

Rev4.7 XT/XTi Module - LTE

ADC-470L-LTE

INSTALLATION GUIDE REV 1.0

Introduction

The LTE Module for Simon XT, XTi, XTi-5 and XTi-5i enables wireless reporting of all alarms and other system events from the Interlogix Simon control panel over a wireless (cellular) network. The module can be used as the primary communication path for all alarm signaling, or as a backup to a telephone line connection to the central monitoring station. The wireless alarm signaling and routing service is operated by Alarm.com. The module also features integrated support for Alarm.com's emPower™ solution with built-in Z-Wave capabilities and for Alarm.com's Image Sensor when the Image Sensor daughterboard is added. Two-way voice is also supported over LTE. The LTE Dual Path Module in addition to the primary cellular connection, supports adding Ethernet broadband as a secondary communication path in the event of an outage.

The module interfaces with the Simon XT, XTi, XTi-5 and XTi-5i panel boards, fits into a special compartment inside the panel, and is powered by the control panel and panel battery.

Contact Information

For additional information and support on Alarm.com products and services, please visit www.alarm.com/dealer or contact Alarm.com technical support at 1-866-834-0470.

Compatibility

The LTE and Dual Path LTE modules are compatible with all Simon XT (version 1.3 and up), XTi, XTi-5 or XTi-5i control panels.

Account Creation

Before installing an Alarm.com LTE Module in a Simon XT, XTi, XTi-5 system, a new customer account needs to be created with Alarm.com. We recommend creating the account at least 24 hours in advance of installation to ensure that the radio is activated prior to installation.

To activate an account go to www.alarm.com/dealer and login. Under the "Customers" heading at the top left of the page click on "Create New Customer". You will need the following customer information to create the account:

- Customer Address
- Customer Phone Number
- Customer E-mail
- Preferred login name for the customer
- Alarm.com Radio Serial Number

At the end of the account creation process you will be able to print a Welcome Letter for the customer that has their login information and temporary password for the Alarm.com website.

Installation

Installation consists of inserting the module into the panel, attaching the antenna, and performing an LTE phone test at the panel. See the Module Diagram at the end of this installation guide for a component overview.

Follow these guidelines during installation:

- Before affixing the panel to a wall, verify the LTE signal level at the installation location. On the XT panel, press and hold the 5 key for 10 seconds to view the LTE signal level. On the XTi panel, enter 'Programming' → 'Interactive Services' → 'Modules Status'. With either panel, module LED L4 blinks to indicate signal strength. (See Tables 1-3 for LED details.) An installation location with a sustained signal level of two or more bars is recommended.

- Do not exceed the panel total output power when using panel power for the LTE Module, hardwired sensors, and /or sirens. Refer to the specific panel installation instructions for details.
- Only one Alarm.com LTE Module can be used per Simon XT or XTi panel.
- The LTE Module draws a maximum of 30 mA average during normal operation. In PowerSave Mode, during or immediately following an AC power failure, the module will draw only 10 mA on average.
- Avoid mounting the panel in areas with excessive metal or electrical wiring, such as furnace or utility rooms.
- Leave 12 to 18 in. of open space around the module antenna.
- Do not install the control panel and module in a basement or other below-ground location. Doing so will negatively impact LTE signal strength.

Tools and supplies needed

You will need the following tools and supplies:

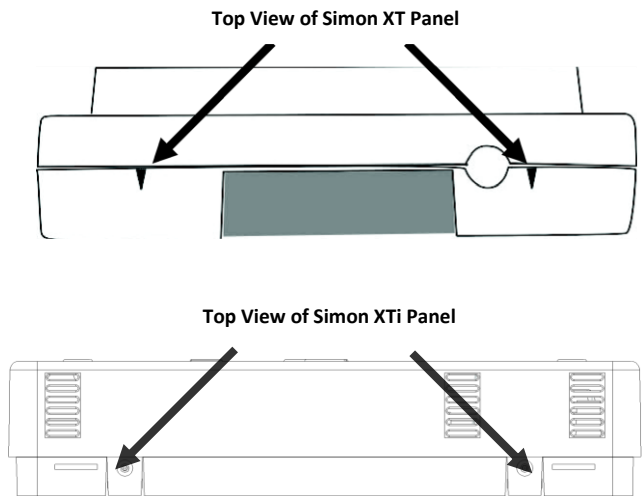
- Small flat-head and Phillips screwdrivers
- Screws (included)
- Antenna (included)

Module Insertion and Antenna Installation

Before module install, disconnect battery and AC power from the panel.

