

Creston Integration

Tech Note 103



Somfy®, UAI+™, and SDN are copyrighted and owned by Somfy Systems Inc. and are used in this document with permission and are in full compliance with the June 2016 Somfy Trademarks, Logos and marketing Assets Guide and Use Agreement.

All product names, logos, and brands are property of their respective owners. All company, product and service names used in this document are for identification purposes only. Use of these names, logos, and brands does not imply endorsement.

Crestron, SIMPL Windows, VT PRO are all registered or Trademarks, of Crestron Electronics Inc.

Table of Contents

Introduction4

How To Use This Technote5

Common Control Nomenclature.....6

Shade Innovations Shade System Control Options7

RTS.....8

Before you begin your integration with RTS9

RTS LinkPro.....10

Integration With RTS via LinkPro11

Wifi and RTS Device Range12

Step process - Integration With RTS via LinkPro13 - 16

SDN17

Integration with SDN.....18

Before you begin your integration with SDN18 - 19

Integration with SDN via SI.FI19

Step Process - Integration with SDN via SI.FI20 - 23

Integration FAQ24 - 30

Shade Innovations Integration Support.....31

Introduction

This TECH NOTE 101 Control4 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 provide some best practices which can help yield the best possible performance from deployments.

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

Shade Innovations® has developed the most innovative shade system available to 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 will provide an unmatched level of performance. We built our shade products to a world class level and are the absolute best you can buy.

We engineered the system in Austin Texas, USA and our products are all engineered and manufactured in the USA. We have some 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 Innovation Tech Note will help with integration to a Crestron 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.shadeinnovations.com> or please call our technical support and sales teams for additional help and information...

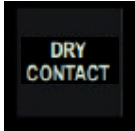
How To Use This Tech Note



QR CODES – When you see this image, scan your phone or tablet and you will receive the latest version of the corresponding document.



Somfy® Wired Technology (WT) – When you see this logo, this product uses line (high) voltage to power the shade, and it may have GPIO, IR, RS-485 or RF control methods.



Somfy® Dry Contact Technology (DCT) – When you see this logo, this product uses dry contact closure(s) for control of the shade(s)



Somfy® Infrared Technology (IR) – When you see this logo, this product uses Infrared commands for control of the shade(s)



Radio Technology Somfy® (RTS) – When you see this logo, this product uses one-way Radio Frequency commands for control of the shade(s)



Somfy® Digital Network (SDN) – When you see this logo, this product uses an RS-485 network to allow full two-way control and status of the shade(s).

Common Control Nomenclature

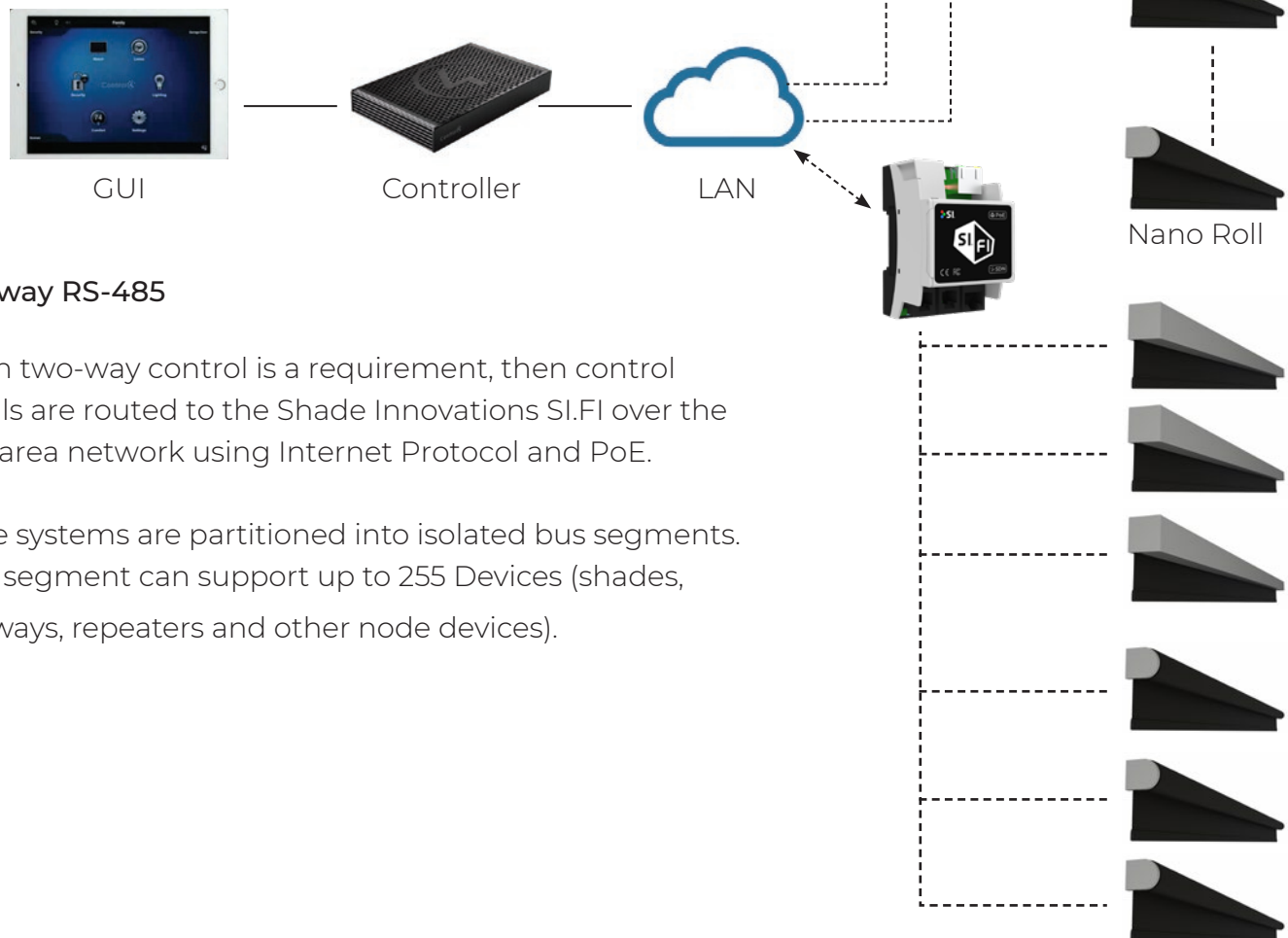
The control system and user interface(s) generally are connected to the local area network and connect with our shades from one or both of the following networking topologies

One-Way Radio Frequency

Control signals are routed to a series of WiFi to RTS bridges such as the SI Link PRO

Each RTS to WIFI gateway can control up to 16 RTS channels. Each channel can have an unlimited amount of shades associated with it

