resideo

AlarmNet CELL-ANT3dB
Remote Weatherproof Antenna Kit

Installation and Setup Guide

General Information

CELL-ANT3dB supports 30 global cellular frequency bands for 4G LTE, 3G WCDMA and CDMA. It should be used on installations where the antenna must be mounted at some distance from the communicator. The antenna is rated for outdoor installations but can also be mounted in attics, plenums and other indoor spaces.

Signal Strength

For reliable service, the communication module should only be installed in locations where there is satisfactory signal strength. The signal strength value is measured in dBm.

For the VISTA and Safewatch Pro Series controls the signal strength can be viewed on the 7720P Programming Tool, by using the *shift <E>* command. The signal strength (green) LED lights steady to indicate satisfactory signal strength.

For the L3000, L5000, L5210, L7000, PROA7 Series, the signal strength value can be viewed through AlarmNet 360. Go to www.alarmnet360.com.

dBm is displayed as a negative value. A value closer to 0 represents a stronger signal. (i.e., Signal strength of -60 dBm is stronger than that of -100 dBm.)

The CELL-ANT3dB Kit includes the following items:

CELL-EXTCX	MMCX-M to SMA-F Cable (p/n 600-00494V1)
	SMA-M to SMA-F Coaxial Adapter (p/n R300-11296)
	Cable tie (2) (p/n P3171)
CELL-EXT	u.FL to SMA Cable (p/n 600-00278)
	Antenna Cable Removal Tool (p/n 700-03513)
WA7626-CA	SMA to N Cable
Antenna	LTE 50ohm, 100w (p/n 900-03021 with N7197 Bracket OR p/n 900-03137 with 700-05655 Bracket)

Additionally, an RF extension cable is required.

7626-50HC	50ft RF Extension Cable
7626-25HC	25ft RF Extension Cable
7626-5	5ft RF Extension Cable

For the correct cable applicability for your installation refer to the table below:

LTE MODULE	CABLE	Panel Compatibility
PROLTE-A PROLTE-V PROLTE-CN	CELL-EXTCX (600-00494V1)	PROA7 Series
LTE-L57-V LTE-L57-A	CELL-EXT (600-00278)	L5210, L7000, L5210-CN, L7000-CN
LTE-L3A	CELL-EXT (600-00278)	L3000
LTE-XV LTE-XA LTE-XC	CELL-EXT (600-00278)	VISTA-15P/20P128FBP/250FBP, VISTA-15PCN/20PCN/128BPCN
LTE-IV LTE-IA LTE-IC	CELL-EXT (600-00278)	VISTA-15P/20P128FBP/250FBP, VISTA-15PCN/20PCN/128BPCN
LTEM-XV LTEM-XA LTEM-XC	CELL-EXT (600-00278)	VISTA-15P/20P128FBP/250FBP, VISTA-15PCN/20PCN/128BPCN

Installation Guidelines

Use these guidelines to maximize the performance of the communication module.

- Find the best coverage before final mounting by moving to several locations while monitoring the signal strength.
- The best signal strength can usually be found at the highest point in the building on an exterior wall. Avoid the basement.
- Do not mount the module on or near large metal objects such as steel I-beams, HVAC ducts, etc.

If consistent signal strength cannot be found with the internal antenna, an external antenna should be used.

The antenna is an exterior weatherproof antenna that can be mounted up to 50 feet away from the radio when the proper coax cable is used. Refer to provided list for coax cable selection. Install the antenna as follows:

1. Measure and record the communication modules signal strength using the internal antenna for reference.
2. Disconnect all power from the unit including the battery.
3. Remove plastic plug from the SMA mounting hole on top of the communication module housing and insert the SMA end of the adapter cable. Secure the SMA connector with the included nut.
4. Plug the u.FL connector on the other end of the adapter cable into the communication module's external antenna port and route cable as shown.
5. Attach the antenna to the mounting bracket as shown in Figure 1.
6. Find a suitable location so that the antenna will be mounted vertically. The best antenna location is usually at the highest point in the building.
   - Avoid the basement.
   - Avoid mounting on or near large metal objects.
7. Route the coax cable and make all required connections.
8. Restore power to the unit and check that the minimum signal strength (green) LED lights steady and compare the new value to the value recorded in Step 1.
9. Adjust the location of the antenna if needed until the minimum signal strength LED lights steady green.
10. Permanently mount the antenna vertically using the hardware as shown. The included silicon rubber tape is used to waterproof the antenna connection..