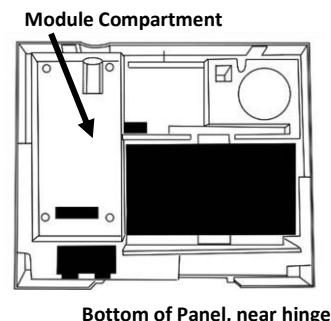
- 1) Open the panel by pressing the two tabs (Fig. 1) on the top of the XT or by lifting the tabs on the XTi panel.

Figure 1: Top View of Simon XT and XTi Panels



- 2) The module compartment can be found behind the front panel that swings down, to the left of the battery compartment as seen in Fig. 2 below.

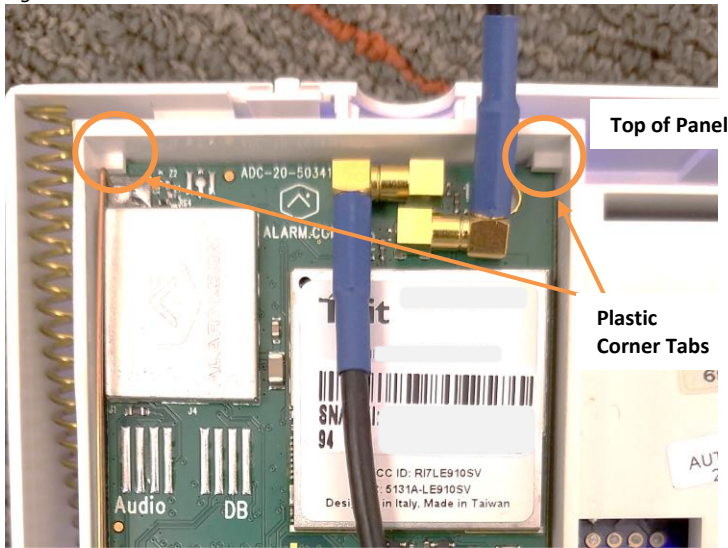
Figure 2: Module Compartment for Simon XT and XTi Panels



- 3) Push antenna end into open module connector to snap the antenna onto

the module. The module must be seated correctly *beneath the two small, plastic corner tabs*, as shown in Fig. 3, to ensure it fits into the compartment properly.

Figure 3: Module Plastic Corner Tabs

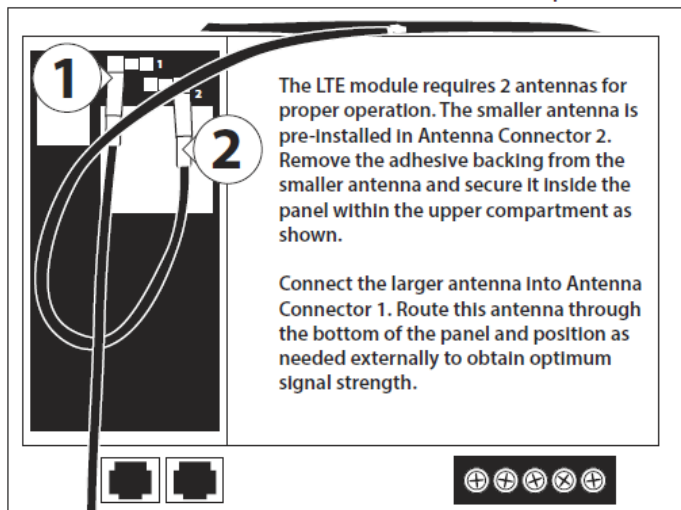


- 4) Insert the module by angling the end of the module where the antenna is attached downwards, making sure that the edge of the module sits below the plastic tabs (see Fig. 3). Once the module is seated evenly, carefully push the bottom of the module into the 8-pin connector beneath it.
- 5) Thread the antenna's wire through the channel in the bottom of the panel. This antenna can then be inserted into the wall behind the panel. The antenna should be placed at least 3 feet away from the panel, and in order to obtain optimal reception the antenna should be affixed as high up as possible.
- 6) The secondary antenna (pre-attached to the module) should be routed and placed as shown in Fig. 4.

Figure 4: LTE Antenna Routing and Placement

LTE Antenna Attachment

Top of Panel



Dual Path Installation

To use broadband Ethernet as a secondary communication path, connect the provided Ethernet dongle to the ethernet connector on the module.