Each project can have up to 10 RTS to WIFI gateways

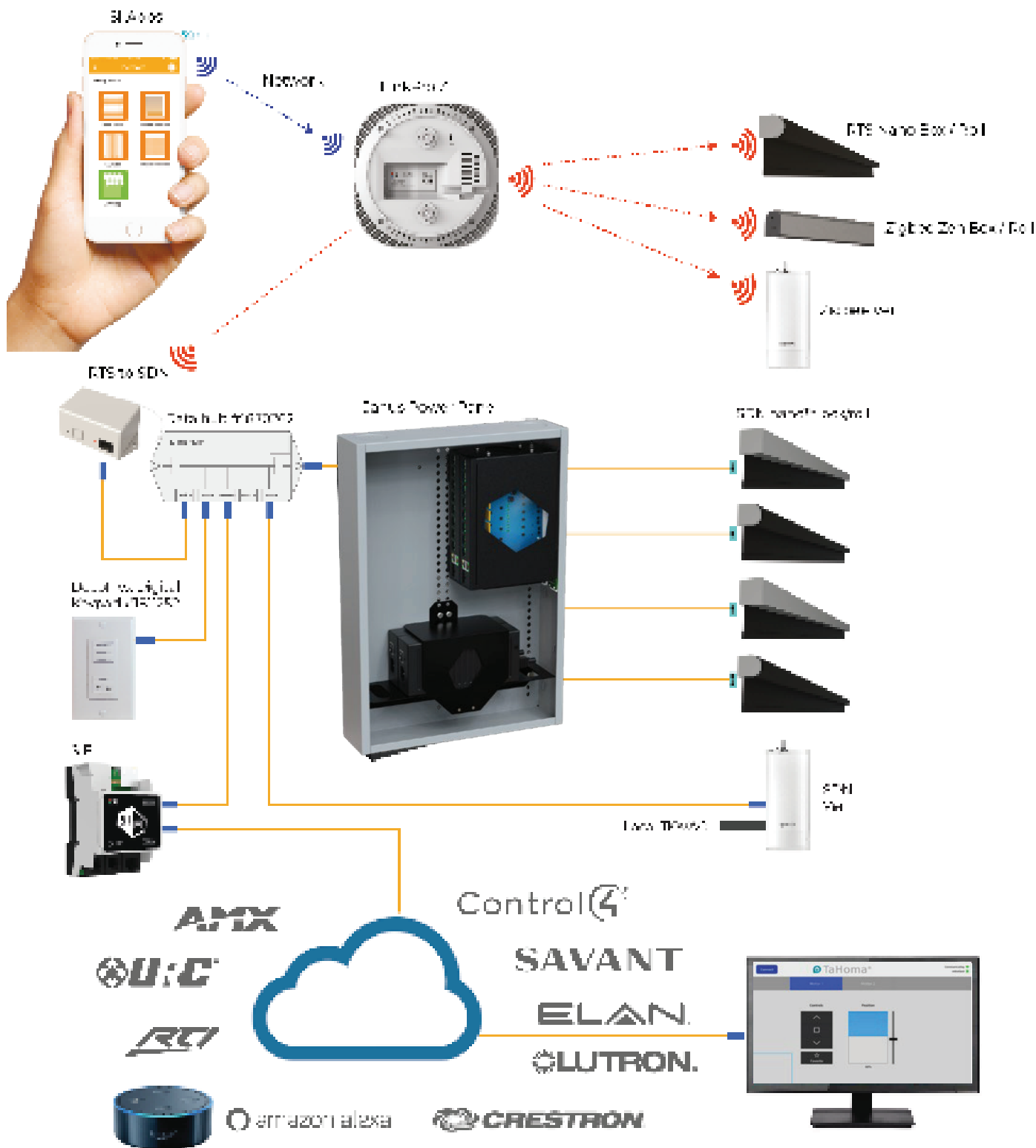


Two-way RS-485

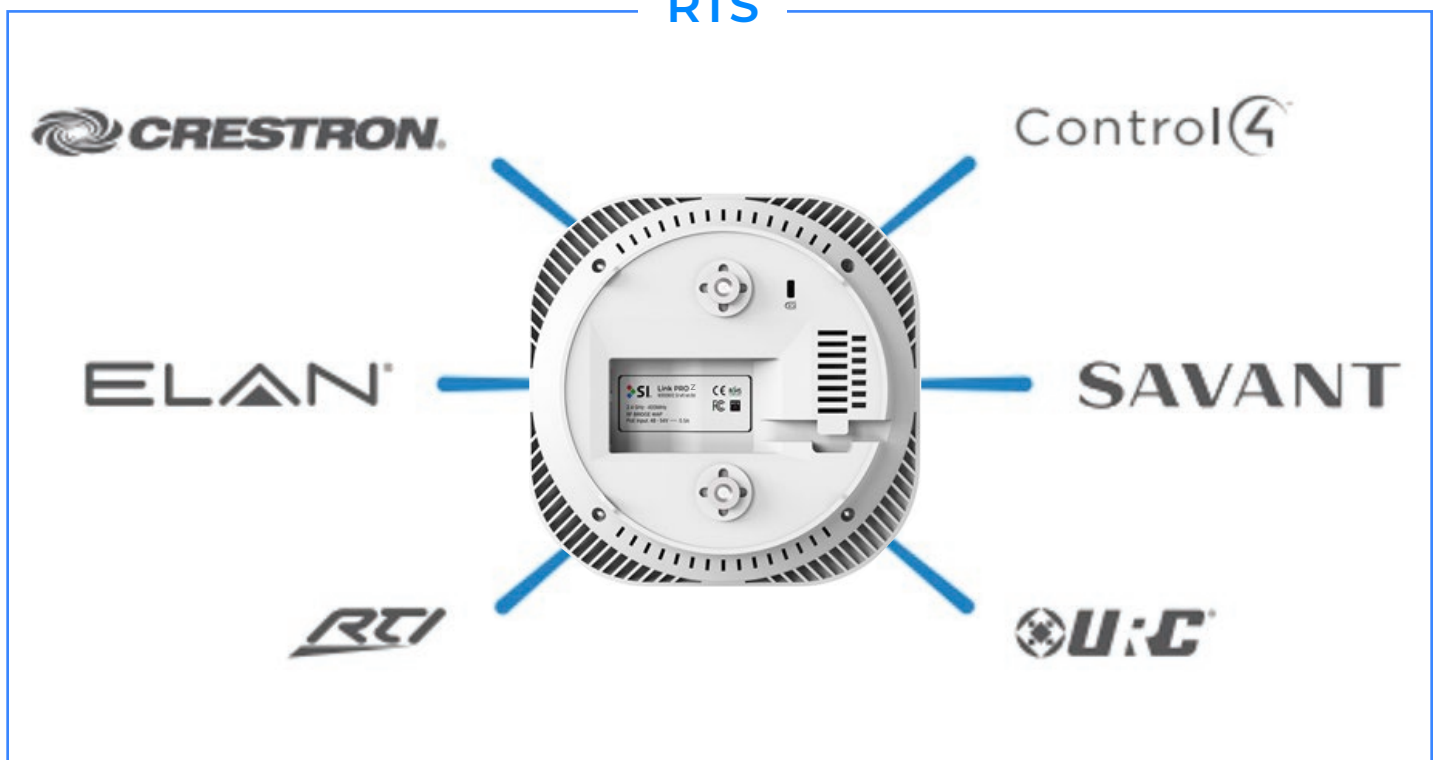
When two-way control is a requirement, then control signals are routed to the Shade Innovations SI.FI over the local area network using Internet Protocol and PoE.

These systems are partitioned into isolated bus segments. Each segment can support up to 255 Devices (shades, gateways, repeaters and other node devices).

Shade Innovations Shade System Control Options



RTS

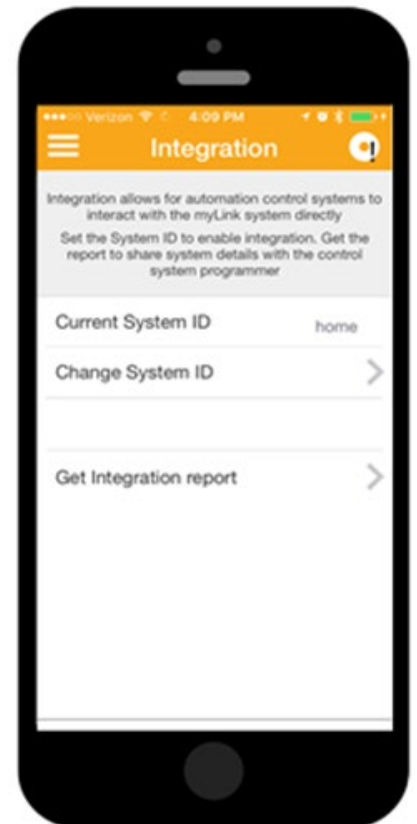


Before you begin your integration with RTS

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 SIMPL Windows.



Any changes to number of channels, scenes or myLinks in the system will require update in system configuration in the g! Tools software.

- Compatible with Crestron series 3 processors only.
- Compatible with new myLinks or Link Pros and legacy myLinks running firmware 4.06 and higher.
- See driver details for more information

RTS LinkPro



Link Pro 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 Shade Innovations RTS gateways are rated for Interior use only
- LED indicates WIFI status and RTS transmission
- latest Firmware version: 5.16

Integration With RTS via LinkPro

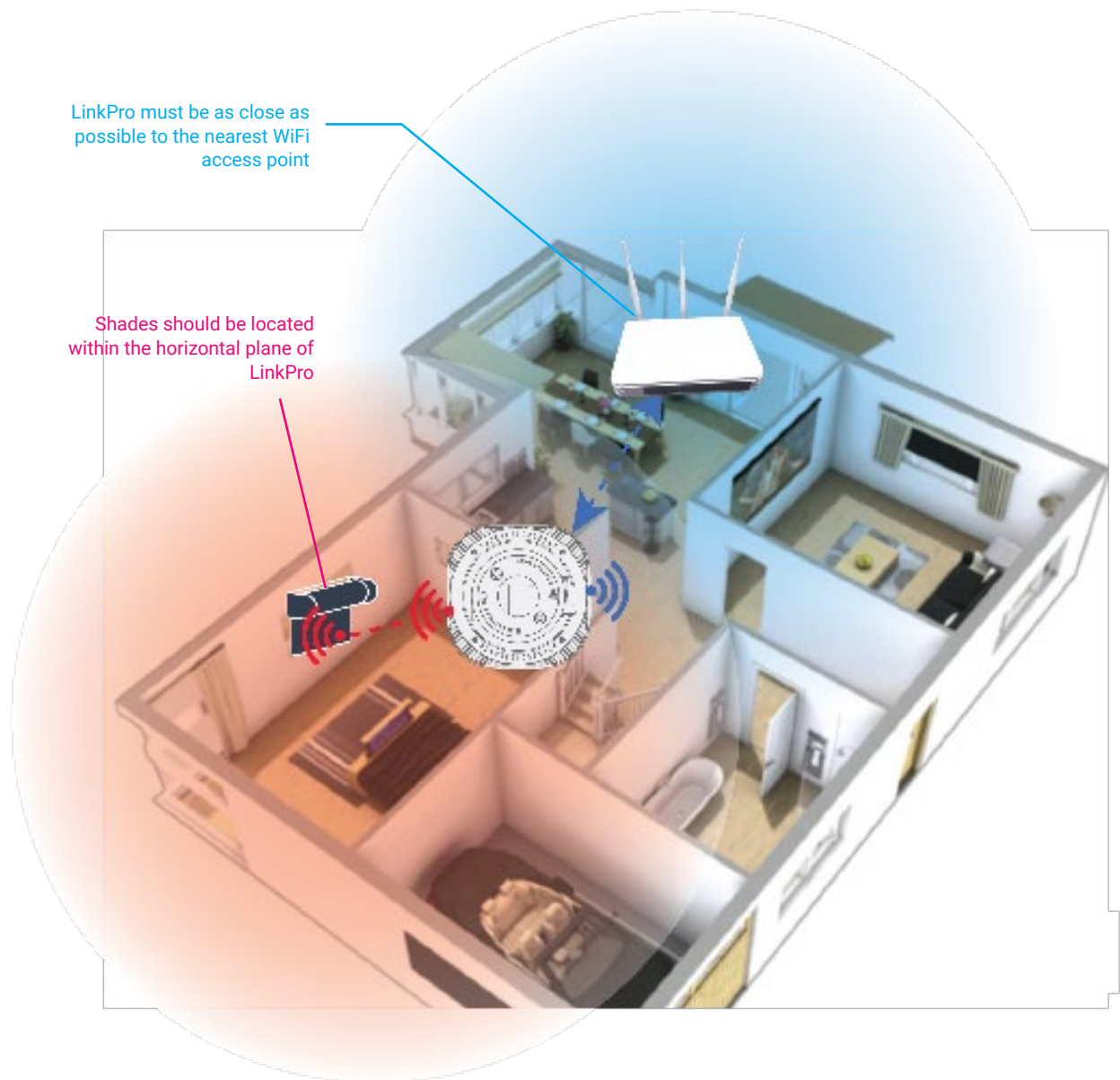
Download App from Apple App Store or Google Play



- “telis remote on your phone”
- Scalable
- Scenes and schedules
- Easy to program
- Local and remote access
- Easily add users

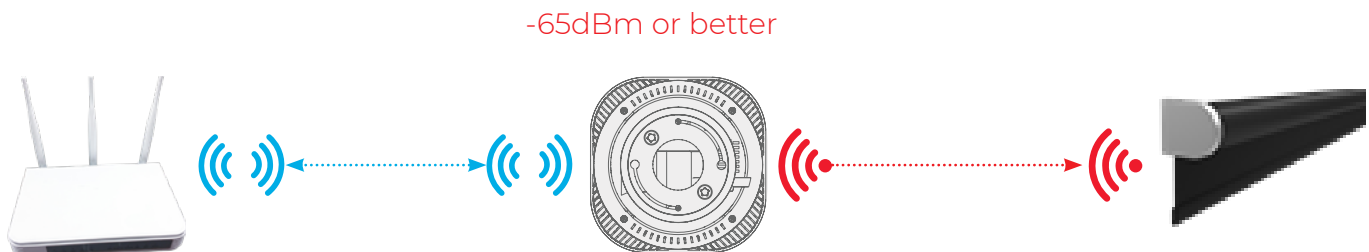
- Over the air firmware updates
- Integration Support
- Demo mode
- English, Spanish and French
- DOES NOT set limits or “copy & paste” new transmitters
- Requires fully operation RTS installation w/ limits set and at least 1 programmed RTS transmitter

Wifi and RTS Device Range



Must be located as close as possible to the nearest WAP.

