

## IMPORTANT INSTRUCTIONS for installing Galaxy Door Modules (635-DRMs) using RS-485 Multi-drop from the 635-DSI Board 635c DSI - PN 20-1655-00 / 635c DRM - PN 20-0235-10

**DO NOT INTERRUPT FLASHING: DO NOT INTERRUPT POWER or I2C Bus, or reset SW1 on the CPU, DSI, or DRM boards during flashing.** Interrupting flash will damage board memory and require a factory repair.

1. System Galaxy Software SG 10.3.1 (or higher) required. All panels must be flashed to the current flash.
2. 635-CPU (with S28 Flash v5.04 (or higher)) support the 635-DSI & 635 DRM on RS485 (not supported on a 600 CPU).
3. 635-DSI Board supports up to 16 devices per 485-Section; for up to 4000 ft. total line distance. NOTE: a 635 CPU supports up to 64 devices per CPU Board; devices distributed across all boards are counted (DRM=2; however each reader counts as 1 when the DRM is installed on the DSI RS-485 Channel).

### IMPORTANT: CONFIGURE SWITCHES & JUMPERS BEFORE PHYSICALLY INSTALLING THE 635-DSI BOARD:

4. **SET THE BOARD ID:** Factory Default = 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)

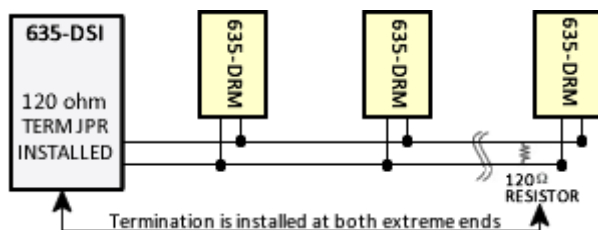
- ▶ **OPTION-C (Switch pos. 3) is OFF** (Factory Default for the 485 Baud Rate = 19200 bps).
- ▶ **OPTION-B (Switch pos. 2) is unused.**
- ▶ **OPTION-A (Switch pos. 1) is unused** (auto-update was decommissioned in Flash v5.04).

5. **SET BOTH 120-ohm TERMINATION JUMPERS correctly for both 485-Sections (JP4/JP5):** Consider the channels separately when deciding whether the termination jumper will be installed.

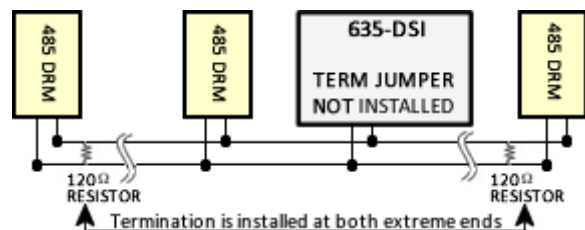
**Diag. A.** Jumper shown in the TERM position when DSI Board is located at the end of a RS485 wire-run.

**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 'extreme end' as close to the DRM board as possible).

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



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



(Use the 120-ohm resistors (included) to install at the DRM boards on the end of the RS485 wire-runs)

6. **Install the DSI Board into the controller cabinet and connect to the I2C Bus (ribbon cable) and power harness.** The DSI must be communicating on the I2C bus before connecting the DRMs. Verify DSI communication by entering the CPU's IP Address into a Web Browser\* to confirm the connection status of the DSI Board. (\*PC and CPU must be on same network segment. Board appears on **Panel Status page**. Board Status should = Normal. When using the Web Config Page diagnostics, you should uncheck/update the server 1 connection) Alternately, a DSI connection can be confirmed by retrieving/saving in the Controller Programming screen via the SG software – see step 10 on Pg 4.)

## 7. Before installing a 635-DRM Board, you must configure the SWITCHES and JUMPERS:

a) **BOARD DIPSWITCH SETTINGS:** *Factory Default = only position 5 = ON (board ID 16 factory default)*

▶ **SET Board ID (positions 1 thru 5).** Valid ID is 1 thru 16; each Board 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	1 = ON	9	4, 1 = ON
2	2 = ON	10	4, 2 = ON
3	2, 1 = ON	11	4, 2, 1 = ON
4	3 = ON	12	4, 3 = ON
5	3, 1 = ON	13	4, 3, 1 = ON
6	3, 2 = ON	14	4, 3, 2 = ON
7	3, 2, 1 = ON	15	4, 3, 2, 1 = ON
8	4 = ON	16	5 = ON (factory default)

▶ **OPTION-C (6<sup>th</sup> position) Baud Rate for 485-DRM must remain OFF** (19200 bps Factory Default).