Figure 5: Ethernet Dongle



Power Up

Reconnect panel battery and AC power. When an LTE Module is connected to a powered control panel, the LEDs at the bottom of the module will become active (see Table 1 on page 4). It may take a few moments after power up for the LEDs to become active. If the LEDs do not light up at all, ensure that the module has been fully inserted into the connector beneath it then perform a full power cycle by following these steps:

- 1) Disconnect the battery leads and unplug the panel power transformer from AC power.
- 2) Verify that the module is inserted securely and that the antenna is snapped-in completely.
- 3) Connect battery leads to the battery. On the XT, make sure to observe polarity (red to + and black to -) and to keep the wires outside of the tab holding them in place.
- 4) Plug the panel power transformer into the AC outlet.

It is important to plug the battery in before plugging in the transformer, otherwise the panel will issue a "System Low Battery" message regardless of the battery voltage level.

LTE Phone Test (Module Registration)

To initiate module communication with Alarm.com and the LTE network the first time, perform a "LTE phone test".

To perform a Phone Test on a Simon XT:

- 1) Scroll Down through the control panel menu until it displays "System Tests" and Press "OK" (↵ on XT version 1.2).
- 2) Enter the installer code (default 4-3-2-1), then "OK" (↵ on XT version 1.2).
- 3) Scroll down until the panel displays "Comm Test" and "OK" (↵ on XT version 1.2). The panel will display "LTE Comm Test in progress" to indicate the test has been initiated.

On Simon XT with module versions 183 and up:

- 1) On the main screen with the panel disarmed, hold down the '3' key for 5 seconds.
- 2) The panel will display "LTE Comm Test in progress" to indicate the test has been initiated.

To perform a Phone Test on a Simon XTi/XTi-5:

- 1) Press the Status & Settings icon  on the lower right of the home screen.
- 2) Scroll Down and press "Programming".
- 3) Enter the installer code (default 4-3-2-1), then "OK".
- 4) Press "System Tests".
- 5) Press "Comm Test". The panel will display "LTE Comm Test in progress" to indicate the test has been initiated.

The Simon XT/XTi panel will let you know when the LTE Phone Test has completed by displaying "LTE Test signal sent OK" on the panel screen. This indicates that Alarm.com has received and acknowledged the signal. This does not guarantee that the signal went through to a central station; it confirms that the Alarm.com Operations Center received the signal. The central station should be contacted directly to verify that the signal was received on the correct account and that the Central Station routing settings have been set up correctly. The signal may not go through to the central station if (a) the Central Station Account settings were entered incorrectly on the Alarm.com Dealer Site or (b) if Alarm.com was unable to send the signal successfully to the Central Station receivers. In these cases the panel will show a "Fail to Communicate" message.

Panel Settings Automatically Change w/ LTE Module

Some panel settings are changed automatically when the LTE module is connected to the control panel. These settings should not be altered. They are:

Sensor/Zone 40: Upon initial module power up, the panel recognizes and learns the LTE module as sensor/zone 40 and assigns "LTE Module" as the sensor/zone name. Any device previously residing in panel memory as sensor/zone 40 is automatically deleted and must be learned into panel memory using any available sensor/zone number between 01 and 39.

Clock: The LTE module sets the panel clock when it connects to Alarm.com and then updates it every 18 hours. It is important to select the correct panel time zone on the Alarm.com website, or the panel time will not be accurate. If a system is powered up before the customer account has been created, the time zone will default to Eastern Time.

Troubleshooting: Module Status Information

Module status information for verifying and troubleshooting module connection status or errors can be found through the Interactive Services menus on the XT and XTi panels. On Simon XT 1.3 & up, go to the 'System Test' → 'Interactive Services' → 'LTE Module Status' menu. On the XTi, this information can be accessed through 'Programming' → 'Interactive Services' → 'Module Status'.

See [Table 1](#) below for potential module statuses. See [Table 3](#) on page 4 for more information on the referenced LED error pattern.

Table 1: LTE Module Statuses

Idle	Most common state
Roaming	Roaming on partner network.
PowerSave Mode	AC Power is Down
Registering...	Same as 3 flashes on LED L1
Connection Error	Same as 4 Flashes on LED L1
Radio Error	Radio is not operating correctly, same as 5 flashes on LED L1
Server Error	Same as 8 flashes on LED L1
Connected	Currently talking to Alarm.com Servers
Connecting...	In the process of connecting to Alarm.com
Updating...	Updating Signal Level

In addition, some of the information can be retrieved on the Simon XT via long key presses from the keypad. Press and hold the following panel keys for 10 seconds to display the given information on the panel display. Most messages are displayed for less than 30 seconds but can be cut short by pressing the # Key for 10 seconds.