Work best within 30 ft of shades and the horizontal plane of Link Pro.



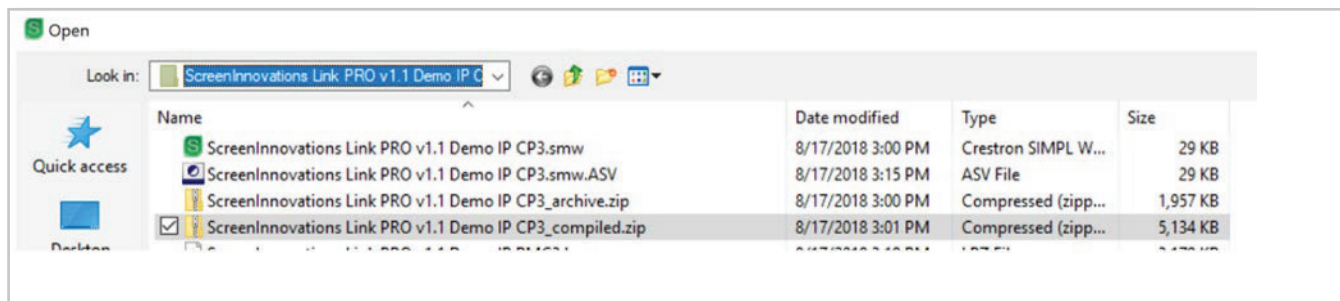
Step process - Integration With RTS via LinkPro

Step-by-Step – Ten steps to Integrate myLink or Link PRO with Control4

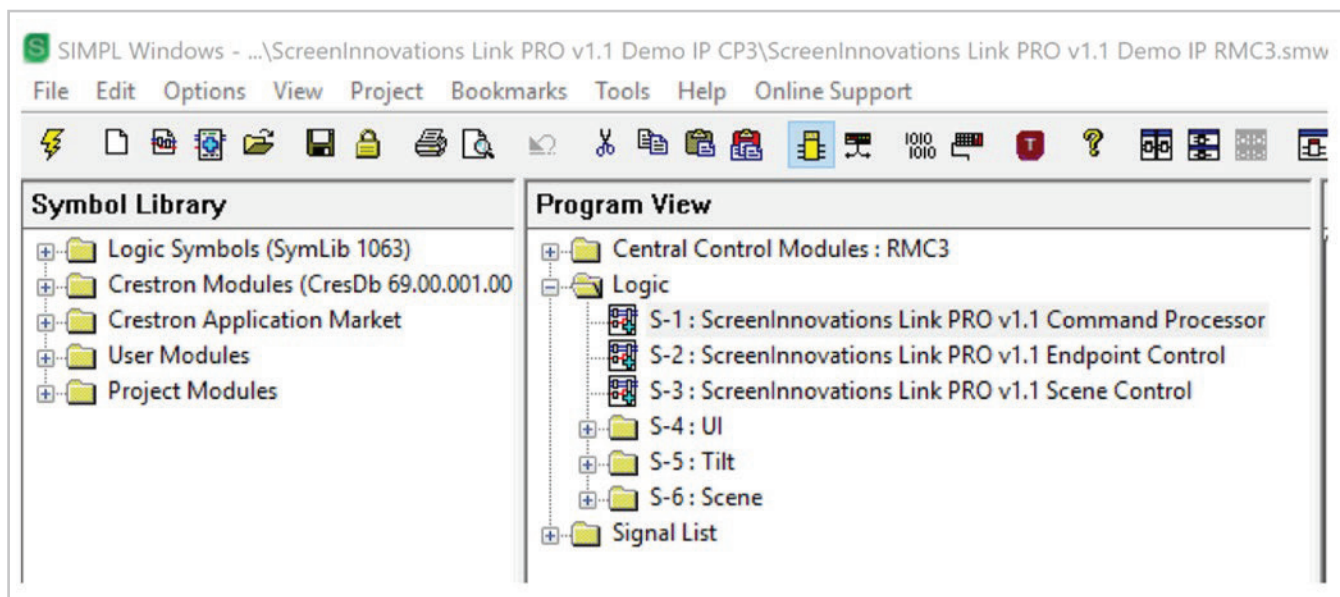
Before you begin please download the latest drivers from our site;

<https://www.shadeinnovations.com/accessories/linkpro/>

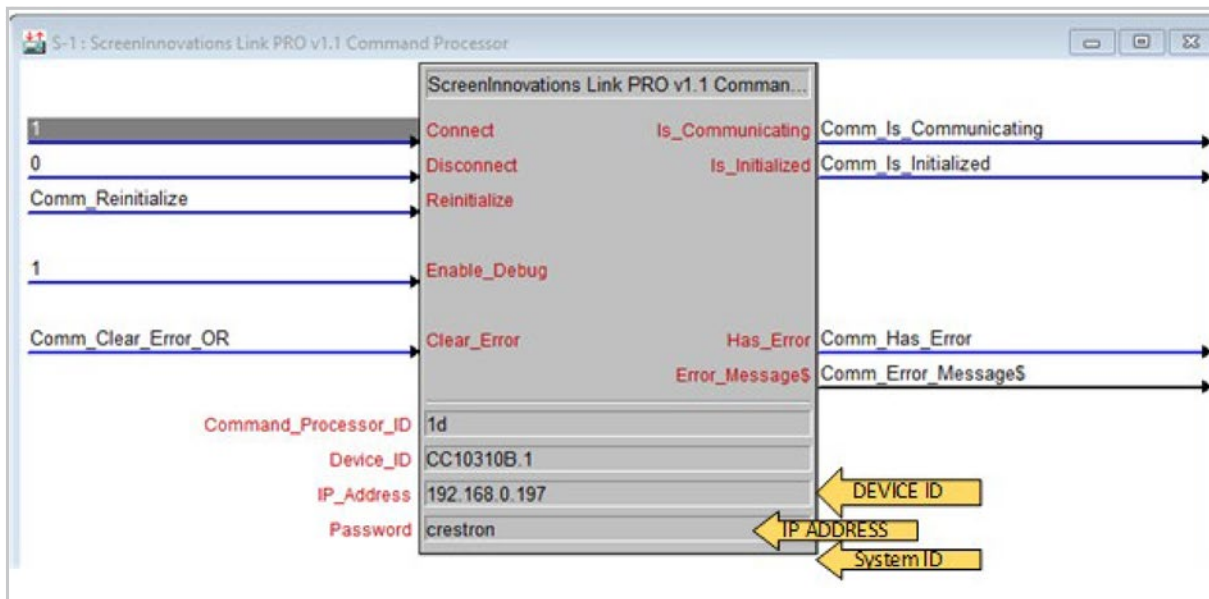
1. Open SIMPL Windows and open the ShadeInnovations Link PRO v1.1 Demo IP.zip. (Note these instructions assume you have a CP3 control system. If you do not have a CP3 you will need to modify the control system and re compile the demo program)



2. Open the shadeinnovations Link PRO v1.1 Command Processor IP from the logic folder in the demo program.

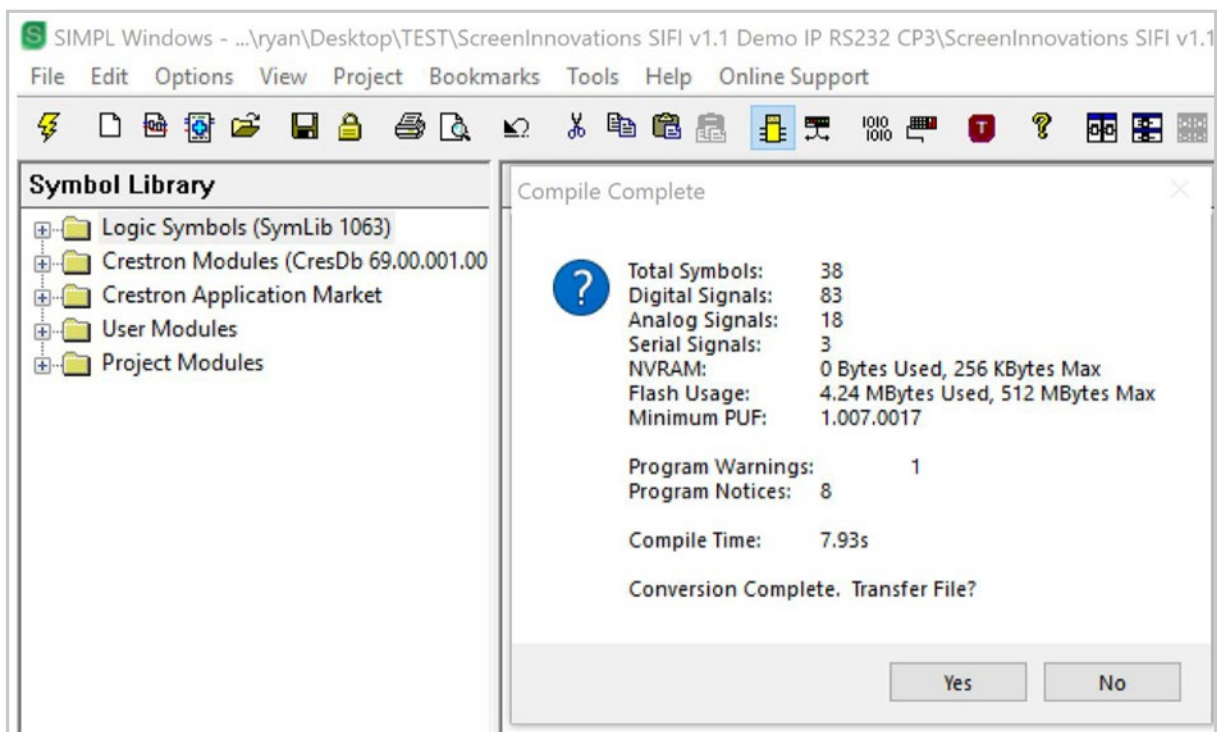


3. Enter the Link PRO device ID, system ID and IP address



The link PRO IP Address can be found in the myLink app integration Report.

