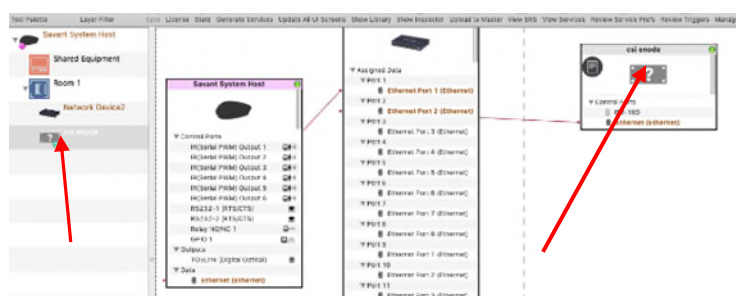
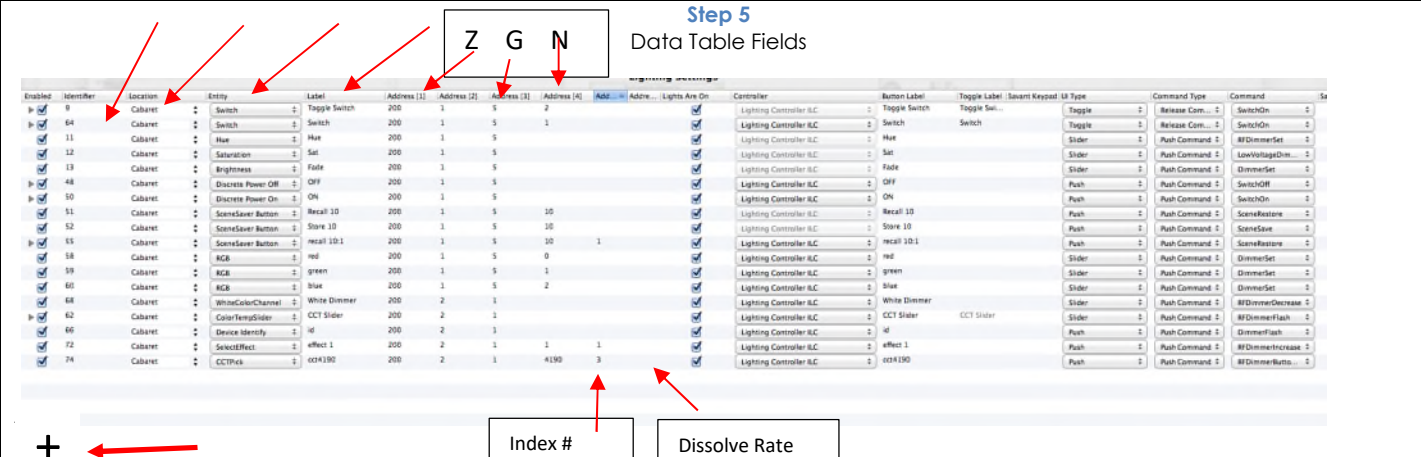


Converging Systems Quick Start Guide* for Savant (with e-Node 2010/2011/CVM or IBT-100)

The Converging Systems' control environment is based upon at least one IP (Internet Protocol) device (i.e., e-Node™, e-Node/dmx, CVM, or IMC-170) (hereinafter all referred to as **Interface Device(s)**). Connected to (or resident therein) to the **Interface Device** are between 1~254 (external) CS-Bus controllers, or 1~32 DMX virtual (internal) controllers, or one or more (internal or external) motor controllers (**Load Devices**) depending on the particular model. In order to interface the CSI environment to Savant platform, carefully follow these steps.

This Quick Start Guide is only applicable to V3.53 or later of the Converging Systems e-Node Profile.

*Note: For a much more detailed set of instructions, consult Integration Notes referenced at https://www.convergingsystems.com/inres_savantav.php