Table 2: LTE Module Statuses

1 Key	10-digit module serial number. This number is needed to create the Alarm.com customer account.
2 Key	Module firmware version. (e.g. 4183a)
3 Key	Performs Phone Test
5 Key	Wireless signal strength level and module status or error, if any. The panel will display bars for the signal level (0 to 5) and a number (2 to 31) followed by the Mode it is in. (See "LTE Module Statuses" on Table 1).
6 Key	Battery voltage as read by the module, to two decimal places, and the AC power status. (e.g. Battery: 6.79v, AC Power OK)
8 Key	LTE frequency used by the module: "High" = 1700MHz; "Low" = 700 MHz.

Troubleshooting LEDs

Status LEDs indicate network and module status. Figure 5 below shows the location of the status LEDs on the LTE module.

Figure 5: Status LEDs

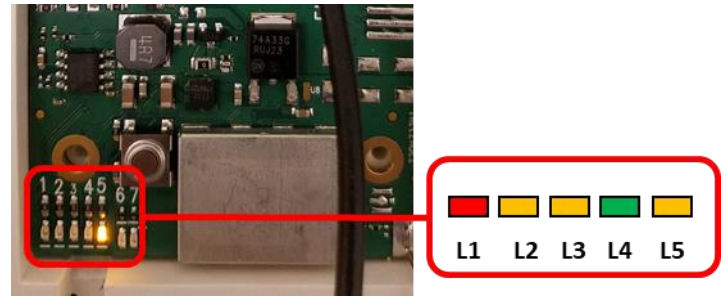


Table 1 below describes the LED functions.

Table 1: LED Functions

LED	Function
L1	Error LED. Flashes 1 to 8 times in an 8-second interval to indicate specific error. See Table 2 for errors and common fixes.
L2	Panel Communication and Z-Wave status messages. Flashes every time the module communicates with the panel and flashes in patterns to indicate Z-Wave status.
L3	LTE Communication. Flashes every time the LTE signal level is checked and when packets are exchanged with Alarm.com.
L4	LTE Signal Level. Flashes 0 to 5 times to indicate signal strength, or toggles on/off slowly when communicating with Alarm.com servers.
L5	Z-Wave Error LED. See Table 3 for error descriptions.

LED Details

LED L1 (red)

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

Table 3: Errors flashed on L1 (red)

Number of flashes	Error and solution
1	Module cannot communicate with the panel. Perform a power cycle on the panel. If the error persists lift the module out of the panel and re-insert it. If the error is still observed try a different module. Finally, if that does not fix the problem try a different panel.
2 then 4	The module provisioning process could not be completed.
2 then 5	The module provisioning process could not be completed because the module is currently roaming on the carrier's network.
3	The module is trying to register on the LTE 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.
4	The module is registered on the LTE network but cannot connect with Alarm.com. Contact Alarm.com Technical Support.
5	Radio portion of 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 verify that the module is flashing 5 times.

6	This is an error only if it persists for more than a minute. Otherwise, it's just an indication that the module is fixing an unusual condition regarding communication with the LTE network.
7	The module is not compatible with this panel type. Please insert a compatible module.
8	If it persists, the account may have been set up incorrectly. Contact Alarm.com Technical Support. You will be asked to check the serial number of the module.

LED L2 (yellow)

L2 flashes with every communication between the module and the panel. Normal pattern calls for a series of quick flashes every two seconds in Idle

Mode or four seconds in PowerSave Mode. It also occasionally flashes in patterns to indicate Z-Wave status. See the table below for a description of various possibilities.

Table 4: Z-wave LED status indicators

LED 2	LED 5	Device status or error	Description
4-blink		Add Mode (lasts 120 seconds or until a device is added)	In this mode you 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
2-blink		Delete Mode (lasts 120 seconds or until a device is deleted)	In this mode you can delete a 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
Solid		Successful add node/remove node/replication (lasts 60 seconds)	After receiving this signal leave all devices by the LTE module for 1 minute. Locks must be left next to the module for 4 minutes
Solid with one blink		Add node attempt failed because node already in network (lasts 60 seconds)	Device you attempted to add to a network is already in a network, and must be "deleted" before it can join a new network
	2-blink	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 LTE module yet. See above for instructions on how to add devices
	5-blink	Learn mode error (lasts 60 seconds)	The device was not successfully added to the Z-Wave network.
	6-blink	No Home ID present (lasts until the module connects to Alarm.com and is configured)	When the LTE module first connects to Alarm.com it is configured with a necessary unique network ID

LED L3 (yellow)

L3 flashes with every communication between the module 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 2.