4. Compile program and then transfer to the Crestron control processor.



5. Open the ShadeInnovations Link PRO v1.1 Demo XPANEL.c3p file to open an Xpanel project.
Enter the hostname or IP address of your Crestron Control Processor and IPID

Hostname/IP Address: 192.168.1.110

IPID: 03

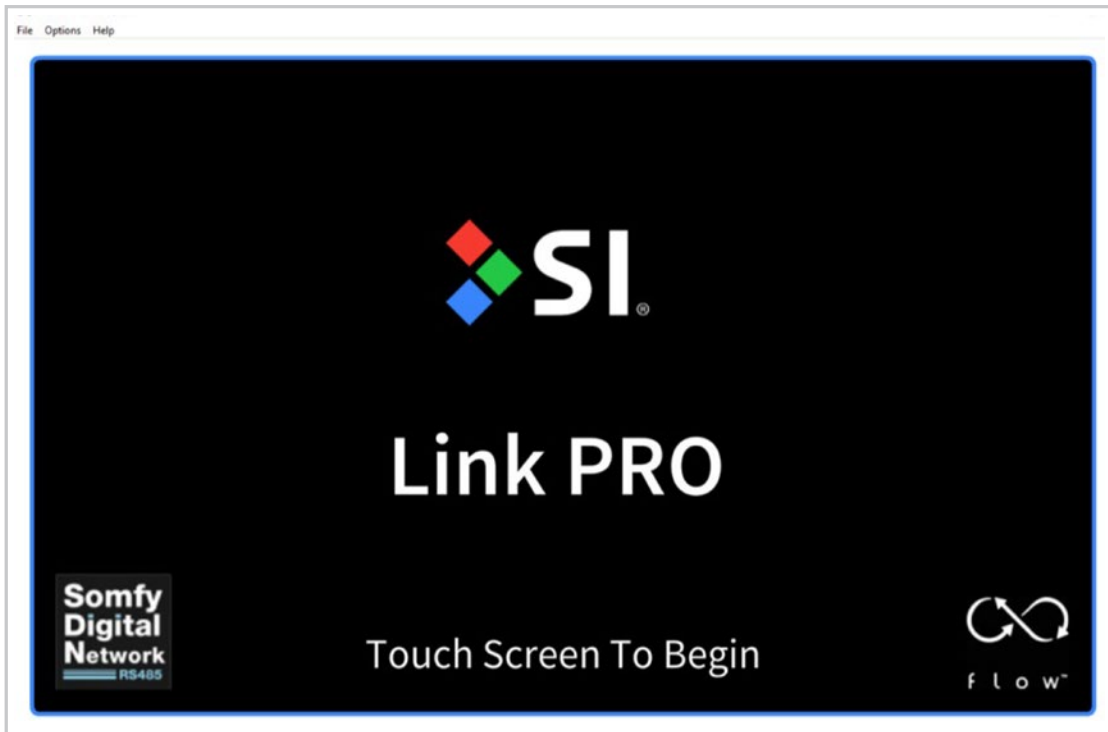
Port: 41794

Use SSL: ☐

Virtual Control Room Id:

Connect Cancel

6. You can now select anywhere on the screen and begin to control your shades and scenes.



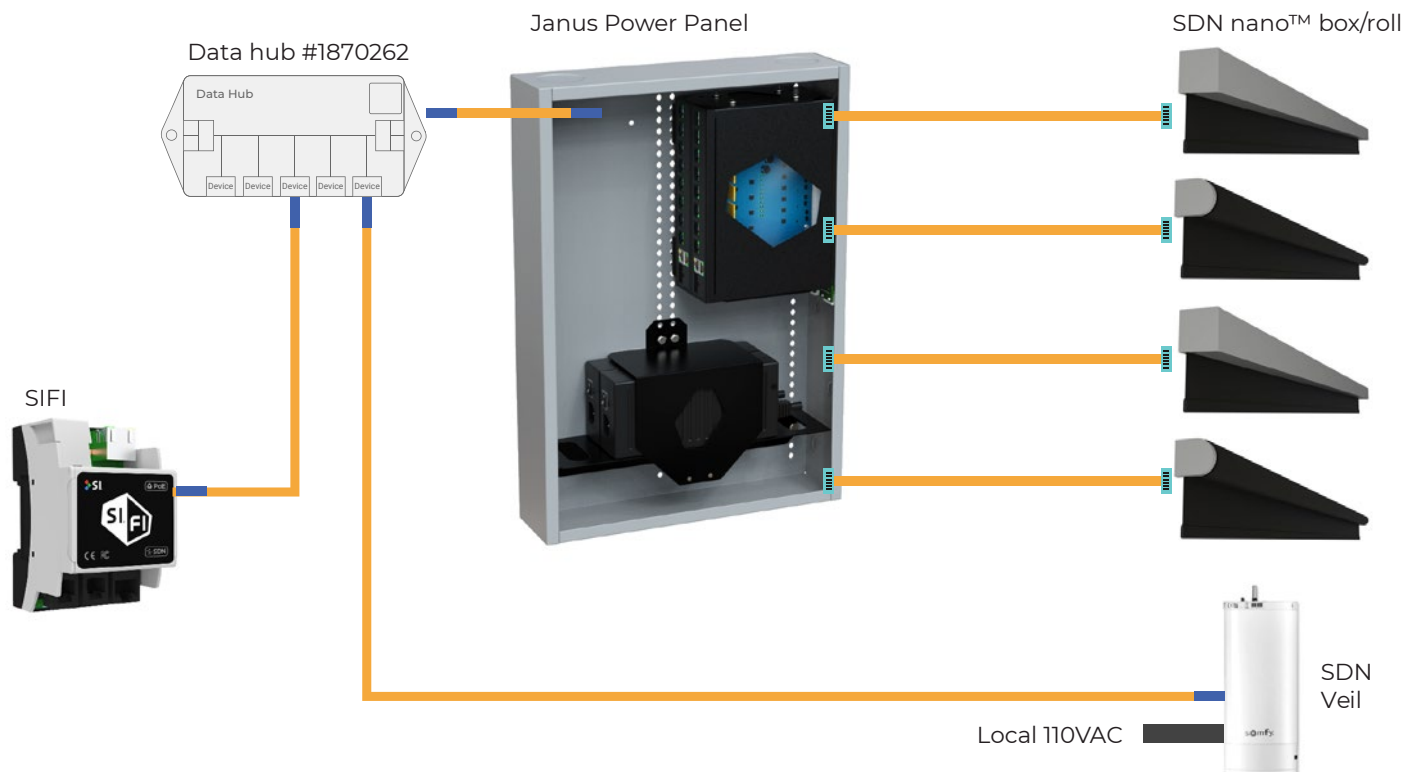
Note: As mentioned in the “Before you begin integration with RTS section of this document”, and before any attempts to Integrate Link PRO products, the RTS system will need to be completely setup including the System ID, System PIN and Paired to the RTS Devices that you want to control.

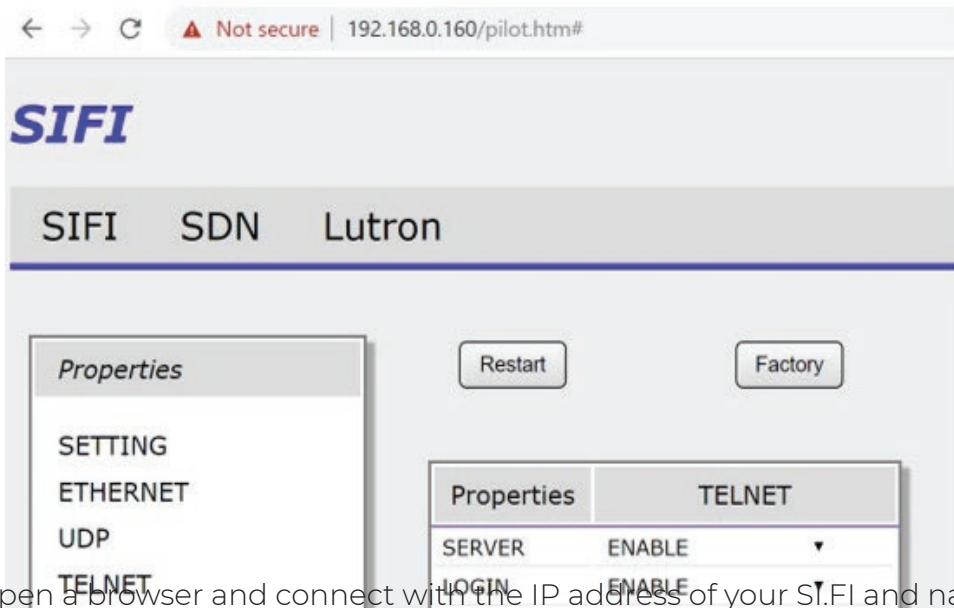
SDN



Before you begin your integration with SDN

Requires a fully operational SI SDN system with all shade limits set (including the MY position if desired) and a fully commissioned SIFI





Open a browser and connect with the IP address of your SI.FI and navigate to the TELNET tab. You will need this telnet user name and password for identification within the SIMPL Windows

Compatible with Crestron series 3 control processors See driver details for more information.