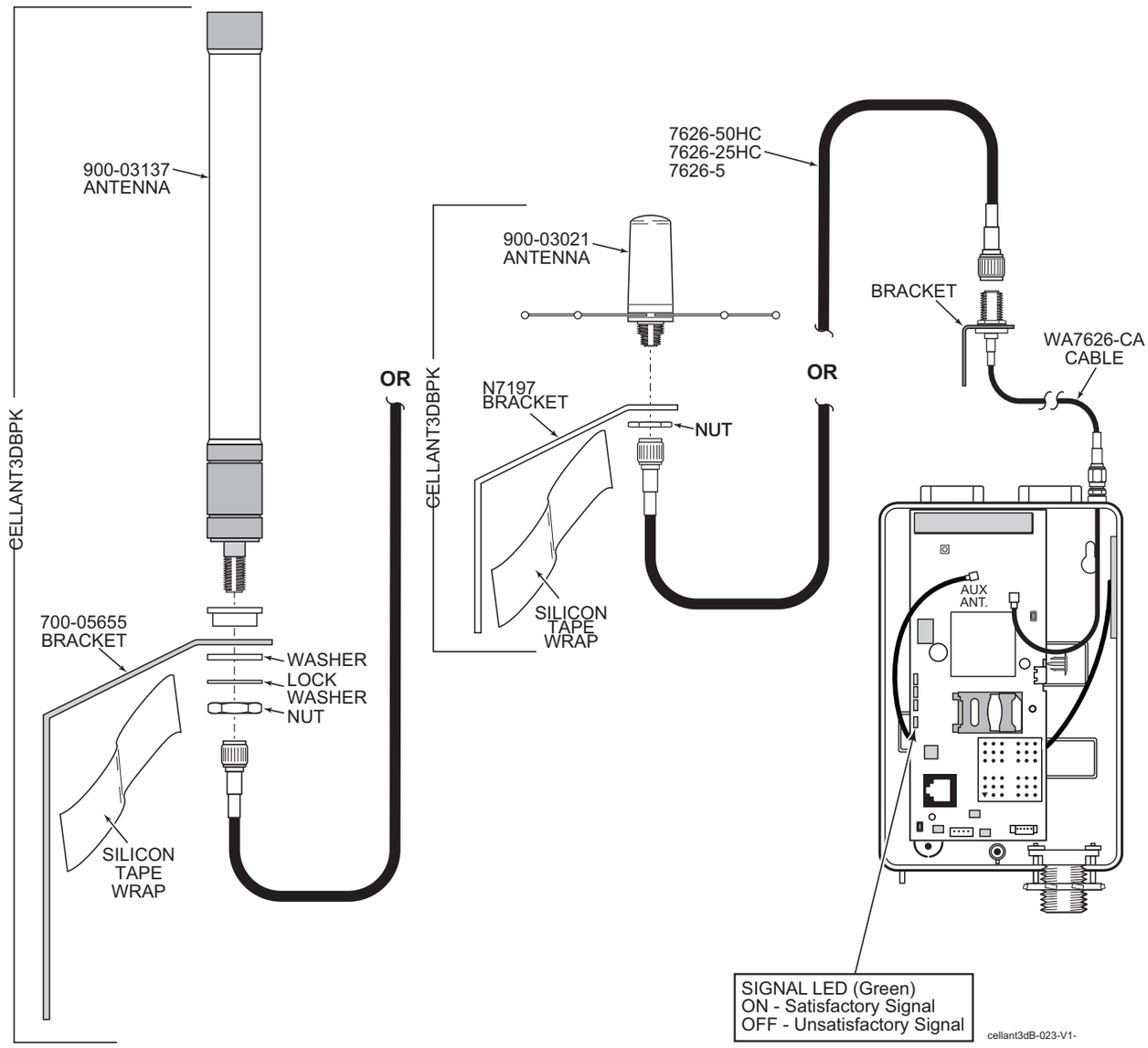
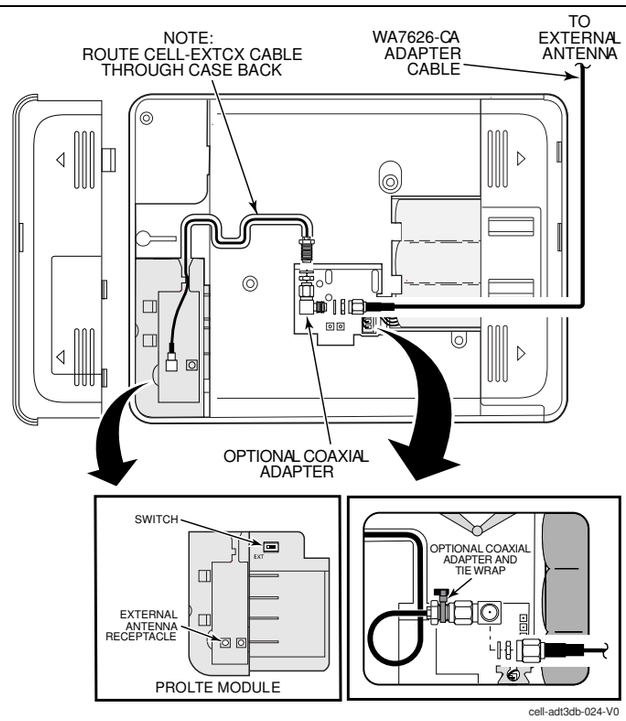