LED L4 (green)

L4 indicates the LTE signal level as a number of flashes (0 to 5 bars). The number of bars may not correspond to the 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 L4 is not flashing it indicates one of the following states:

- The module is in PowerSave Mode
- The module just powered up
- There is no LTE coverage in the area. Alarm.com recommends a steady signal level of 2 or higher for proper operation of the module.

In Connected Mode, the LED toggles on and off.

LED L5 (yellow)

L5 indicates Z-Wave errors. See Table 3 above for more details.

Various Module States (modes)

There are three module states, or modes, as described below:

Idle Mode. AC power is OK and the module is not currently talking to Alarm.com.

L1 - Flashes errors, if any.

L2 - Communication with panel.

L3 - Communication with radio unit.

L4 - Signal level (0 to 5 bars).

L5 - Flashes errors, if any

PowerSave Mode. The module just powered up, AC power is down, or AC power was recently restored and the battery is recharging. The module is fully functional and will go into Connected Mode as soon as a signal needs to be sent. Press and hold the 5 Key for 10 seconds to switch the module into Idle Mode and update the signal level reading. The system will go into Idle Mode every 2 hours to check for any incoming messages.

L1 - Inactive.

L2 - Communication with panel.

L3 - Same flashing pattern as L2.

L4 - Inactive.

L5 - Inactive

Connected Mode. The module is currently talking to Alarm.com. The module stays in Connected Mode for at least four minutes after reporting an event to Alarm.com, unless the 5 Key is pressed and held for 10 seconds, which will cause the module to go back to Idle Mode.

L1 - Flashes errors, if any.

L2 - Communication with panel.

L3 - Communication with Alarm.com.

L4 - Alternates two seconds on, then two seconds off.

L5 - Inactive

Sleep Mode. The panel is not connected to AC power, or there is an AC power failure, and the battery level is low. The module will connect to Alarm.com to send a signal, but will otherwise draw almost no power.

Note: If the LTE module is powered down for a short period of time, buffered messages from Alarm.com may be received when module power is restored.

Improving Wireless Signal Strength

Guidelines for optimal wireless signal strength:

- Install the module above ground level, as high up as possible within the structure.
- Install the module near or adjacent to an outside-facing wall of the structure.
- Do not install the module inside a metal structure or close to large metal objects or ducts.
- Make sure to follow the antenna positioning guidelines that are included with the antenna. Certain antennas must be oriented a specific way in order to receive signals.
- Upgrade the antenna. If using the 1/4 wave antenna included with the LTE module, upgrade to a remote cable antenna. Contact Alarm.com technical support for antenna options.

As you make changes to the module location or antenna to improve signal strength, request updated signal readings to verify changes. To request an updated reading, press and hold the “5” key for 10 seconds on the XT or press the ‘Refresh’ button in the “Module Status” menu on the XTi.

Note: If you have an XT 1.2 panel, you can still access some of the functionality found in the Interactive menus via special key presses (see “Appendix 1: Special Key Presses on Simon XT 1.2” at the end).

Table 5: Simon XT 1.3 and up Interactive Services Menu

Menu	Description
System Programming + Installer Code	Scroll down to System Programming, enter the Installer Code and press OK
- Interactive Services	Scroll up to Interactive Services and press OK
-- LTE Module Status	Scroll down through the various LTE module information screens
--- Radio	Signal level, connection status, roaming status, and errors (if any)
--- LTE Freq.	LTE frequency used by the module.
--- LTE Band	By default the module will choose the best LTE band.
--- Battery	Current battery voltage and AC power status
--- SN	Module serial number. Needed to create or troubleshoot an Alarm.com account.
--- SIM card	IMSI number. Sometimes needed to troubleshoot an account
--- Version	LTE module firmware version and sub-version. Example: 4183a, where 4 = XT, 183 = module firmware version, a = subversion (the label on the module will say X183)
-- Z-Wave Setup ²	This menu is used to add, remove, and troubleshoot Z-Wave devices and networks. To control Z-Wave devices via the Alarm.com website and smart phone apps, you will also need to enable Z-Wave services on the account.
--- Number of Z-Wave Devices ²	The total number of Z-Wave devices currently known to the LTE module.
--- Add Z-Wave Device ²	Press OK to enter Z-Wave Add Mode. Make sure the device you are trying to add is powered up and within 3 to 6 feet of the Simon XT or XTi panel. Refer to the manufacturer’s instructions for button presses required to enroll device.