Integration with SDN via SI.FI



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

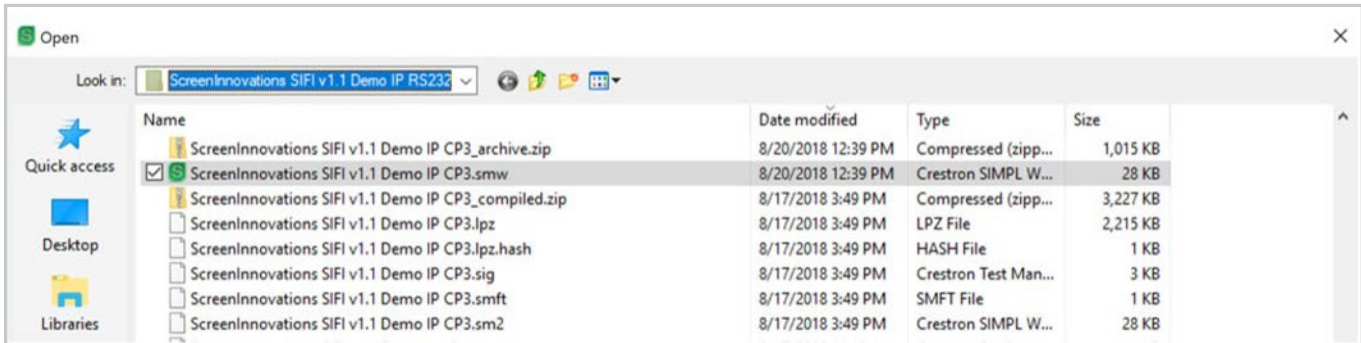
Embedded motor commissioning software streamlines SDN system configuration.

The SI.FI SDN Gateway is also compatible with the Somfy Synergy™ API as well as drivers from all popular home automation and control systems and Amazon Alexa, a Google Assistant via IFTTT making it easy to integrate custom automation programming.

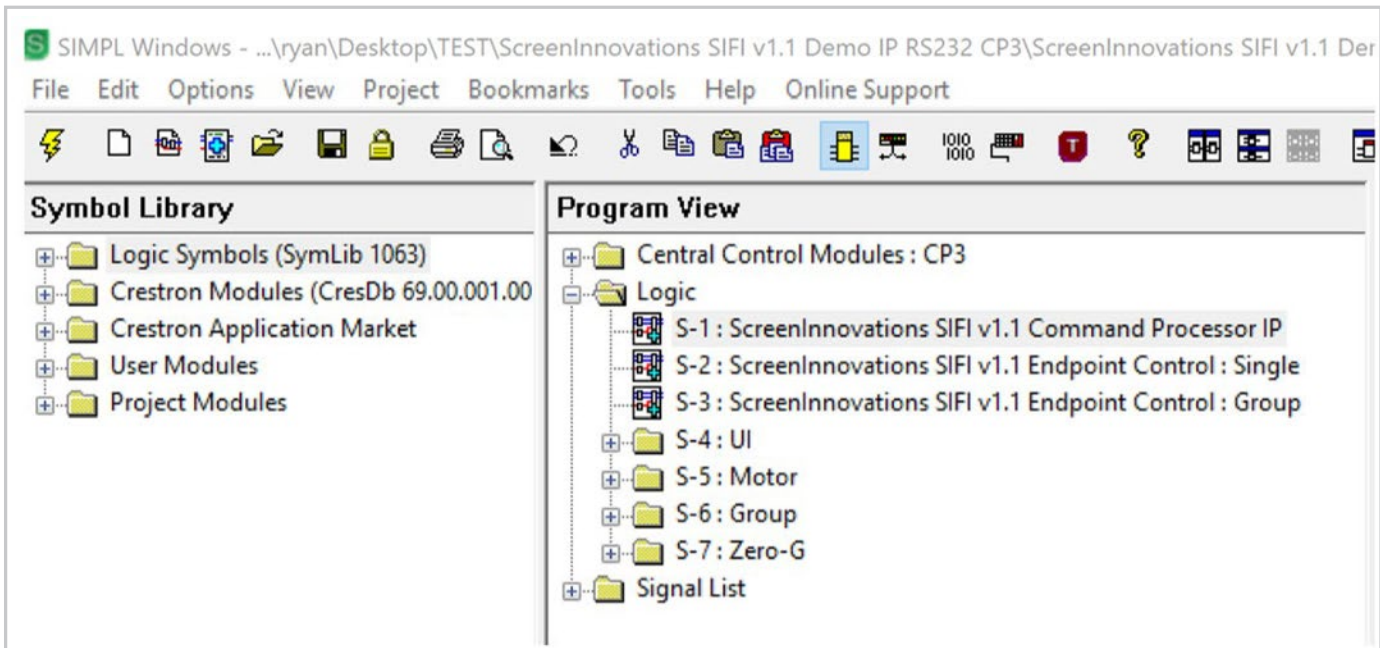
Step Process - To integrate SI.FI and ELAN

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

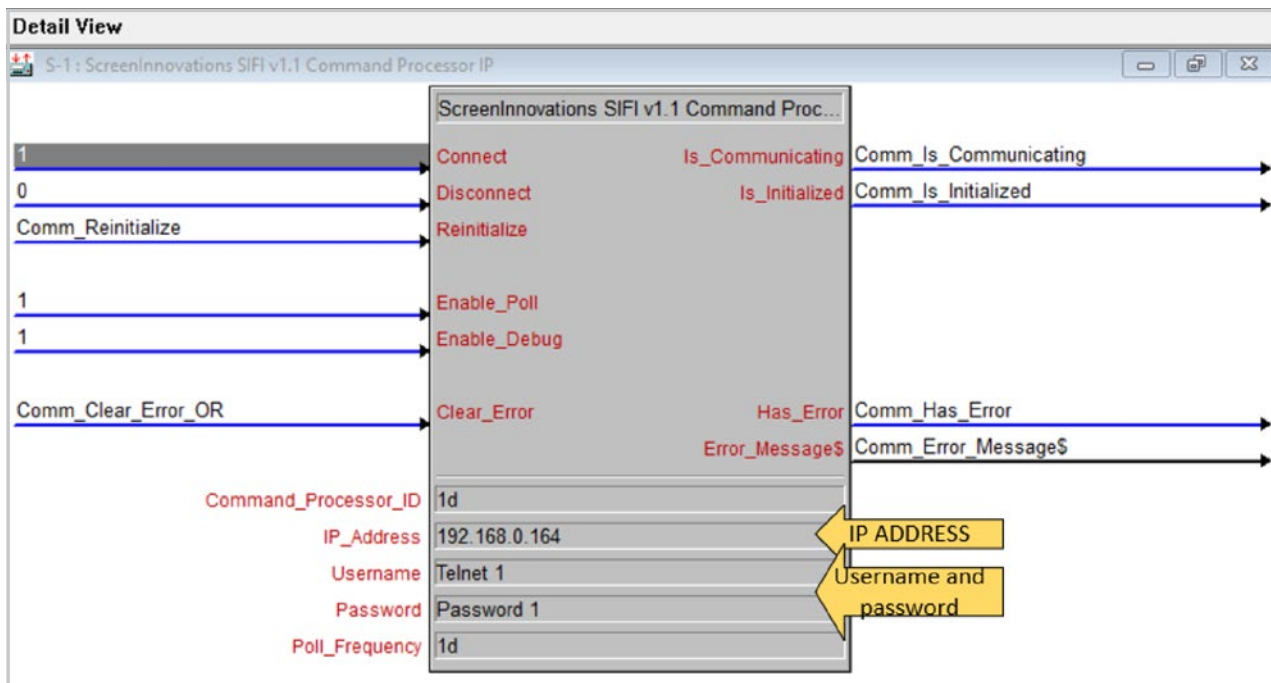
1. Open SIMPL Windows and open the ShadeInnovations SIFI v1.1 Demo . IP RS232 CP3.zip.
(Note these instructions assume you have a CP3 control system. If you do not have a CP3 you will need to modify the control system and re compile the demo program)



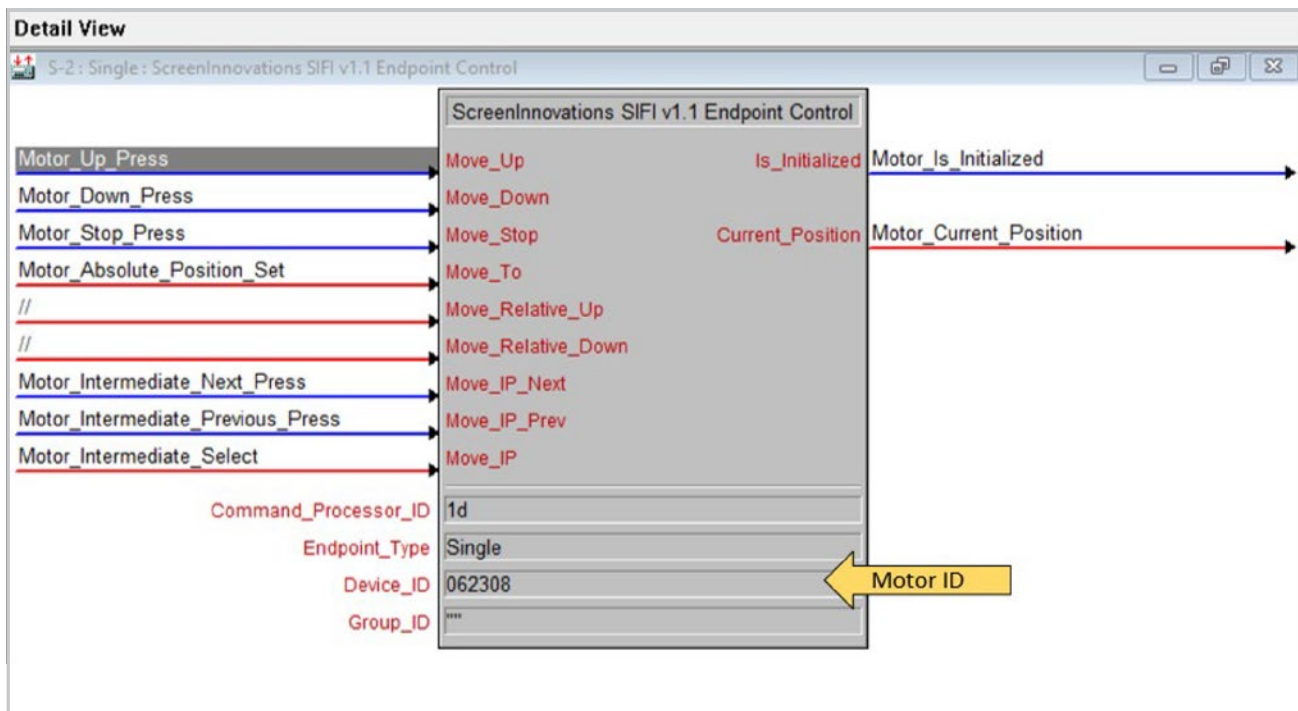
- 2.. Open the ShadeInnovations SIFI v1.1 Command Processor IP from the logic folder in the demo program.