<p style="text-align: center;">Step 1 Backgrounder on Converging Systems e-Node Profile</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="background-color: #ffff00;"> <th colspan="2">Communication I/O</th> </tr> </thead> <tbody> <tr> <td style="width:20%;">IP connection</td> <td>A single Converging Systems e-Node profile supports up to 254 connected CS-BUS Motor and/or Lighting loads through Ethernet (IP)</td> </tr> <tr> <td>IBT-100 (RS-232c) connection</td> <td>The same profile also supports Serial communication for up to 254 CS-BUS connected Motor and/or Lighting loads</td> </tr> <tr style="background-color: #90ee90;"> <th colspan="2">Load Devices</th> </tr> <tr> <td>LED Lighting Controllers (ILC-xxx)</td> <td>Monochrome, RGB, RGBW constant current and constant voltage CS-BUS controllers are supported and can be programmed within the RacePoint Blueprint Data Table/Lighting Tab</td> </tr> <tr> <td>Motor Controllers (IMC-xxx/CVM)</td> <td>Single, triple and other derivative CS-Bus controllers are supported and can be programmed within the RacePoint Blueprint Data Tables/Shades tab</td> </tr> </tbody> </table> <p>Note: The CSI download package will provide the above Profile along with necessary icon file zipped into a single file. Also, for convenience a sample RacePoint Blueprint file can be downloaded here. https://www.convergingsystems.com/inres_savantav.php This sample project implements a wide range of sliders/toggles, switches and hybrid switches (customized for the Pro App Scene manager).</p>	Communication I/O		IP connection	A single Converging Systems e-Node profile supports up to 254 connected CS-BUS Motor and/or Lighting loads through Ethernet (IP)	IBT-100 (RS-232c) connection	The same profile also supports Serial communication for up to 254 CS-BUS connected Motor and/or Lighting loads	Load Devices		LED Lighting Controllers (ILC-xxx)	Monochrome, RGB, RGBW constant current and constant voltage CS-BUS controllers are supported and can be programmed within the RacePoint Blueprint Data Table/Lighting Tab	Motor Controllers (IMC-xxx/CVM)	Single, triple and other derivative CS-Bus controllers are supported and can be programmed within the RacePoint Blueprint Data Tables/Shades tab	<p style="text-align: center;">Step 2 Load Profile</p> <p>Converging Systems Profile Search. Latest profile may be found here (https://www.convergingsystems.com/software/local_profiles_library.php#savant). Download, unzip and import into your standard Savant Profile directory.</p> <p>Savant Profile. Although some Converging Systems Profiles may be found within Savant's Profile library, the latest should be downloaded directly from the Converging Systems' website (at above address).</p> <p>Load profile. Load the latest Converging Systems e-Node Profile within your project.</p> 														
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<p style="text-align: center;">Step 3 Customize Variable for Communication Device(s)</p> <p>Update Control Port. Open Inspector and select either -Ethernet and enter the e-Node's (or CVM) IP address, or -IBT-100 (Serial) and select the default baud rate (57600). Note: for CVM you must edit the Profile and change the 57600 entry for the IBT-100 to 19200 as documented within the Profile.</p> <p>Update Safe Variables. Within Inspector, enter values for Username and Password for your e-Node or CVM—entries can be programmed/found through the commissioning process for these devices -Username is typically Telnet 1 -Password is typically Password 1</p> <p>Update Icon for e-Node. Within the downloaded Profile zip file is the icon for the e-Node/CVM object. Load as appropriate.</p> <p>Wiring Connections. Within Blueprint, make applicable (Blueprint wiring) connections as appropriate. -Ethernet—connect to available IP port within Savant system. -IBT-100 (serial)—connect to available RS-232-c port within system.</p>	<p style="text-align: center;">Step 4 Data Table Entities Available for Lighting or Shades¹</p> <p>Select the + icon at the lower left-hand corner of the respective page and add a new row for each type of control you wish to enter.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="color: green;"> <th>Popular Lighting Entities¹</th> <th>Popular Motor Entities²</th> </tr> </thead> <tbody> <tr><td>Switch</td><td>Shade (Up/Down/Stop)</td></tr> <tr><td>Hue (slider)</td><td>MotorSlider (variable)</td></tr> <tr><td>Saturation (slider)</td><td>ShadeUp</td></tr> <tr><td>Brightness (slider)</td><td>ShadeDown</td></tr> <tr><td>Red (slider)²</td><td>ShadeAdjStopShad</td></tr> <tr><td>Green (slider)²</td><td></td></tr> <tr><td>Blue (slider)²</td><td></td></tr> <tr><td>White (slider) -for White in RGBW</td><td></td></tr> <tr><td>CircadianSlider</td><td></td></tr> <tr><td>ColorTempSlider</td><td></td></tr> <tr><td>RecallPreset Button</td><td></td></tr> <tr><td>StorePreset Button</td><td></td></tr> </tbody> </table> <p>¹ for full list see Integration Note referenced at top of this Guide ² Not typically recommended—"old school" concept-use HSB instead</p>	Popular Lighting Entities ¹	Popular Motor Entities ²	Switch	Shade (Up/Down/Stop)	Hue (slider)	MotorSlider (variable)	Saturation (slider)	ShadeUp	Brightness (slider)	ShadeDown	Red (slider) ²	ShadeAdjStopShad	Green (slider) ²		Blue (slider) ²		White (slider) -for White in RGBW		CircadianSlider		ColorTempSlider		RecallPreset Button		StorePreset Button	
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Step 6

Sample Lighting Programming using Data Tables. (Lighting)

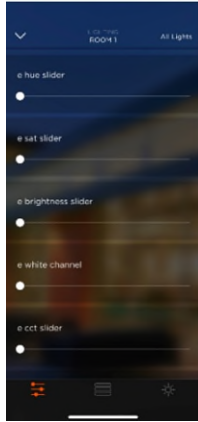


Figure 1

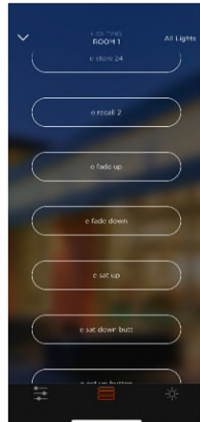


Figure 2

To create new Lighting slider/toggle or switch proceed here:

