

# 635-DSI Board Installation QRG (Generic DSI Installation)


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1.0 Install 635-DSI on the I2C Data Bus

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## 1.0 Installing a 635-DSI Board on the I2C Data Bus

This section describes installing a 635-DSI Board on the I2C Data Bus (ribbon cable) to support any hardware on RS485 Section.

 **DO NOT INTERRUPT FLASHING.** Do not interrupt the power source, I2C Bus, or SW1 Reset on the CPU or DRM board during flashing process. Interrupting flash will damage board memory and require factory repair.

1. The 635-DSI board is compatible on System Galaxy 10.3 (or higher). All existing & new panels must be flashed to current flash.
2. When upgrading System Flash from 5.04 (SG 10.3) to 10.4 (SG 10.4) all 635-DSIs must be disconnected from the ribbon cable (I2C Data Bus) while CPU flashes. See Upgrade Instructions below.

Table 1 - Flash Version Chart:

SYSTEM GALAXY	COMPATIBLE FLASH VERSION	INSTALLING 635-DSI
SG 11.8.4.1	v11.0.9 Flash	Connect & Flash only one DSI Board at a time to the I2C ribbon cable, but only after you have correctly flashed all other boards
SG 10.3	v5.04 Flash	

3. The 635-DSI board is only compatible with a 635-CPU (min. 5.04 flash). **Do not install this board on a 600-CPU.**
4. This 635-DSI board currently supports the new 635-Input & 635-DRM, as well as RS485 Wireless Technologies.

Table 2 – Board Compatibility Chart:

635 PANEL (v5.04 or higher)					600 PANEL			
ALL 635 MODEL			MIXED BOARDS			600 CPU →	✗	635 DSI
635 CPU →	✓	635 DSI	635 CPU →	✓	600 DSI	600 CPU →	✓	600 DSI
<ul style="list-style-type: none"> <li>Galaxy LCD Clock Module</li> <li>600 Elevator/Output Module</li> </ul>			<ul style="list-style-type: none"> <li>Galaxy LCD Clock Module</li> <li>600 Elevator/Output Module</li> </ul>			<ul style="list-style-type: none"> <li>Galaxy LCD Clock Module</li> <li>600 Elevator/Output Module</li> </ul>		
<ul style="list-style-type: none"> <li>635 DRM Door Module (NEW)</li> <li>635 Input Module (NEW)</li> </ul>			(New boards not supported on 600-DSI)			(New boards not supported on 600-DSI)		
Note: wireless reader support is based on the System Galaxy software version – see the Wireless Addendum for more.								

## UPGRADING SYSTEMS

### A) UPGRADE SYSTEM GALAXY (required step for all upgrades)

1. Upgrade your Software to System Galaxy the current version – Database, Clients and Servers.

### B) STEP FLASH ALL PANELS TO V5.04 (required only for SG 10.2 and lower). SG 10.3 or higher do not need to step-flash.

2. Upgrade every controller to the current flash using the GCS Loader Utility. After you coldstart and burn-in the v5.04 Flash at the CPUs, you can click the [Allow all Boards to Update] button to update the daughter boards TO V5.04. Do this for every panel.

See [Upgrade Guide Online](#) or [Upgrade PDF](#) for more information

See [Detailed Flash Instructions PDF](#) for more

### C) FLASH ALL PANELS TO V10.4 (required for all upgrades)

3. Confirm that all boards show the v5.04 Flash - click the [Get Board Info] button from the SG *Controller Properties screen*.
4. **DISCONNECT ANY/ALL 635-DSI Boards on the ribbon cable (I2C Data Bus).** If there are any existing 635-DSI Boards already installed on the ribbon cable, you must disconnect them before flashing panels to v10.4 flash.
5. Flash all panels/CPUs up to v10.4 Flash using the GCS Loader Utility. After you coldstart and burn-in the v10.4 Flash at the CPUs, you can click on the [Allow all Boards to Update] button to update all the daughter boards on the panel.

### D) CONNECT AND FLASH EACH 635-DSI TO V10.4 (required step for all upgrades)

6. Confirm that all CPUs and daughter boards are v10.4 - use the [Get Board Info] button from *Controller Properties screen*.
7. Now, connect only one 635-DSI Board to the I2C Buss (ribbon cable) - see the Board Installation instructions for configuring the

See the [635-600 Hardware Guide](#) for complete hardware install steps (PDF at [www.galaxysys.com](http://www.galaxysys.com))

635-DSI board before installing and connecting it to the ribbon cable.