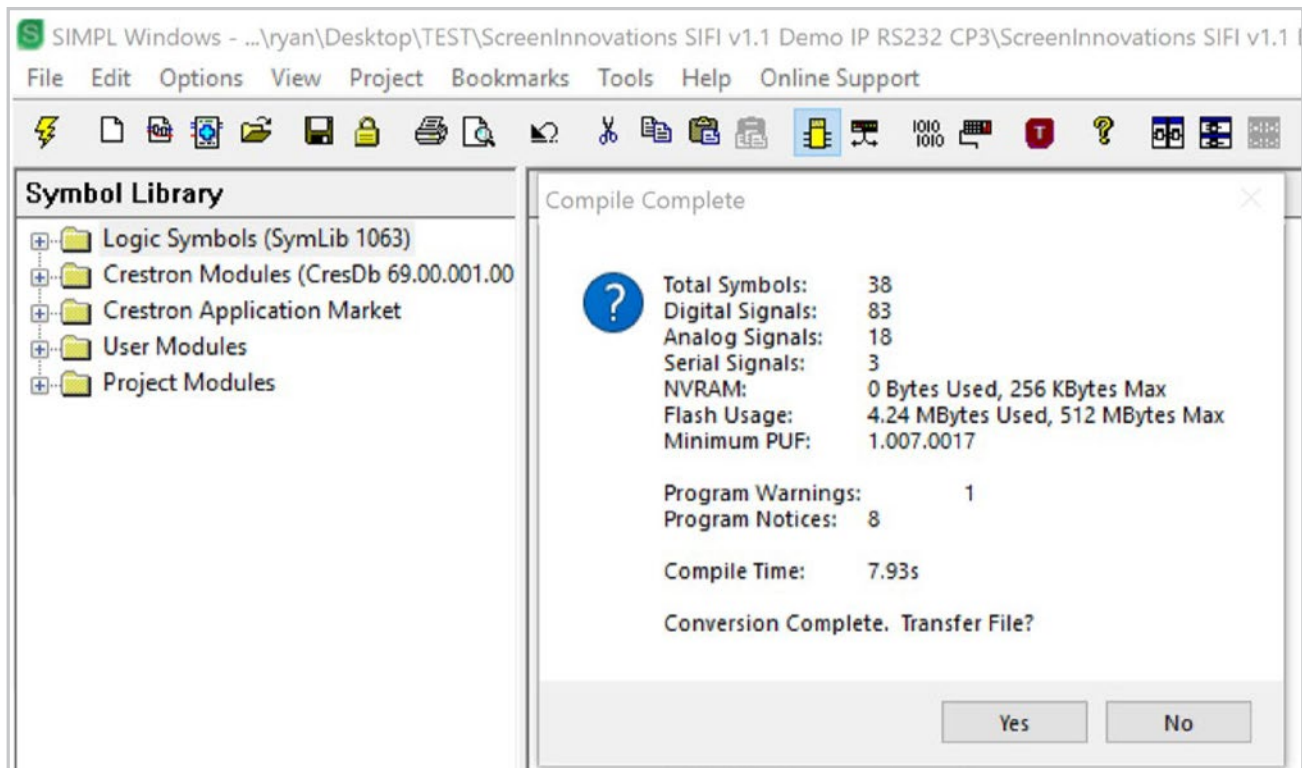
3. Enter the SIFI IP address and the telnet username and password.



4. Select the ShadeInnovations SIFI v1.1 Endpoint Control for single and groups. Enter the motor address in the device_ID entry.



5. Compile program and then transfer to the Crestron control processor.

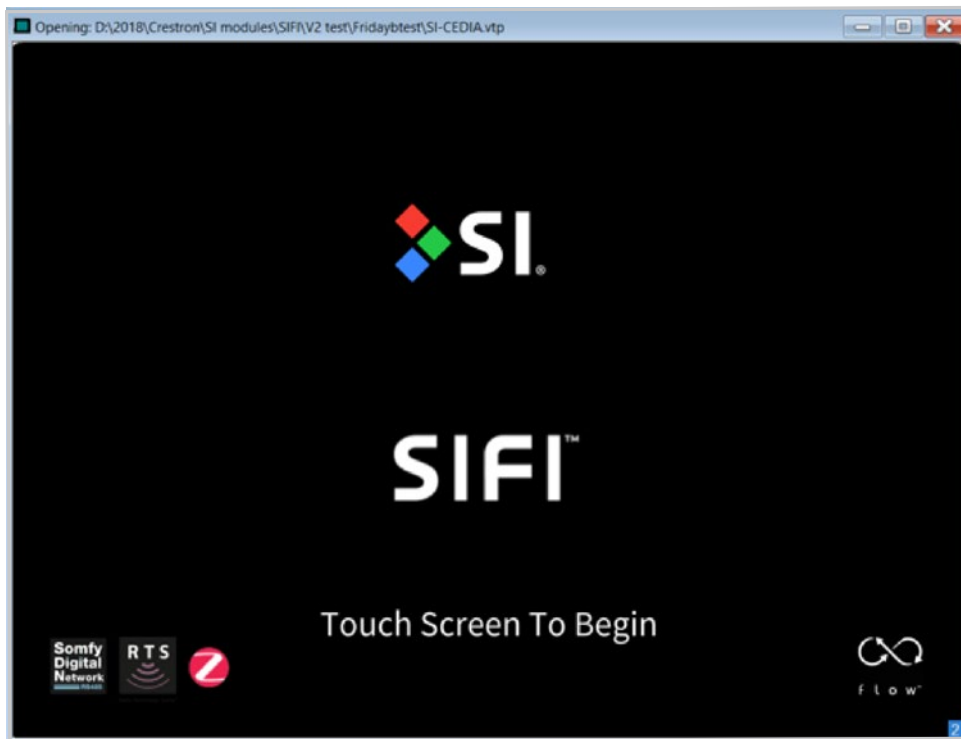


6. Open the ShadeInnovations SIFI v1.1 Demo XPANEL.c3p file to open an Xpanel project. Enter the hostname or IP address of your Crestron Control Processor and IPID

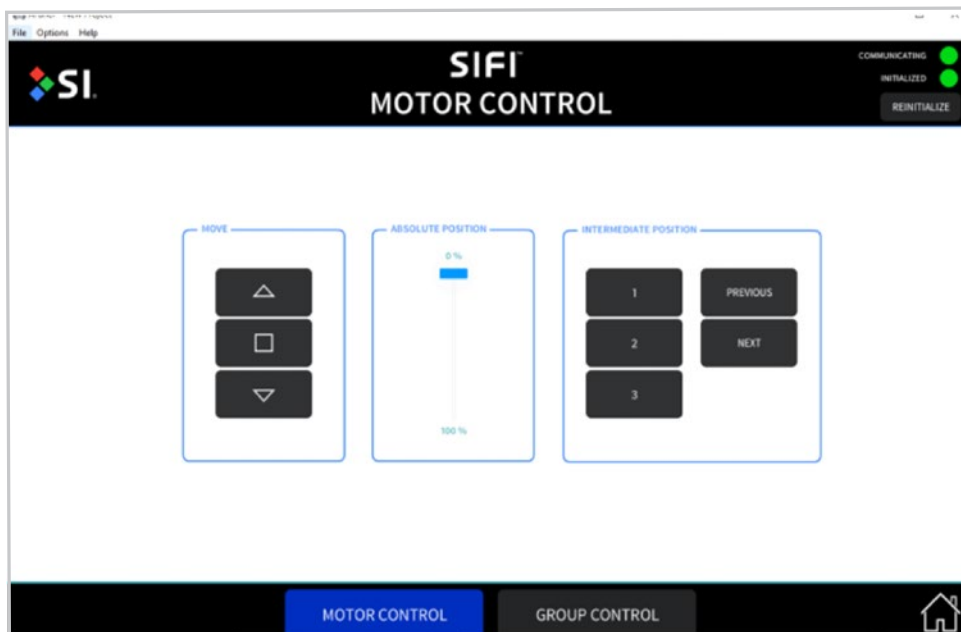
The screenshot shows a connection configuration dialog box with a dark background. It contains the following fields and controls:

- Hostname/IP Address:** A text field containing '192.168.1.110'.
- IPID:** A text field containing '03'.
- Port:** A text field containing '41794'.
- Use SSL:** A checkbox that is currently unchecked.
- Virtual Control Room Id:** An empty text field.
- Buttons:** Two buttons at the bottom, 'Connect' and 'Cancel'.

7. Compile program and then transfer to the Crestron control processor.



8. Use the sample GUI to adjust motor, see current motor position.



Integration FAQ

What do the different colors on the Link Pro LED indicate?

Blinking red to solid red indicated Link PRO is scanning for WiFi networks & will stop blinking when scan is complete. Rescan WiFi by clicking on setup button



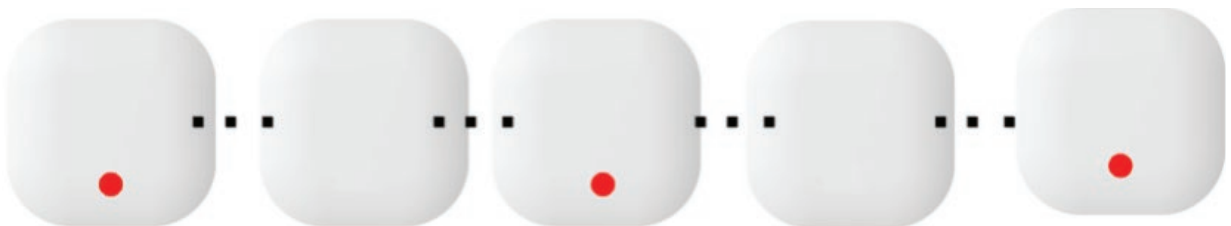
Solid Green: Connect to the configured WiFi.



Slowly blinking Green: Link Pro is trying to connect to the configured WiFi network but cannot connect or has been disconnected.



