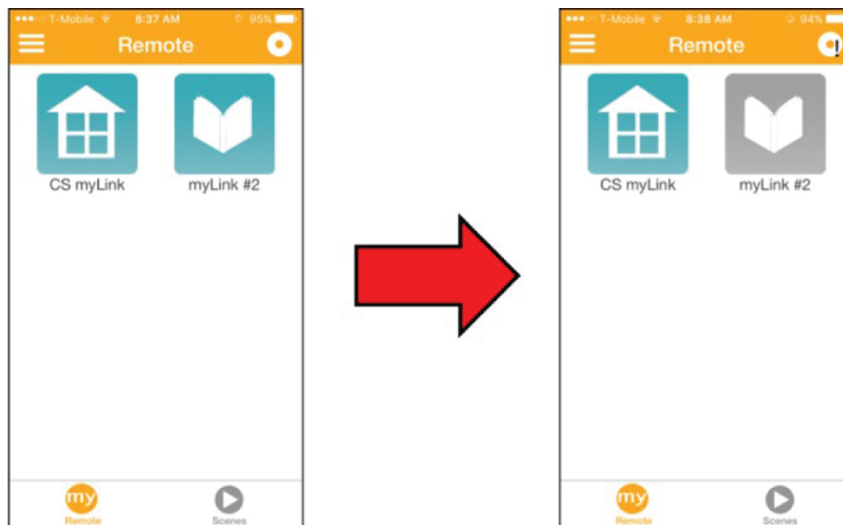
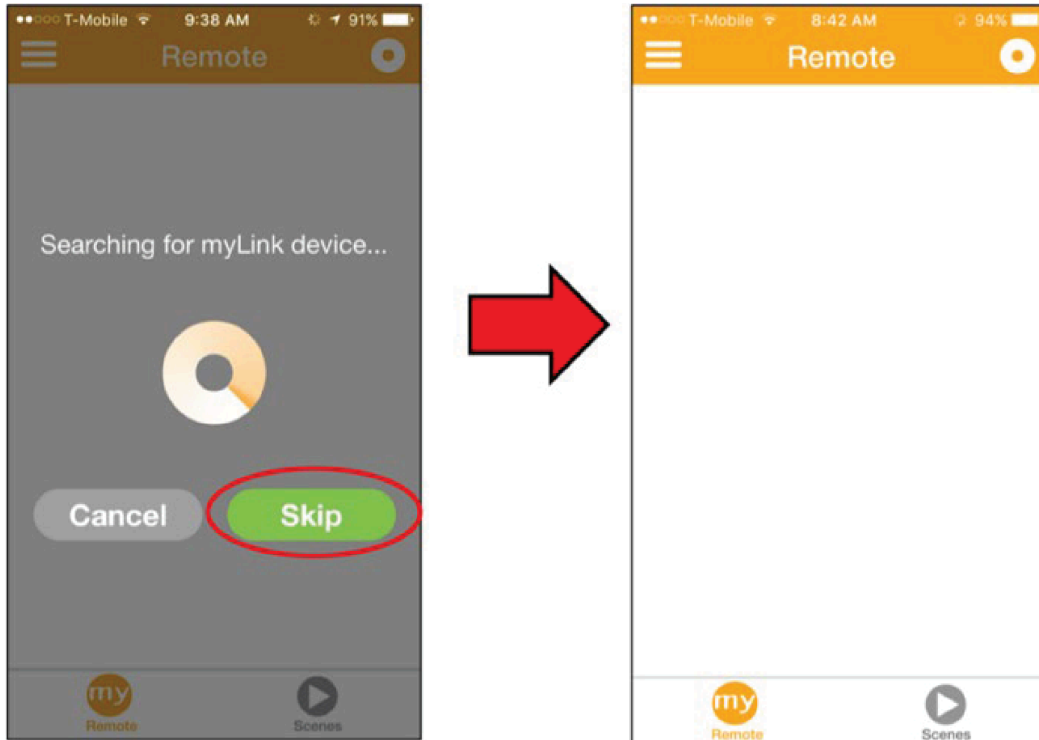2. Click the menu button and select "Mobile PIN."



