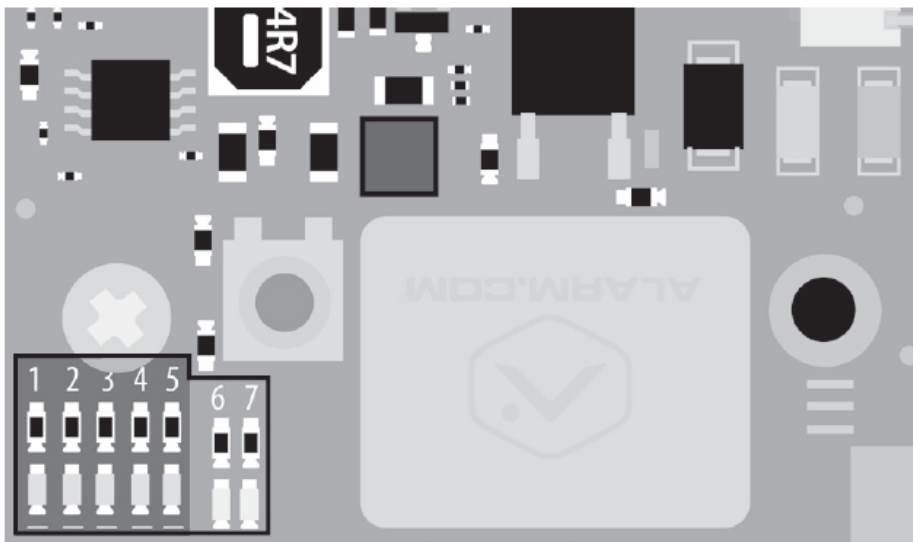


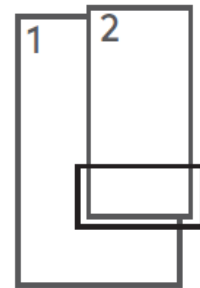


SEM210 TROUBLESHOOTING GUIDE

GATEWAY LED REFERENCE



*System
Enhancement
Module (SEM)*



BOTTOM OF ALARM.COM MODULE

DUAL-PATH SEM-DSC POWERSERIES LEDS

The Alarm.com Module LEDs can be used to indicate communication errors, panel communication, network communication, and signal strength.

LED	Function
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L1 General & Cellular Error LED

L1 flashes 1 to 8 times in a four-second interval to indicate

specific error conditions such as a network error, panel communication error, or radio error.

- | | |
|-----------|---|
| L2 | Broadband & Panel communication LED

L2 flashes every time the module communicates with the panel and flashes in patterns to indicate broadband troubles. |
| L3 | Cell Radio LTE communication LED

L3 flashes every time the cellular signal level is checked and when data packets are exchanged with Alarm.com and the LTE radio. |
| L4 | LTE signal level LED

L4 flashes zero to five times indicating the module signal strength, or toggles on/off when communicating with the Alarm.com servers. |
| L5 | Z-Wave error LED

L5 indicates Z-Wave states and errors. |
| L6 | Reserved for future use. |
| L7 | Reserved for future use. |

LED L1 (RED)

L1 flashes when an error is encountered. The number of flashes indicates the error number. If there are two or more errors at the same time, the errors flashes one after the other. The LED stays off for at least four seconds between errors.

Note: It may take up to 10 minutes before L1 detects and flashes an error code.

LED L1 ERROR DESCRIPTIONS AND SOLUTIONS

Number of flashes	Description
1	Alarm.com module cannot communicate with the panel. Perform a power cycle on the panel. If the error persists, contact Alarm.com CORE Technical Support.
2 then 4	The Alarm.com module provisioning process could not be completed. If the error persists, power cycle the system, then contact Technical Support.
2 then 5	The Alarm.com module provisioning process could not be completed because the module is currently roaming off the carrier's primary network.
3	The Alarm.com module is trying to register on the cellular network. If it persists for more than a few minutes, the module is having problems registering. Check L4 for signal level. If signal level is lower than 2 bars, change the panel's location or use a remote antenna option. If the signal is good, the module may be roaming on a network that does not partner with Alarm.com's cellular providers.
4	The Alarm.com module is registered on the cellular network but could not connect with Alarm.com. Contact Alarm.com CORE Technical Support.
5	The radio on the module is not working correctly. If this persists for more than a few minutes the module may need to be replaced. This error is extremely rare, so please verify that the module is flashing 5 times.
6	This indicates an error only if it persists for more than a minute. Otherwise, it's an indication that the module is resolving an unusual condition regarding communication with the cellular network.
7	The SEM is unable to access panel programming. Check panel wiring and installer code.
8	If this error persists, the account may have been set up incorrectly. Check that the serial number being used matches the serial number used to create the account. If the serial numbers are the same, contact Alarm.com CORE Technical Support.

LED L2 (YELLOW)

L2 flashes with every communication between the module and the panel and flashes in patterns to indicate broadband troubles. Normal pattern calls for a flash about every eight seconds. The following table describes the error flashes on L2.

Number of Flashes	Error and Solution
1	Flashes for each communication with the panel.
2	The module is unable to establish a connection with the router. Verify the wiring and power cycle the module. If this error persists, power cycle the router.
4	The module is unable to establish communication with Alarm.com.
5	Alarm.com is unable to reach the module, likely due to a local firewall.

LED L3 (GREEN OR YELLOW)

L3 flashes with every communication between the SEM and its radio unit in Idle mode, and with every communication with Alarm.com in Connected mode. In PowerSave mode, this LED flashes in unison with LED L2.

LED L4 (GREEN OR YELLOW)

L4 indicates the cellular signal level as a number of flashes (0 to 5 bars). The number of bars may not correspond to the number of bars shown on your cell phone. A level of 5 bars is obtained only in the strongest signal conditions. Signal level is updated every ten seconds if it fluctuates, or every 30 seconds if it is fairly stable.

If LED L4 is continuously flashing, the module provisioning process is in progress. LED L4 begins flashing to indicate signal level as soon as the provisioning process is complete.

If LED L4 is not flashing, this means one of the following:

- The Alarm.com module is in PowerSave mode
- The Alarm.com module just powered up
- There is no cellular coverage in the area

In Connected mode, LED L4 toggles on and off.

Important: Alarm.com recommends a steady signal level of two or higher for proper operation of the SEM.

LED L5 (YELLOW)

L5 indicates Z-Wave states and errors. If you can't add a device to the network, try deleting the device and re-adding it to the network. Contact Alarm.com Technical Support with additional issues.

The following table describes the Z-Wave LED status indicators number.

Number of flashes	Device status or error	Description
1	Successful add node/remove node/replication (lasts 60 seconds)	After receiving this signal leave all devices by the LTE module for one minute. Locks must be left next to the module for four minutes.
2	Delete Mode (lasts 120 seconds or until a device is deleted)	This mode can delete a Z-Wave device from a Z-Wave network. A device can only be in one network at a time and must receive a delete command before it can be learned into a new network.
3	Add node attempt failed because node already in network (lasts 60 seconds)	The device that was attempted to be added to a network is already in a network and must be deleted before it can join a new network.
4	Add Mode (lasts 120 seconds or until a device is added)	This mode can add a device to the local Z-Wave network. Devices cannot be added to a network if they are already a part of a network.
5	Replicate Mode	-

6	Learn mode error (lasts 60 seconds)	The device was not successfully added to the Z-Wave network.
7	No node info	-
8	No other nodes are in the network (lasts until a device is added to the network)	No devices have been added that can be controlled by the module yet. See above for instructions on how to add devices.