TECH NOTE 103
CRESTRON INTEGRATION
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INTRODUCTION

This TECH NOTE 103 Crestron 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 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 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.ScreenInnovations.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 Screen 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).
SCREEN INNOVATIONS INTEGRATION SUPPORT

we are here for you!
Our sales and support teams are available via phone and email
if you're on the job site, call us now at 512.832.6939

Office Hours
Monday-Friday
8am - 6 pm CST

Can't find the answer to your design questions in this Tech Note? Please contact our technical support teams at the number and times above.
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 SIMPL Windows.

- 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
INTEGRATION WITH RTS VIA 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 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 VIA Link PRO

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
INTEGRATION WITH RTS VIA Link PRO

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.

-65 dBm or better
INTEGRATION WITH RTS VIA Link PRO

Step-by-Step – Six steps to Integrate myLink or Link PRO and CRESTRON

Open SIMPL Windows and open the ScreenInnovations 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)

Open the ScreenInnovations Link PRO v1.1 Command Processor IP from the logic folder in the demo program.
INTEGRATION WITH RTS VIA Link PRO

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.
INTEGRATION WITH RTS VIA Link PRO

Open the ScreenInnovations Link PRO v1.1 Demo X PANEL.c3p file to open an Xpanel project. Enter the hostname or IP address of your Crestron Control Processor and IPID.
INTEGRATION WITH RTS VIA Link PRO

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.
INTEGRATION WITH 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 SI.FI

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 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.
INTEGRATION WITH SDN VIA SI.FI

Step-by-Step – Eight steps to Integrate SI.FI and CRESTRON

1. Open SIMPL Windows and open the ScreenInnovations 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 ScreenInnovations SIFI v1.1 Command Processor IP from the logic folder in the demo program.
INTEGRATION WITH SDN VIA SI.FI

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

Select the ScreenInnovations SIFI v1.1 Endpoint Control for single and groups. Enter the motor address in the device _ID entry.
INTEGRATION WITH SDN VIA SI.FI

Compile program and then transfer to the Crestron control processor.

Open the ScreenInnovations 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.
INTEGRATION WITH SDN VIA SI.FI

Compile program and then transfer to the Crestron control processor.

Use the sample GUI to adjust motor, see current motor position.
**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.
INTEGRATION FAQ Cont. ...

Q 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.screeninnovations.com

Q Which SI Shade products can I control with Crestron?

All SI Shade products including nano, zen, veil and sail can be controlled with Crestron

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

55050
44040
40045
20000
44100
44200
1902
INTEGRATION FAQ Cont. ...

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

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.
INTEGRATION FAQ Cont. ...

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.
INTEGRATION FAQ Cont. ...

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

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 remote page.
How can I delete a Link Pro from the myLink app? – Cont.

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.
INTEGRATION FAQ Cont. ...

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 below URL:

https://www.somfypro.com/services-support/software

For more information and design help please call us or contact us at

www.SCREENINNOVATIONS.COM