--- Remove Z-Wave Device ²	Press “OK” to remove an existing Z-Wave device, or to “reset” a Z-Wave device that was previously learned into a different Z-Wave network. Previously enrolled devices must be reset before they can be enrolled into the module.
--- Z-Wave Home ID ²	Press “OK” to query the Z-Wave network Home ID. If the ID is 0, verify that the module has communicated with Alarm.com and that the Alarm.com account is set up for Z-Wave.
-- Account Creation	This menu is available only to installers who have their own Alarm.com account creation system. You must enter a Technician ID and a Lead ID in order to use this menu.
--Image Sensor Setup ¹	An Image Sensor daughterboard is required to enable Image Sensor capabilities on the module. This menu is only active if an Image Sensor daughterboard is connected.
--- Learn Image Sensor ¹	Press “OK” to enter Add Mode. Enroll the Image Sensor by inserting batteries or resetting.
--- Delete Image Sensor ¹	Press “OK” and scroll to the Image Sensor to delete. Press “OK” to delete.
---Image Sensor Settings ¹	Press “OK” and scroll to the Image Sensor of interest. Press “OK”.
----Image Sensor #[x] ¹	[x] is the sensor ID. Press “OK” to view information on this Image Sensor.
----[Power Information] ¹	Gives information on the Image Sensor’s battery level and power status.
----Signal ¹	The signal strength of the communication between the Image Sensor and the Image Sensor daughterboard.
----Test PIR ¹	Press “OK” to put the Image Sensor in PIR Test Mode.
----PIR Sensitivity ¹	Press “OK” to view current selection. Scroll down to view available sensitivity levels. Press “OK” to select.
-- Dealer Logo Update	This menu is used to upload a Dealer logo to the two-way talking touchscreen (2WTTS). (Only available for dealers who have set up this feature with Alarm.com.) Press “OK”. If a logo is NOT available for upload to the 2WTTS, you will see “Logo update not available”. If a logo is available, you will be asked to wait until the panel’s LEDs start flashing, then wait until the panel’s LEDs stop flashing – at which time the logo should show on the 2WTTS.
System Test + Installer Code	Scroll down to System Test, enter the Installer Code and press OK
- Interactive Services	Scroll up to Interactive Services and press OK

-- Sensor Reporting Test	This menu is used to automate the process of confirming that all sensors report correctly to the Central Station. It will put the account on test and request the list of sensors that did not report correctly. It is available only to installers who have integrated their sensor testing process with the Central Station and with Alarm.com
-- AVM/LTE Test	This menu is used to automate the process of testing AVM over the LTE link. It is available only to installers who have integrated their wireless AVM testing process with the Central Station and with Alarm.com
-- LTE Module Status	See Installer Programming section above.
System Test + Master Code	Scroll down to System Test, enter the Master Code and press OK
- Interactive Services	Scroll up to Interactive Services and press OK
-- LTE Module Status	See Installer Programming section above.
-- Z-Wave Setup	See Installer Programming section above.
-- Thermostat Settings	This menu is used to troubleshoot the interaction between Z-Wave thermostats and the two-way wireless talking touch screen (2WTTS).
--- Thermostat 1, 2, 3	Select the thermostat and press OK.
---- Node ID	The Z-Wave node id of the Z-Wave thermostat. If 0, then the Z-Wave thermostat has not been found. You may need to troubleshoot the Z-Wave network via the Z-Wave Setup menu. Press "OK" to have the module try to find the thermostat again.
---- Mode	The Z-Wave thermostat's current mode (Off, Heat, Cool)
---- Setpoints	The current heating and cooling setpoints of the Z-Wave thermostat. These are the temperature thresholds that determine when the heating or cooling unit will turn on.
---- Fan	The current fan mode (Auto, On)
---- Schedules	Shows whether the thermostat is running on a schedule (On), or is using a fixed setpoint. Note that these thermostat schedules must be set from the Alarm.com website. Some Z-Wave thermostats allow setting schedules directly at the thermostat. These built-in schedules cannot be set or controlled via the website or via the touch screen (2WTTS).
---- Update 2WTTS	Press OK to force an update of the thermostat information shown on the touch screen (2WTTS). Note that these updates may take several minutes to complete. To speed up the process, go into System Programming. This puts the panel in high-speed communication mode with the touch screen.