▶ **OPTION-B (7<sup>th</sup> position) Controls Reader Data from DRMSection-2:**

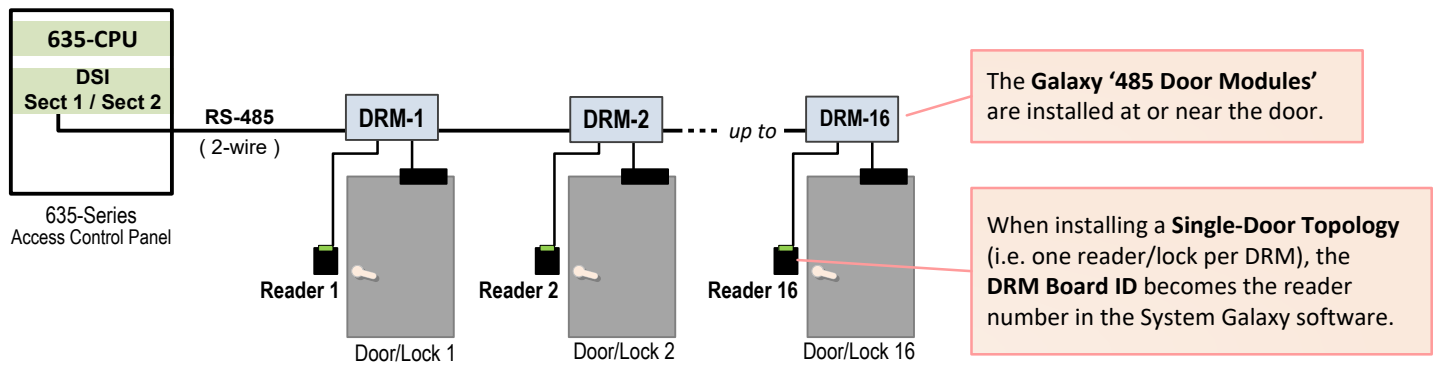
**OFF/DOWN = Disables DRM Section-2;** only Section-1 will operate.

**ON/UP = Enables Section-2;** Both Section-1 and 2 will operate.

▶ **OPTION-A (8<sup>th</sup> position) is unused.**

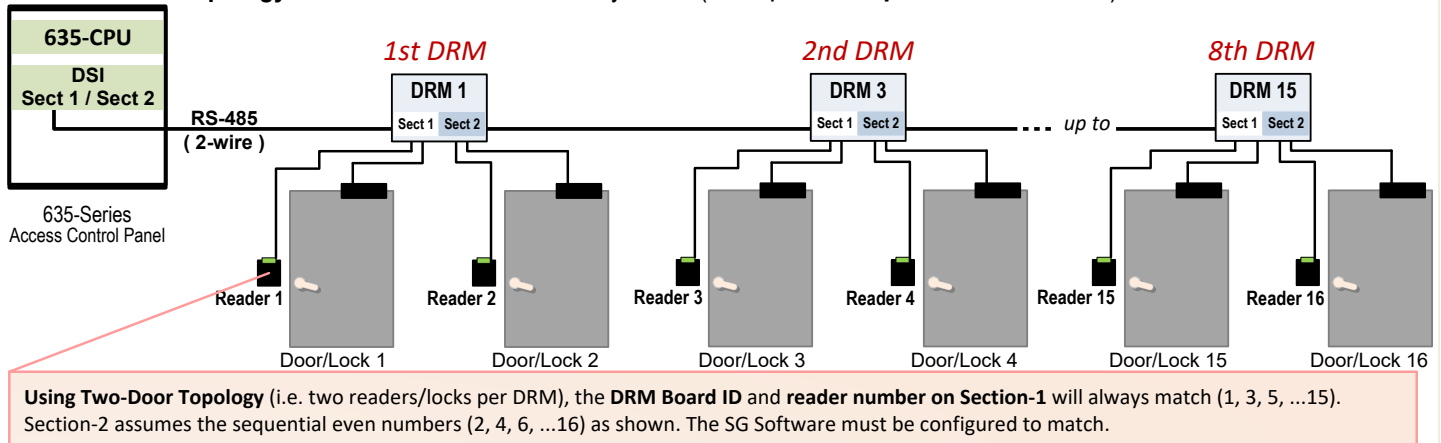
### Diagram C: SINGLE-DOOR TOPOLOGY – Showing DRM Board ID and Reader Numbering