Figure 1 – CELL-ANT3dB Remote, Weatherproof Antenna
(LTE-X Series shown; see applicable section for connecting to other communication modules)

PROA7 Series Installation

Install the antenna

1. Power down the Control Panel. Refer to the PROLTE Series Wireless Communication Module Installation Guide for Replacing the Module (P/N 800-25165).
2. Remove the screw retaining the module (if installed).
3. Remove the PROLTE module (if installed).
4. Plug the MMCX end of the CELL-EXTCX cable into the module's external antenna port and route the cable as shown.
5. Set the switch on the module to EXT.
6. Install the module in the panel and secure with the screw.
7. Route the SMA connector through the back case.
8. Connect to CELL-EXTCX cable and the WA7626-CA cable to the (optional) Coaxial adapter or directly to one another.
9. Secure the Coaxial adapter to the Control Panel using the provided tie wrap (if required).
10. Permanently mount the antenna.
11. Reconnect the backup battery and plug in the power supply.
12. Install the rear case and secure with the screw.
13. Perform a Communication Test.



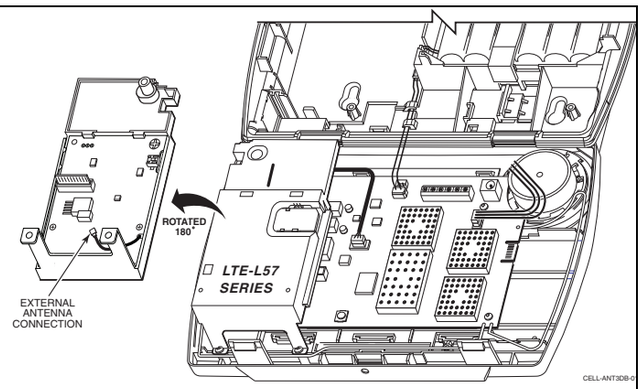
L5210 and L7000 Controls

Remove the RF Cable from the PC Board

1. Unplug the power supply from the wall outlet, and open the control panel cover.
2. Release the front case from the back case by depressing the two locking tabs at the top of the unit with the blade of a medium size screwdriver.
3. Disconnect the battery connector from the receptacle on the PC board.

Note: Proceed to step 4 if a communications module is already installed in the control. If this is a new installation, proceed to step 6.

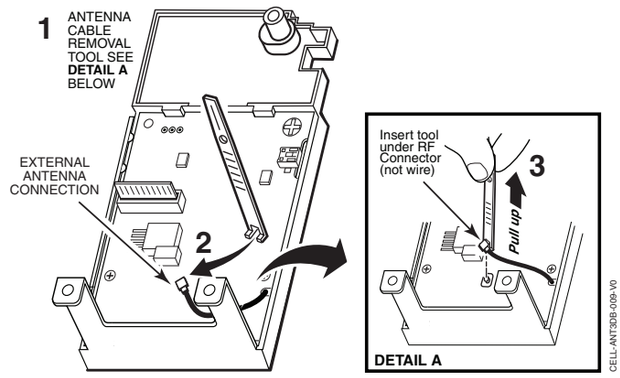
4. Remove three screws that secure the module to the control.
5. Remove the module from the control and flip over.