Quick Red Flash: Link PRO is transmitting using the 433MHz radio



Solid Amber: Firmware is being updated.



Should I choose 2.4GHz or 5GHz for Link PRO?

Choose 2.4GHz if the home construction is concrete, or multi-floor, or stucco walls. Choose 5GHz if single floor, 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 RTS DESIGN GUIDE available at www.shadeinnovations.com

Which SI Shade products can I control with ELAN?

All SI Shade products including Nano and Zen 2 can be controlled with ELAN.

Which ports are needed for Link PRO control on my network?

55050

44040

40045

20000

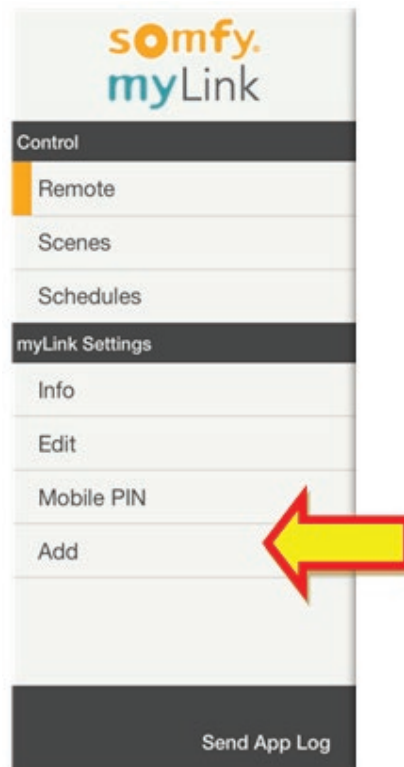
44100

44200

1902

How do I update a Link PRO Network Settings to match my Control4?

- In the myLink App Open the Menu
- Select ADD under “myLink Settings”



- Follow the instructions shown on your device to connect to your Link Pro

- After you select “Search for myLink”, you will need to select your network & current password for your network.

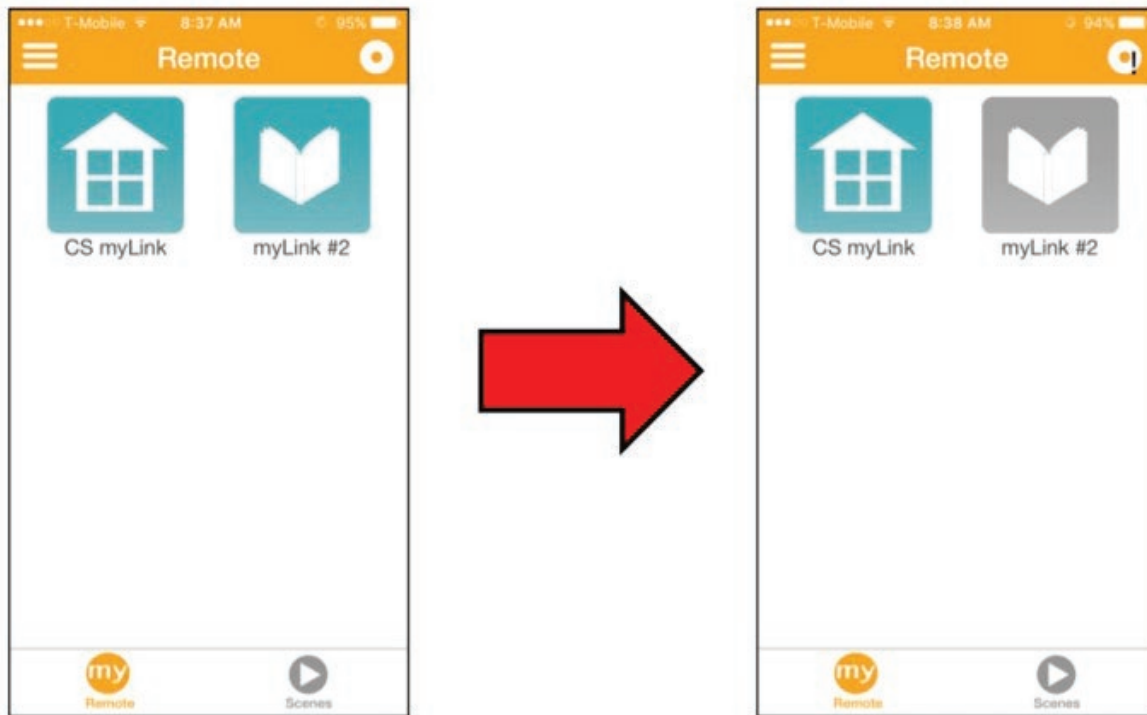


- Once you complete that and the Auto Configuration steps are finish, you will be asked if you would like to Erase or Continue.
- Select Continue, then you will see the icon for current Link PRO device.
 - Select Next, then you will see all your current channels.
 - Finally select Done as all your programming is still existing.

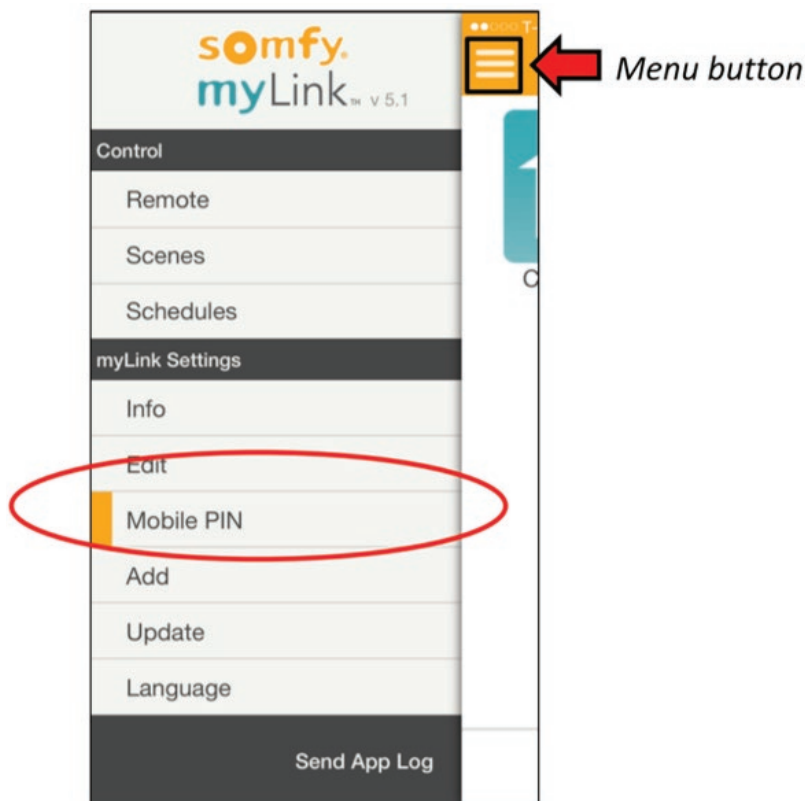
Once the first Link PRO has been successfully added, repeat the process to add the rest of the Link PROs.

How can I delete a Link Pro from the myLink app?

- Unplug Link Pro, and the Icon for it will go from Blue to Gray

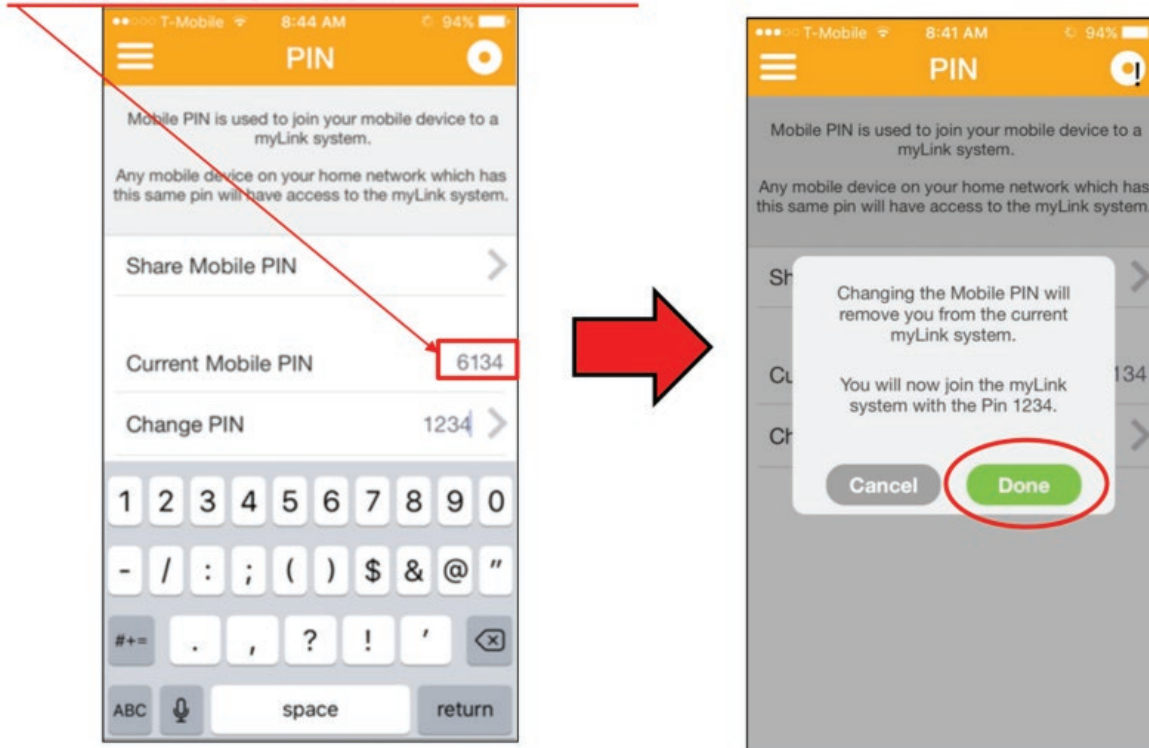


- Click Menu button, and select Mobile PIN.