8. **Upgrade the DSI to 10.4 Flash** - click the **[Allow all Boards to Update]** button from the GCS Loader Utility. *Note you can optionally use the embedded web page from a PC that is in the same network segment by browsing for the CPU's IP Address.*
9. **Confirm the DSI is up to 10.4** - Use the **[Get Board Info]** button in Controller Properties screen (or refresh the web page).
10. Repeat steps 7 thru 9 for each 635-DSI Board that must be connected and flashed.

## BOARD INSTALLATION INSTRUCTIONS (635-DSI)

1. 635-DSI Board supports up to 16 devices per RS485-Section with up to 4000 ft. total line distance per section (up to 32 devices per DSI board). NOTE: a 635-CPU supports up to 64 devices per CPU Board. The devices distributed across all boards are counted (i.e. each reader = 1 device).

**IMPORTANT: Configure the SWITCHES & JUMPERS before physically installing the 635-DSI Board:**

2. **SET THE BOARD ID:** Factory Default is only position 4 = ON (board ID 16 factory default)
  - ▶ SET Board ID (Switch pos. 4 thru 8). Valid ID's are 1 thru 16; the DSI must have a unique ID on I2C Bus.

**TABLE FOR SETTING BINARY DIPSWITCH (BOARD NUMBERS)**

ID	Actual DIP Switch Position	ID	Actual DIP Switch Position
1	8 = ON	9	5, 8 = ON
2	7 = ON	10	5, 7 = ON
3	7, 8 = ON	11	5, 7, 8 = ON
4	6 = ON	12	5, 6 = ON
5	6, 8 = ON	13	5, 6, 8 = ON
6	6, 7 = ON	14	5, 6, 7 = ON
7	6, 7, 8 = ON	15	5, 6, 7, 8 = ON
8	5 = ON	16	4 = ON (factory default)

**OPTION-C (Switch pos. 3) is OFF** (Factory Default RS-485 Baud Rate = 19200 bps).

**OPTION-B (Switch pos. 2) is unused.**

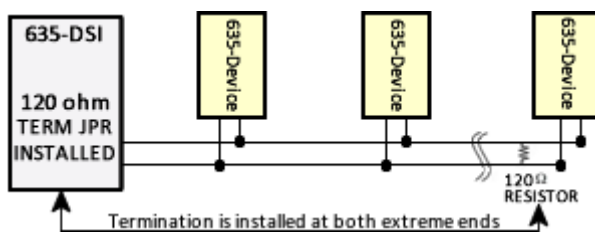
**OPTION-A (Switch pos. 1) is unused.** ('Auto-update' was decommissioned in v5.04 Flash. You must send an **[Allow Boards Update]** from the GCS Load Utility, or send a **clear auto** command from a terminal emulator.)

3. **SET the 120-ohm TERMINATION JUMPERS** as appropriate\* for each 485-Sections (JP4/JP5):

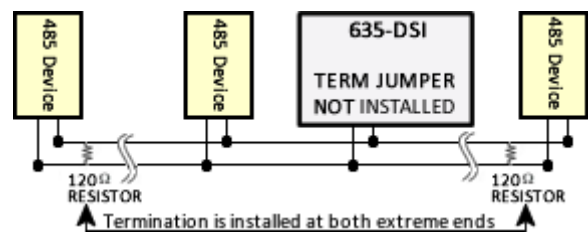
**Diag. A.** Jumper shown in the TERM position *when DSI Board is located at the end of a RS-485 wire-run.*

**Diag. B.** Jumper shown OPEN when DSI is NOT at the end of line (120 Ω resistors should be installed across the A/B terminals at the two 'extreme end' DRMs).

**Diagram A: DSI's 120 Ω TERM JUMPER INSTALLED.**



**Diagram B: DSI's 120 Ω TERM JUMPER NOT INSTALLED.**



**(Use the 120-ohm resistors (included) to install at the DRM boards on the end of the RS-485 wire-runs)**

4. Install one 638-DSI Board into the controller cabinet and connect to the power harness and I2C Bus (ribbon cable). The DSI must be communicating on the I2C bus before connecting the peripheral devices on the RS-485 Channels.

**IMPORTANT: when upgrading a DSI to v10.4, you must only connect & flash one 635-DSI Board at a time.**

5. In the GCS Loader, click the **[Allow all Boards to Update]** button to update the 635-DSI. *Note you can also use the embedded web page from a PC that is in the same network segment by browsing for the CPU's IP Address.*
6. Use the **[Get Board Info]** button in Controller Properties screen (or refresh the web page) to verify that the DSI is up to v10.4.

Contact your authorized technical support if you need assistance.