---- Remove From 2WTTS	To remove the association between the Z-Wave thermostat and the touch screen (2WTTS). This will hide the Thermostat page on the 2WTTS.
---- Last Temp. Read	For troubleshooting only. Shows how many unsuccessful attempts were made by the LTE module at trying to communicate with the Z-Wave thermostat. A low number of 0 or 1 is normal.
-- Request Weather Update	Press OK if the weather forecast is not showing on the touch screen (2WTTS).

¹ All Image Sensor menus are only available when an Image Sensor daughterboard has been connected to the module. An Image Sensor daughterboard is required to enable Image Sensor functionality. An interactive Alarm.com account with an Image Sensor service plan is required for image capabilities and features.

² Refer to the emPower™ installation instructions and guides on the Alarm.com Dealer Site for more information on Z-Wave enrollment and troubleshooting.

Table 6: XTi Interactive Services Menu

Menu	Description
System Programming + Installer Code	Scroll to Programming and enter the Installer Code.
- Interactive Services	Select Interactive Services.
-- Module Status	Provides status and troubleshooting information for the LTE module.
-- Image Sensor ¹	Enroll, troubleshoot and configure Image Sensors. This menu can also be used to retrieve images from the enrolled Image Sensors.
---Status ¹	View signal strength, PIR, battery and other information about each Image Sensor enrolled.
----Set PIR Sensitivity ¹	View and configure the PIR sensitivity for the Image Sensor.
---Privacy ¹	Remove all Image Sensor images currently stored on the XTi panel. (This does not affect image storage on the Alarm.com online account.)
--- Add ¹	Enroll the Image Sensor by inserting batteries or resetting.
---Image List ¹	View list of images captured by the Image Sensor(s) on the system and request to have specific images sent to the panel for local viewing.
--- Test ¹	Put the Image Sensor in PIR Test Mode (LED on sensor illuminates when activated) or request an "Installer Peek-In Now" to test image capture.
--- Delete ¹	Delete Image Sensors from the panel.
--Set Dealer Logo	Send the dealer logo to the panel and touch screen. (Only available for dealers who have set up this feature with Alarm.com.)
-- Weather Update	Request a Weather Update if the weather forecast is not showing on the XTi touch screen. To speed up the process, stay in Programming. This keeps the panel in high-speed communication mode with the touch screens.

-- Z-Wave ²	Used to add, remove, and troubleshoot Z-Wave devices and networks. To control Z-Wave devices via the Alarm.com website and smart phone apps, you will also need to enable Z-Wave services on the account.
--- Add Device ²	Add Z-Wave devices to the module's network. Make sure the device you are trying to add is powered up and within 3 to 6 feet of the Simon XTi panel. Read the manufacturer's instructions on what button to press on the device to enroll it.
--- Remove Device ²	Remove an existing Z-Wave device, or to "reset" a Z-Wave device that was previously learned into a different Z-Wave network, before you can learn it into the LTE module.
---Update 2WTTS	Press Update 2WTTS to force an update of the thermostat, lights or locks information shown on the touch screen (2WTTS). Note that these updates may take several minutes to complete.
----Thermostats	View thermostat data and update/remove thermostats from display on the panel and touch screens.
----Lights	Update the lights list shown on the panel and touch screens.
----Locks	Update locks list shown on panel and touch screens and pair locks with their door contact sensor.
--- Advanced ²	Provides additional functionality for advanced Z-Wave troubleshooting and configuration.
---- Rediscovery ²	Network rediscovery allows the system to determine the most efficient communication patch between Z-Wave devices. (During this process the Z-Wave network is busy and cannot respond to other commands.)
---- Replicate Mode ²	Initiates replicate mode on the panel.
---- Send Node Info ²	For advanced use only. Do not use unless directed to do so by Alarm.com.
---- Refresh Thermostat ²	Requests updated thermostat data.
--Advanced Menu	This menu houses advanced LTE module tasks.
---Auth. Code	Requests an authorization code from Alarm.com for use on the Image Sensor Installer Test Site. (www.alarm.com/imagesetup).
---Create Account	This menu is available only to installers who have their own Alarm.com account creation system. You must enter a Technician ID and a Lead ID in order to use this menu.
System Programming + Master Code	Scroll to Programming and enter the Master Code.
- Interactive Services	Select Interactive Services.
-- Module Status	Provides status and troubleshooting information for the LTE module.