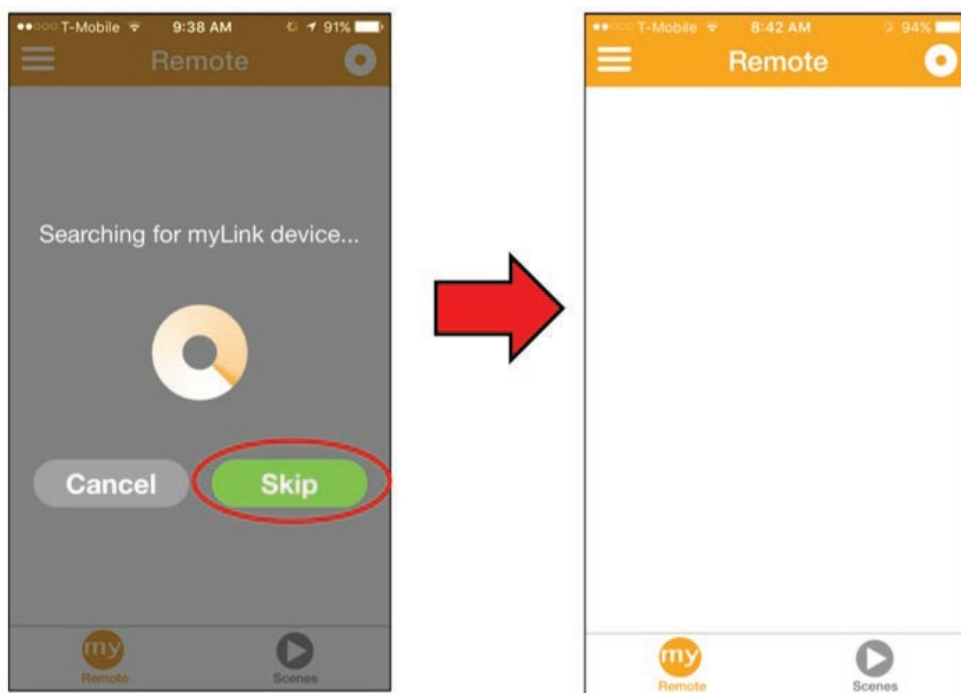


- Under “Change PIN”, enter random 4-digit number and select return. The select DONE

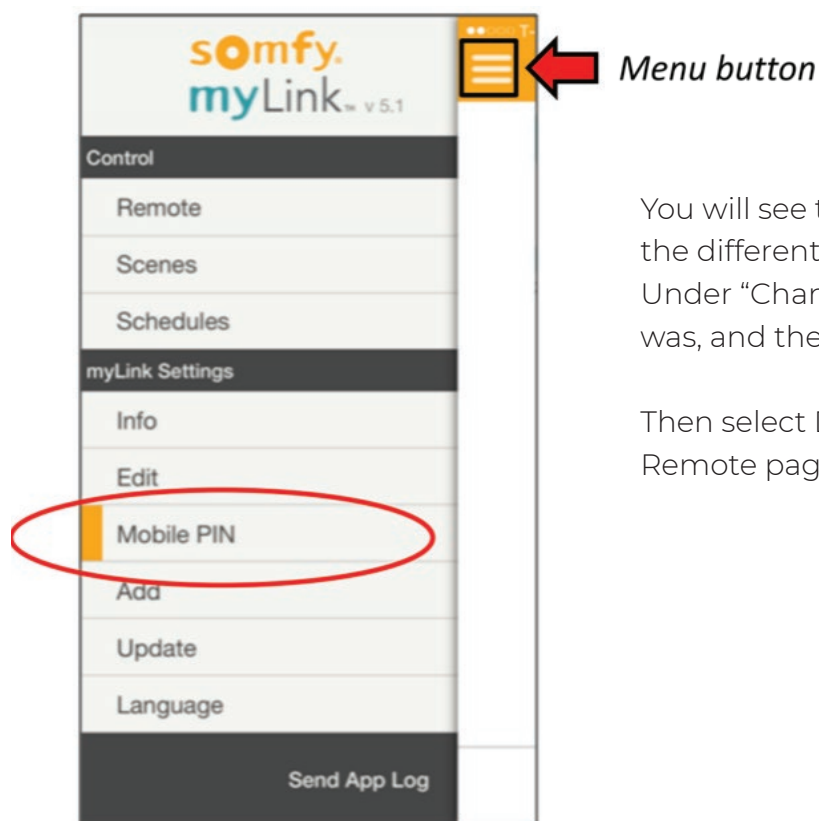
****NOTE YOUR CURRENT PIN****



- Select Skip then you will see a blank page.



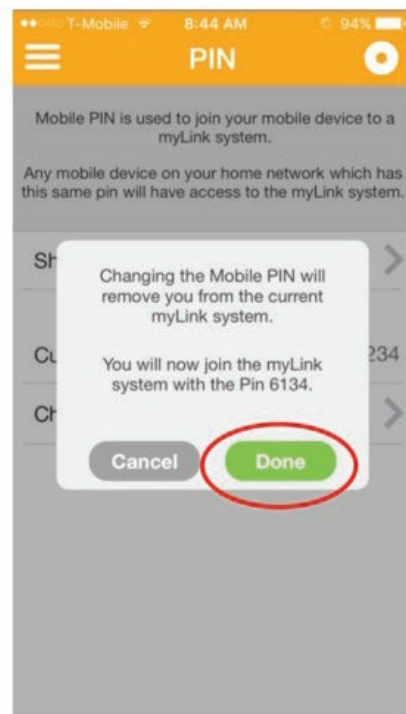
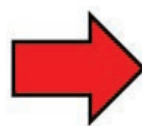
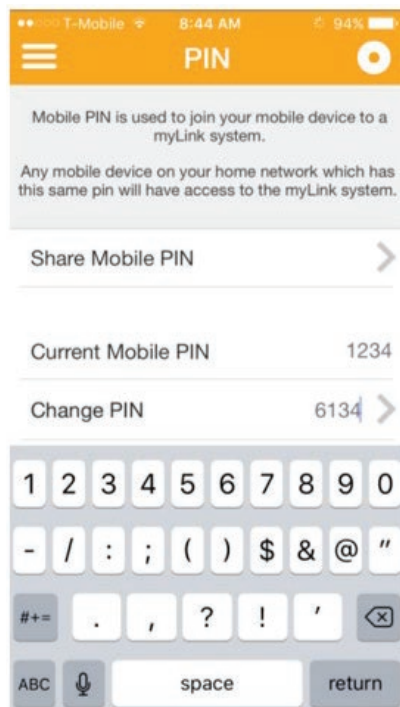
- Click Menu, select Mobile PIN.



You will see that the current mobile pin is now the different number that you had just entered. Under “Change PIN”, enter what your 4-digit PIN was, and then hit return.

Then select DONE. SKIP, then you will see a blank Remote page.

After selecting DONE, you will ONLY see your active Link Pro devices listed.

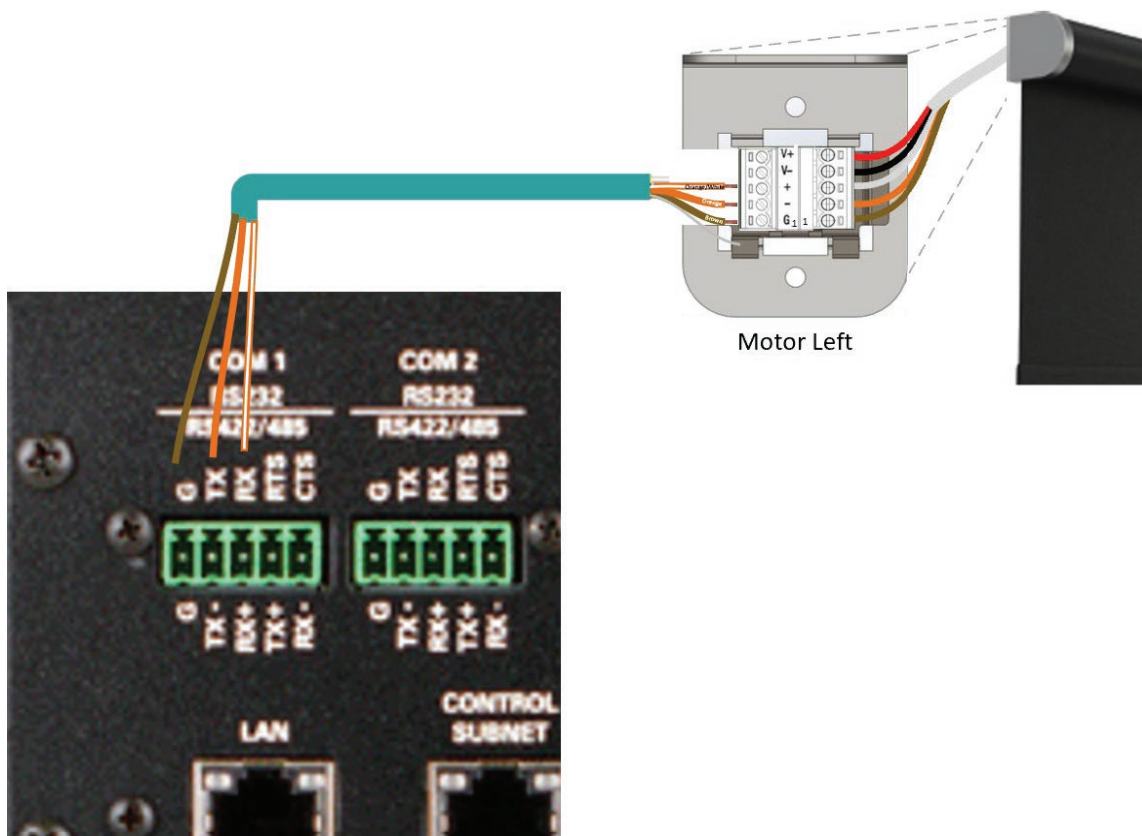


How can I control an SDN shade or screen without SI.FI?

Ensure you have a fully commissioned SDN screen or shade with all limits set before you begin any direct control. It is not necessary to have a permanently installed SDN gateway such as SI.FI. But you will need to set all limits with a SI.FI 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 the TX, RX, and G from your control system to the Screen or Shade.



Next navigate to the SDN 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://www.shadeinnovations.com/services-support/software>

For more information and design help please call us or contact us at www.shadeinnovations.com

Shade 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 now at 512-832-6939.

Office Hours: Monday - Friday (8am - 6pm).



9715-B Burnet Rd, Suite 400 Austin, TX 78758 512.832.6939
www.shadeinnovations.com