For **Single-Door Topology**, Section-2 is disabled on every DRM (SW2 pos. 7; **Opt-B OFF = Disabled**)

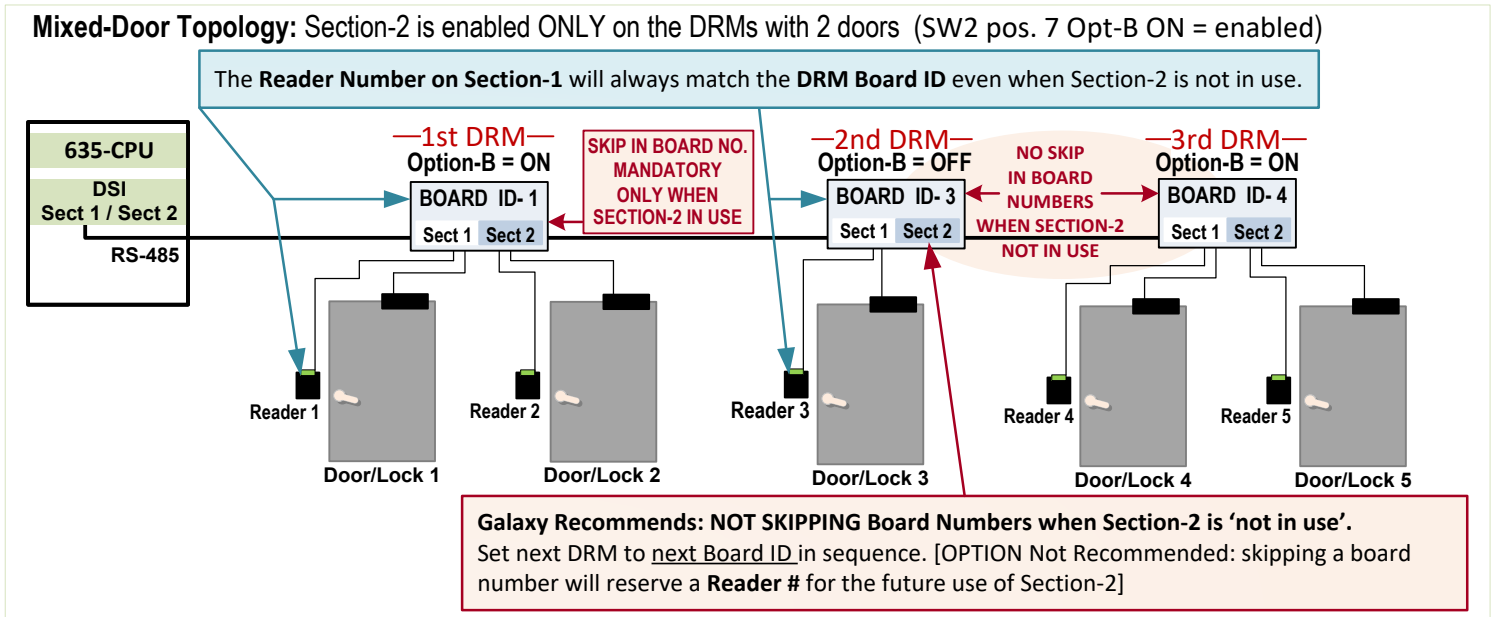


### Diagram D: TWO-DOOR TOPOLOGY – Showing DRM Board ID and Reader Numbering

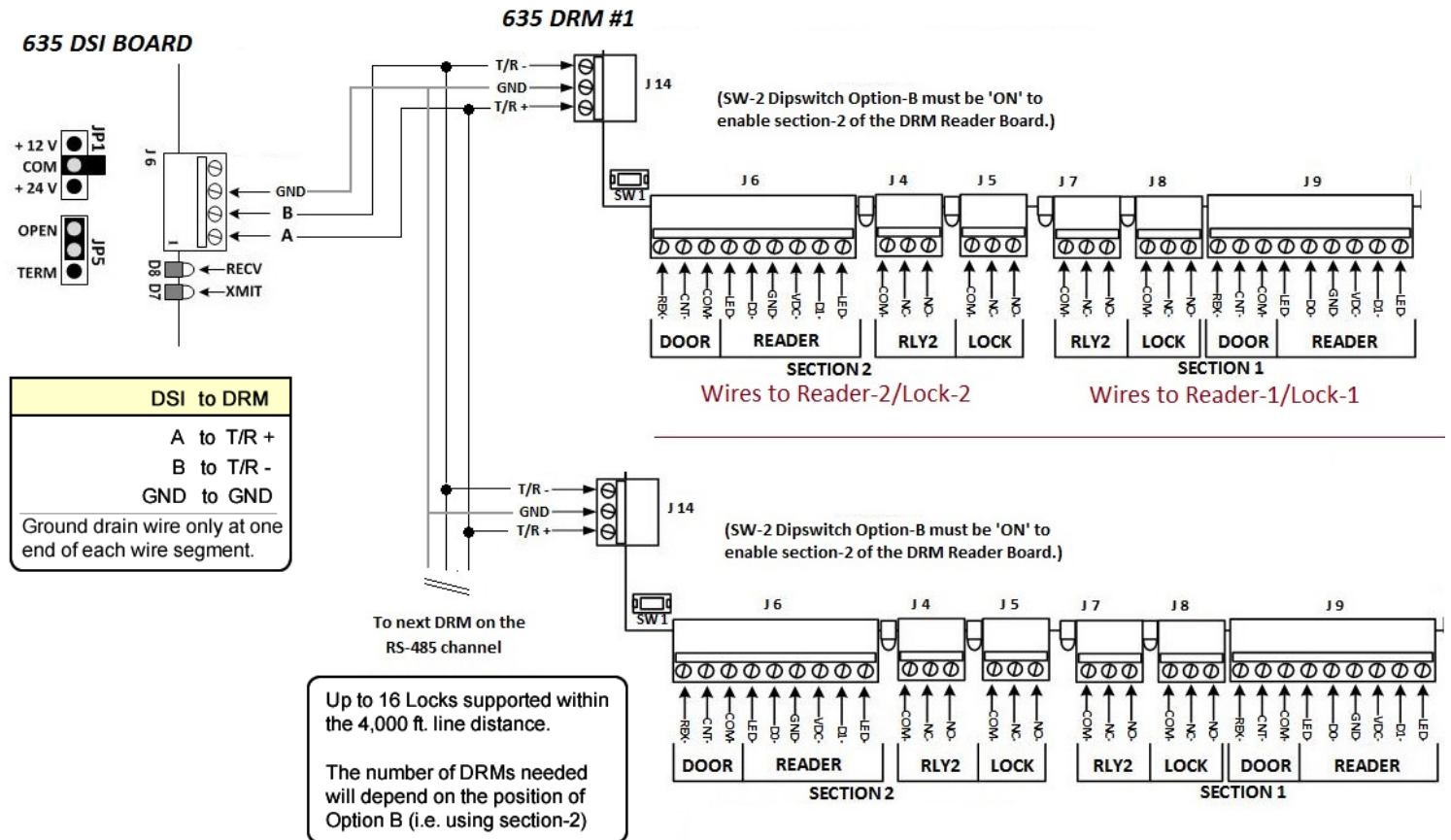
For **Two-Door Topology**, Section-2 is enabled on every DRM (SW2 pos. 7: **Opt-B ON= enabled**)



