



635-DRM Installation QRG

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1.0 Installing a 635-DRM Board on the I2C Data Bus (Standard 2-Door Operation)

This section describes installing a 635-DRM board on the I2C Data Bus (ribbon cable) for standard 2-door operation.



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.

- All boards must be flashed to a compatible flash version; see the System Galaxy Help menu ([Help > About](#)).
- Before installing a 635-DRM Board into the panel, you must configure the SWITCHES and JUMPERS.

3. SETTING THE DRM BOARD ID: (use dipswitch pos. 1 thru 5) ...

- Locate DIP Switch Positions 1 thru 5 (Factory Default is SW POS-5 = ON; and SW POS 1 thru 4 = OFF)
- To begin configuring the Board ID, turn OFF/DOWN all Switch Positions 1 thru 5.
- Then only turn ON/UP the DIP Switch positions needed for the desired Board ID – use table below.
 - Each Board ID must be unique on the I2C Data bus (ribbon cable); Valid IDs are 1 thru 16.

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)

This table shows the binary dip switch positions 1 thru 5 that must be used.

d) DIP Switch positions 6 thru 8 should remain in factory default settings:

- (POS 6) OPTION-C OFF = 19200 bps; (factory default required)
- (POS 7) OPTION-B ON/UP = Section-2 enabled; (both sections 1 and 2 will operate)
- (POS 8) OPTION-A = (unused).

- Door Supervision: (optional; Factory default = 4.7k ohm)** Two socketed resistors are provided with the controller (1 resistor per door/section). Insert the resistors in the resistor sockets on the board of you want to use door supervision.

NOTE: The installer may provide a different resistor values if desired. When using supervision resistors, the *door supervision option* must be enabled in the System Galaxy software. In the *Door/Reader Properties screen*, choose the matching *resistor value* and *installation type* (i.e. series, parallel, or series+parallel).

2.0 Installing a 635-DSI Board with 635-DRMs on the RS485 Section

This section describes installing a 635-DSI with 635-DRMs on the RS485 Section, which operate as Remote Door Modules.



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. **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 RS-485-Section:** for up to 4000 ft. total line distance.
MAX DEVICE COUNT 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).
4. **Before installing a 635-DSI Board into the panel, you must configure the SWITCHES and JUMPERS**
5. **SET THE DSI BOARD ID:** (use dipswitch pos. 4 thru 8)
 - a) Turn OFF/DOWN all Switch Positions 4 thru 8; (Factory Default 16 = only position 4 ON)
 - b) Then only turn ON/UP the DIP Switch positions that are needed to set the desired Board ID – use table below.
 - The Board ID must be unique on the I2C data bus (ribbon cable), and Valid IDs are 1 thru 16.

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

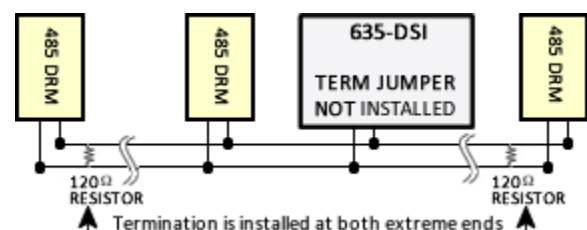
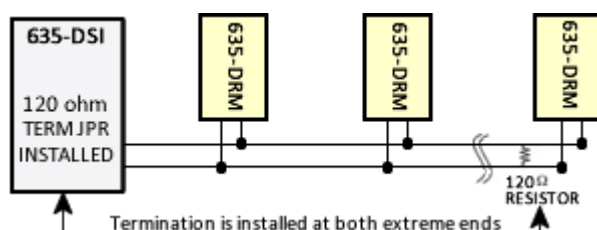
6. **SET BOTH 120-ohm Termination Jumpers correctly for both RS-485-Sections (JP4/JP5):** Consider the channels separately when deciding whether the termination jumper will be installed.

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)

7. **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. Controller Door/Tamper must be open/active. See **635 Web Config Tool Guide** for more information. 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 Board Info in the *Controller Programming* screen in the SG software Menu [Configure > Hardware > 635 Controller](#) .).