3. Under "Change PIN," enter a random 4-digit number and select return. Then select "Done."
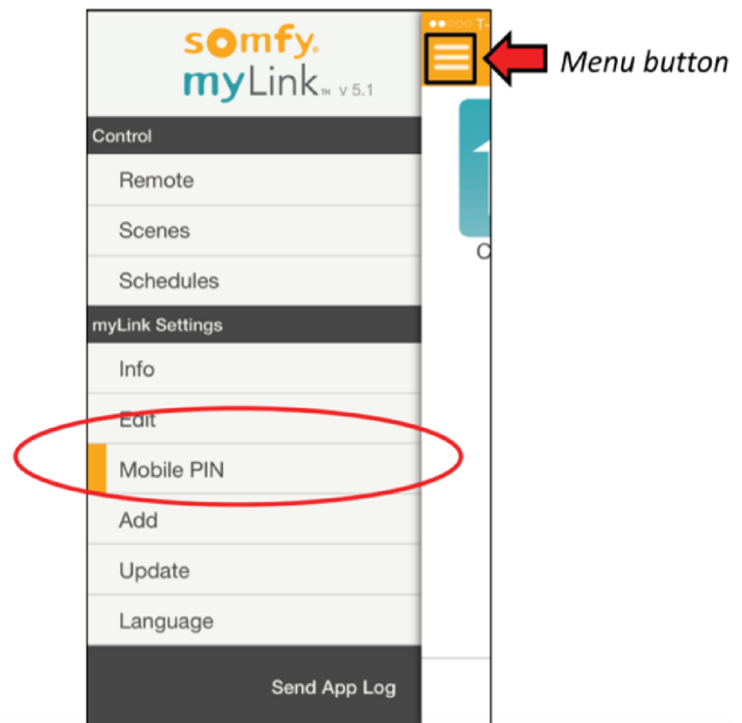
**NOTE YOUR CURRENT MOBILE PIN**

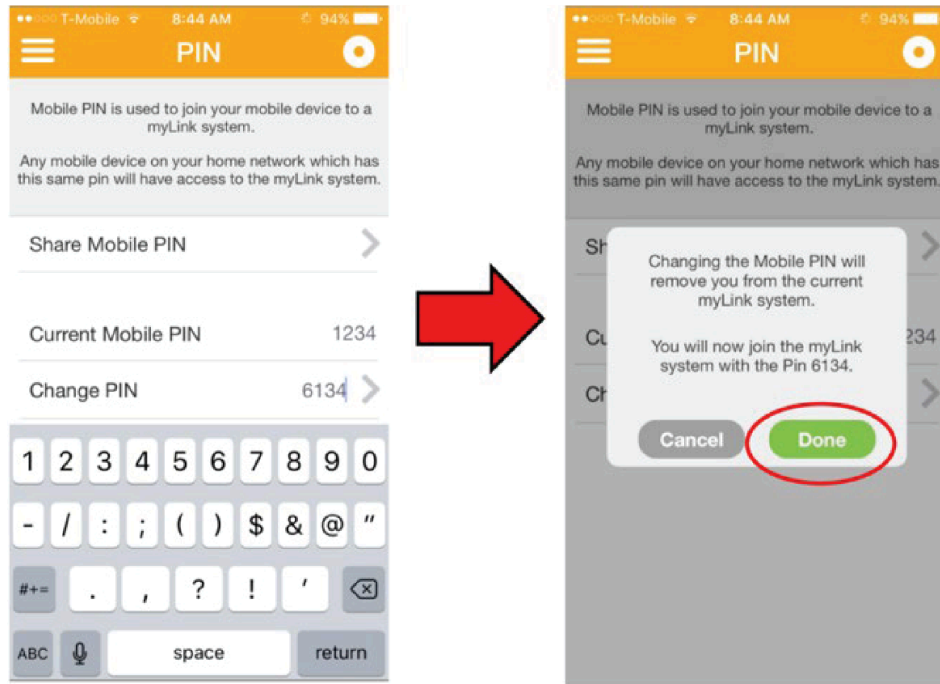4. Select "Skip" then a blank page will appear.



5. Click "Menu," select "Mobile PIN."

6. The current mobile pin is now the different number just entered Under "Change PIN."

   Enter the previous 4-digit PIN, and then hit return.



Menu button

7. Then select "Done," "Skip," then a blank Remote page will appear.



8. After selecting "Done," only active myLink devices are listed.

# Screen Innovations Integration Support

Can't find the answer to your design questions in this Tech Note? Our support team will help you with the problem you're having.

Call us at 512-832-6939.                    Office Hours: Monday - Friday (8am - 6pm).

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