- Select the **+** icon to create new entry
- Select **Controller** name (e-Node)
- Select **Location**
- Select **Entity**
- Enter **Z/G/N** address for **Add.(1)**-Zone#, **Add(2)**-Group #, **Add(3)**-Node #,
- Hit Done, **Generate Services**, Reenter Data Table
- Enter **Label**
- Enter any required entries in **Address(4)** (i.e., # for Preset/Stores/Effect or "0" for Switch
- Optional-Enter any **Dissolve rate** (seconds for most entries in **Address(5)** or minutes for Circadian/ramps)

Step 7

Sample Motor Programming using Data Tables. (Shades)

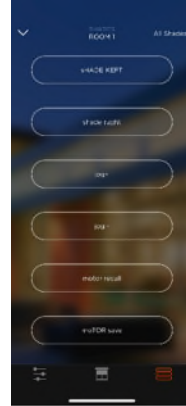


Figure 3

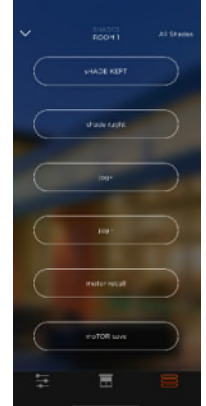


Figure 4

To create new Shade(motor) slider/toggle or switch proceed here:

- Select the **+** icon to create new entry
- Select **Controller** name (e-Node)
- Select **Location**
- Select **Entity**
- Enter **Z/G/N** address for **Add.(1)**-Zone#, **Add(2)**-Group #, **Add(3)**-Node #,
- Hit Done, **Generate Services**, Reenter Data Table
- Enter **Label**
- Enter any required entries in **Address(4)** (i.e., # for Preset/Stores)

Step 8

Testing/Troubleshooting

CSI Pilot Application Traffic Window. Launch the Pilot application. Select the **View Map Tab** and discover **e-Nodes** and **Devices**. Go to the **Traffic Tab** monitor traffic from any Savant button/slider push. If you see a * after a button press you know an incorrectly command has been sent from Savant. Check entries and try again.

CSI Pilot Application Virtual Terminal tab. After discovery in the above step, launch the **View/Virtual Terminal** widget within Pilot and select the appropriate UI (Lighting or Motor). Enter the appropriate address for the targeted controller and test.



RPM Terminal. Observe command flowing out from Savant and those returned from Converging Systems. Verify that # precedes Savant commands and ! precedes backchannel (CSI) feedback.

Step 9

Common Mistakes

#	Hints
1	Forgetting Telnet credential for Interface Device. Try Telnet 1 and Password 1 if no dealer updates have been made.
2	Forgetting to commission all devices with Pilot or Web Pilot before programming with Savant Data Tables.
3	Forgetting to enter the Zone address for a CS-Bus controller in Address(1) , a Group address within Address(2) and a Node address within Address(3)
4	Forgetting to enter a "0" in Address(4) for the Switch when you want to enter a dissolve rate in Address(5)
5	Forgetting to enter a numerical entry for Dissolve/Ramp in Address(5) if you want something other than the factorydefault setting to prevail.
6	Trying to select a color temperature <1700 or >7000 (Kelvin) Use numbers within this range only.
7	Using an Red/Green/Sliders to effectively control color (not good) . Use HSB sliders for proper control (and great dimming)
8	Connectivity with Lutron. Failure to enter Lutron parameters within e-Node's webpage.

Appendix 1

How to Import Converging Systems' Profile

#	Steps
1	Within RacePoint Blueprint, Select Preferences , and highlight a target directory into which you will import the new Profile. Make sure that this directory does not have a duplicate profile already loaded therein.
2	Select Import and browse for targeted Profile and hit Import .
3	If this is first time that this Profile is being loaded, select Show Library and search for the Profile and drag it into the appropriate Room under the Savant Host.
4	If are subsequently updating a similarly names Profile, confirm that you want the sytem to update or replace as necessary.

Appendix 2

Method to Add Multiple Toggles to Scene Manager*

#	Steps
1	Select the + icon of Lighting Systems to add a new Switch Entity
2	Add the applicable (i) Controller , (ii) Location and (iii) Address(1) , Address(2) and Address(3) entries. Don't enter anything yet for Address(4) or Address(5) --see below for those directions.
3	Hit Done , then Generate Services and once again enter the Data Table to append information to your previously generated new Entity as per next step.
4	Select Show Advanced Columns check box and under Command enter the ALTERNATIVE Entity Name for the new hybrid Switch/Entity that you wish to create. Refer to the below list to pick the applicable Entity. Where an Address(4) and/or an Address(5) is required below, enter those as well (IMPORTANT) (See Appendix 4 of Int. Note for details) <ul style="list-style-type: none"> (a) Effect. Pick SelectEffect as Command (b) Recall. Pick RecallPreset as Command (c) CCT Select. Pick ColorTempSelect as Cmd (d) Circadian Event. Pick CircadianUp or CircadianDown as Command