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

DRM BOARD DIPSWITCH SETTINGS: *Factory Default is only position-5 = ON (i.e. Board ID-16)*

- Locate DIP Switch Positions 1 thru 5 (Factory Default is SW POS-5 = ON; and SW POS 1 thru 4 = OFF)
- To begin configuring the Board ID, turn OFF/DOWN all Switch Positions 1 thru 5.
- Then only turn ON/UP the DIP Switch positions needed for the desired Board ID – use table below.

Each Board ID must be unique on the I2C Data bus (ribbon cable); Valid IDs are 1 thru 16.

TABLE FOR SETTING BINARY DIPSWITCH (BOARD NUMBERS)

ID	Actual DIP Switch Position	ID	Actual DIP Switch Position
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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)

- (pos 6) OPTION-C OFF = 19200 bps; Baud Rate for 485-DRM must remain OFF (Factory Default).
- (pos 7) OPTION-B Controls DRMSection-2:
 OFF/DOWN = Disables Section-2 only Section-1 will operate.
 ON/UP = Enables Section-2 both Section-1 and 2 will operate.
- (pos 8) OPTION-A OFF (is unused).

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

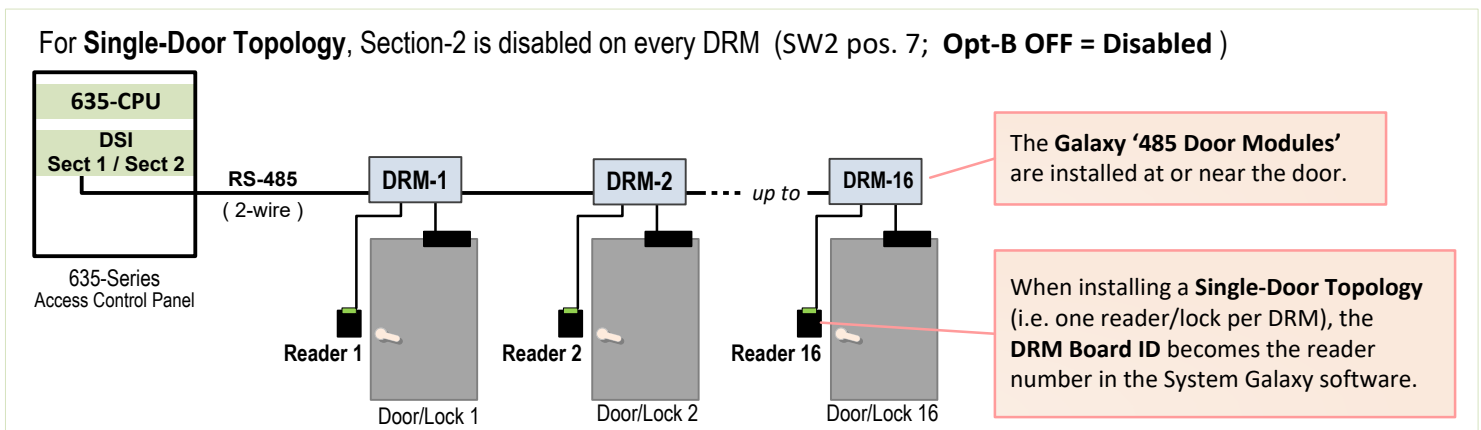
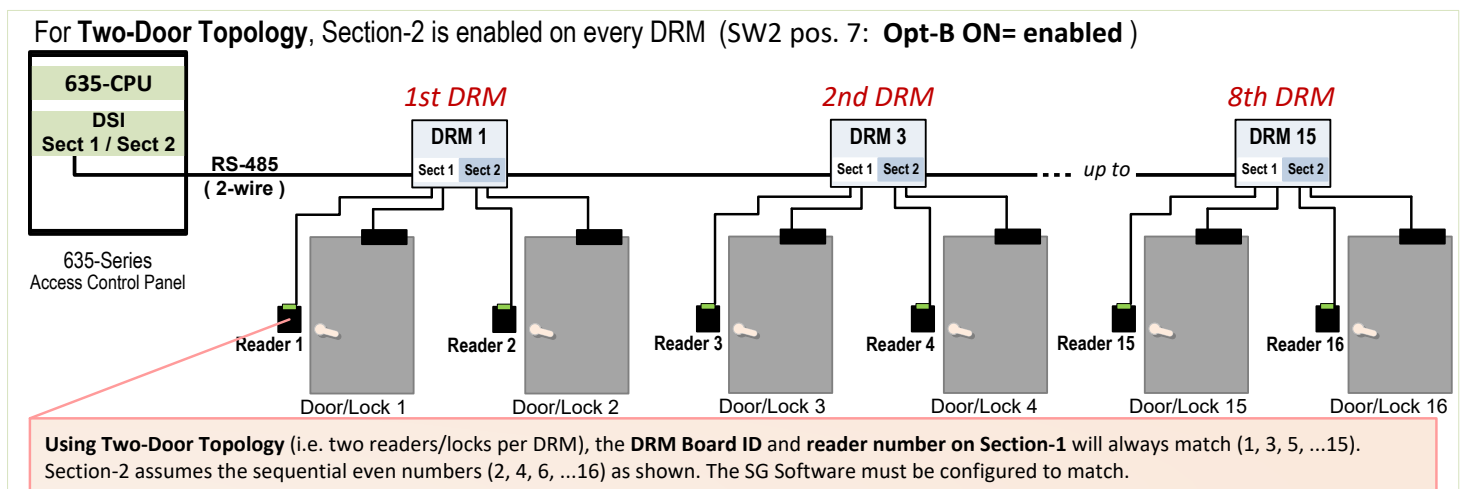