**Diagram E: MIXED TOPOLOGY – DRM ID and Reader Numbering for Single-Door and Two-Door Mixed**



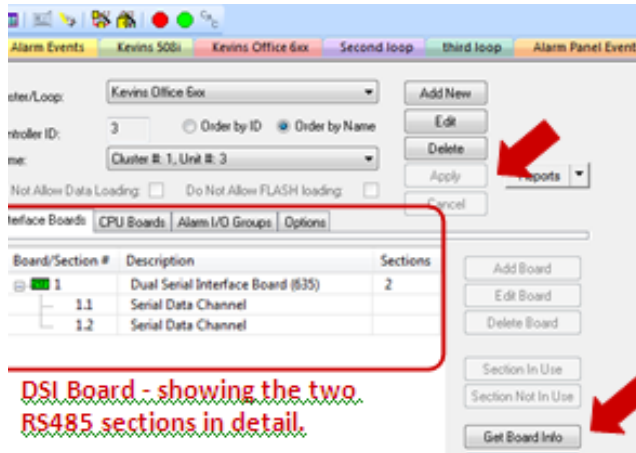
**8. RS-485 WIRING from the DSI to the DRMs:**



**9. Install the 120 Ω Resistors (included with DSI) as close to the DRM board that is at the extreme line-end (RS485 wire-run). See page 1 of this document for the Termination Diagrams.**

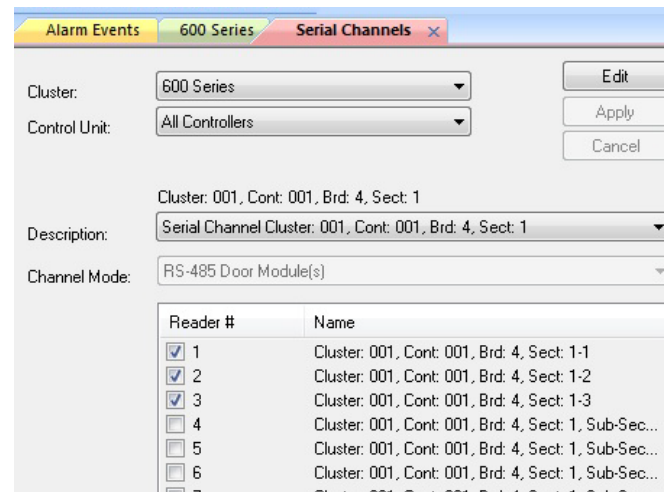
**10. In the System Galaxy Software, you must program the Loop/Cluster, Controller, and DSI Board.**

- ▶ In the Controller Properties screen click **[Edit]** then click **[Get Board Info]**. The boards that are attached to that CPU will be retrieved.
- ▶ NOTE: The CPU must be powered ON and connected to the LAN and the CPUs configured with IP Addresses and the Boards installed and connected to the I2C ribbon cable. The GCS services must be running/connected.



**11. Select **Configure > Hardware > Serial Channels** from the SG menu TO configure the DSI boards.**

- ▶ Set the Channel Mode field to “RS485 Door Module”.
- ▶ “check” only the reader numbers you installed.



**12. (Optional door supervision 4.7k ohm) In System Galaxy open the Door/Reader Properties to set supervision to match the physical installation of supervision resistors (i.e. series, parallel, or series+parallel).**

**13. You must load data to the panel using the GCS Loader Utility, which is launched from the Operator Command Menu on the SG Hardware Tree (i.e. right-click the Loop Name in the HW Tree that the panel belongs to).**

**14. Verify the reader status of all enabled sections on the RS485 Door Modules from the Controller Properties screen ( **Configure > Hardware > 635 Controller** )**

- ▶ Click on the **[RS-485 Device Info]** button to retrieve the status of all the doors/sections of the DRMs.

READER ICON	READER NAME	BOARD Serial Number	SYMPTOM / MEANING
GREEN DOOR	- is displaying -	- is displaying -	> Reader is installed and added to SG
RED X	- is displaying -		> Reader is checked in the Serial Channel but not physically installed or Section-2 OFF
GREEN DOOR	“Not Defined in DB”		> Reader is physically installed BUT is not ‘checked’ in the Serial Channel screen
RED X	“Not Defined in DB”		> Reader is NOT installed AND is not ‘checked’ in the Serial Channel screen; and the section is enabled.
Board Serial Number appears twice in list			> Dipswitch Opt-B is ON /Section-2 is enabled
Board Serial Number appears only once in list			> Dipswitch Opt-B is OFF /Section-2 is disabled