-- Image Sensor	This menu is used to view the status of and test Image Sensors. This menu can also be used to retrieve images from the enrolled Image Sensors.
---Status	View signal strength, PIR, battery and other information about each Image Sensor enrolled.
---Privacy	Clear all Image Sensor images currently stored on the XTi panel. (This does not affect image storage on the Alarm.com online account.)
---Image List	View list of images captured by the Image Sensor(s) on the system and request to have specific images sent to the panel for local viewing.
--- Test	Put the Image Sensor in PIR Test Mode (LED on sensor illuminates when activated) or request an "Installer Peek-In Now" to test image captures.
-- Weather Update	Request a Weather Update if the weather forecast is not showing on the XTi touch screen. To speed up the process, stay in Programming. This keeps the panel in high-speed communication mode with the touch screens.
-- Z-Wave ²	Used to add, remove, and troubleshoot Z-Wave devices and networks. To control Z-Wave devices via the Alarm.com website and smart phone apps, you will also need to enable Z-Wave services on the account.
--- Add Device ²	Add Z-Wave devices to the module's network. Make sure the device you are trying to add is powered up and within 3 to 6 feet of the Simon XTi panel. Read the manufacturer's instructions on what button to press on the device to enroll it.
--- Remove Device ²	Remove an existing Z-Wave device, or to "reset" a Z-Wave device that was previously learned into a different Z-Wave network, before you can learn it into the LTE module.
---Update 2WTTS	Press Update 2WTTS to force an update of the thermostat, lights or locks information shown on the touch screen (2WTTS). Note that these updates may take several minutes to complete.
----Thermostats	View thermostat data and update/remove thermostats from display on the panel and touch screens.
----Lights	Update the lights list shown on the panel and touch screens.
----Locks	Update locks list shown on panel and touch screens and pair locks with their door contact sensor.
--- Advanced ²	Provides additional functionality for advanced Z-Wave troubleshooting and configuration.

---- Rediscovery ²	Network rediscovery allows the system to determine the most efficient communication patch between Z-Wave devices. (During this process the Z-Wave network is busy and cannot respond to other commands.)
---- Replicate Mode ²	Initiates replicate mode on the panel.
---- Send Node Info ²	For advanced use only. Do not use unless directed to do so by Alarm.com.
---- Refresh Thermostat ²	Requests updated thermostat data.

¹All Image Sensor menus are only available when an Image Sensor daughterboard has been connected to the module. An Image Sensor daughterboard is required to enable Image Sensor functionality. An interactive Alarm.com account with an Image Sensor service plan is required for image capabilities and features.

²Refer to the emPower™ installation instructions and guides on the Alarm.com Dealer Site for more information on Z-Wave enrollment and troubleshooting.

Walking the Customer through New User Setup on the Web

This section describes how to help your customer set up their website account, and only applies to customers on an interactive service plan with an online account. (Skip this step for customers using the module for wireless signaling only).

Before the customer can configure their website account, the Alarm.com account for that customer must be created on the Dealer Site, and the LTE module associated with the account must be installed successfully.

To log in and access their account, the customer can go to www.alarm.com (or custom dealer website address) to complete the new subscriber setup procedure.

The customer will need the following:

- The website login and temporary password included on the Alarm.com *Welcome Letter* generated when the account was created by the Dealer
- A list of their system sensors and touch screens with corresponding zone IDs
- At least one phone number and e-mail address where notifications can be sent

Note: At least one sensor must be learned into the panel to complete the new subscriber setup. If not all sensors and touch screens were learned in before powering up the module, an updated sensor list must be requested by performing an LTE phone test or requesting an updated equipment list from the Dealer Site.

Specifications

Compatible	Simon XT panels with software versions 1.3 and later and Simon XTi
Power requirements	6V nominal
Standby current	30mA (10mA in PowerSave Mode)
Peak current	1.7 A
Operating temperature	32 to 120°F (0 to 49°C)
Storage temperature	-30 to 140°F (-34 to 60°C)
Max. relative humidity	90% non-condensing
Cellular network	LTE – Verizon LTE – AT&T, 3G HSPA – AT&T
Dimensions	(H x W) 4 1/16 x 1 7/8 in.

Regulatory Information

Listings	FCC ID: YL6-143470L, IC: 9111A-143470L
This device contains	FCC ID: R17LE910NAV2, IC: 5131A-LE910NAV2

Changes or modifications not expressly approved by Alarm.com can void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:

(1) This device may not cause interference

(2) This device must accept any interference, including interference that may cause undesired operation of the device

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Module Diagram