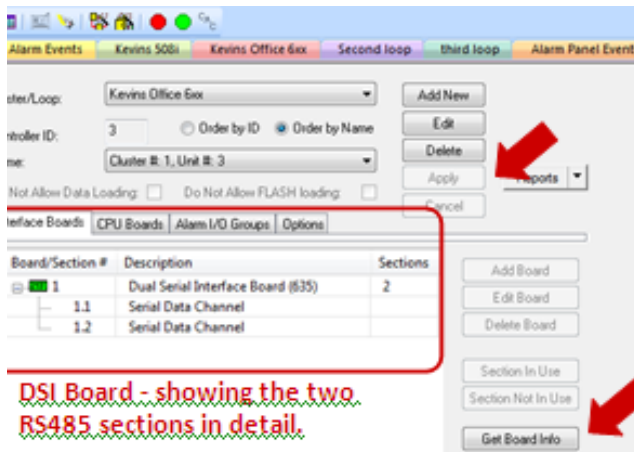
Diagram D: TWO-DOOR TOPOLOGY – Showing DRM Board ID and Reader Numbering



11. In the System Galaxy Software, you must program the Loop/Cluster, Controller, and DSI Board.
([Configure > Hardware > 635 Controller](#))

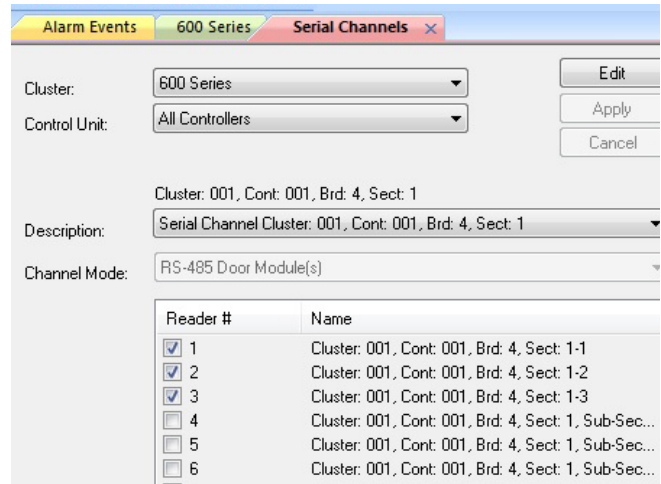
- ▶ In the *Controller Properties* screen click [Edit] then click [Get Board Info]. The DSI boards that are attached to that CPU will be retrieved. Click Save and Apply buttons to import the DSI Boards.

NOTE: The Controller CPU must be powered ON and connected to the LAN; and the CPUs configured with Valid IP Addresses, and the DSI Boards installed and connected to the I2C Bus ribbon cable. The GCS services must be running/connected.



12. [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.



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

14. You must load data to the panel using the GCS Loader Utility, which is opened from the Operator Command Menu in the SG Hardware Tree (i.e., right-click the Loop Name in the Hardware Tree that the panel belongs to, then select the Load command from the menu).

15. 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 No.	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 DRM Section-2/Opt-B 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 DRM 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)