6. Locate the RF cable and slip the Antenna Cable Removal Tool (p/n 700-03513) under RF Cable connector as shown.

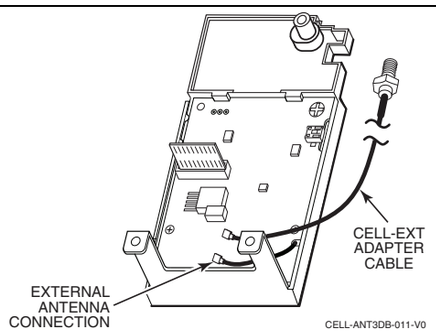
DO NOT use the tool to <u>pry</u> the connector loose. Instead, <u>pull</u> directly upward, perpendicular to the circuit board. Do not pull on the cable. USE CAUTION not to damage the adjacent components when inserting the Antenna Cable Removal Tool.

7. Pull directly upwards until the connector detaches from the module's receptacle as shown in Detail A. (This cable is no longer needed.)

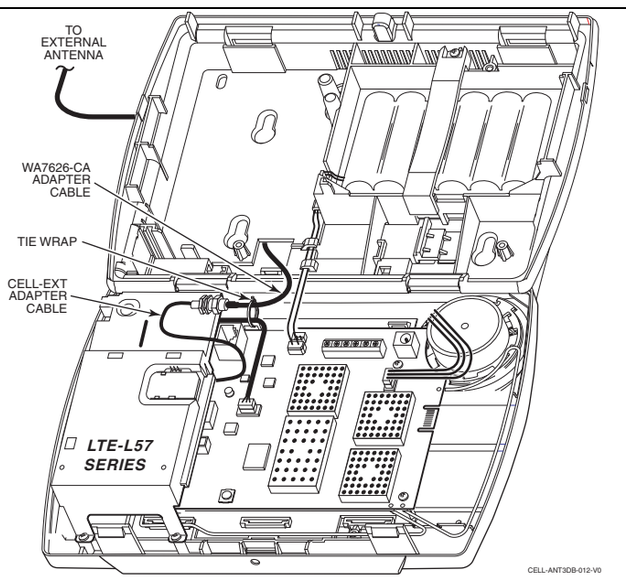


Install the CELL-EXT Adapter Cable on the PC Board

1. Connect the CELL-EXT cable to the module's receptacle as shown.
2. Holding the cable between the thumb and middle finger, with the index finger on the back of the connector.
3. Align the connector vertically with the receptacle (the cable should be leading away from the module).
4. Gently press directly downward to mate both connectors. There should be a "snap" to confirm the mating.
5. Flip the module over and reinstall it in the plastic housing.



6. Install the module in the control. Ensure that the connector board is properly seated into the receptacle on the control and the CELL-EXT cable is routed properly as shown.
7. Secure the module in the control with the three screws.
8. Route the external antenna cable through the control rear case and connect the CELL-EXT cable to the WA7626-CA adapter cable.
9. Route the CELL-EXT cable and secure it to the tie wrap point on the control with the provided tie wrap as shown.
10. Permanently mount the external antenna.
11. Connect the battery connector to the receptacle on the PC board.
12. After the wiring connections are made, snap the front and back case closed.
13. Plug the power supply into a 24-hour, 110VAC unswitched outlet.

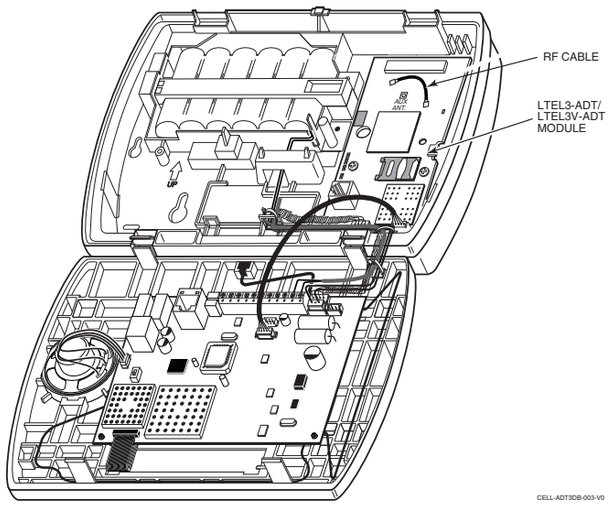


Remove the RF Cable from the PC Board

1. Unplug the power supply from the wall outlet, and open the control panel cover.
2. Release the front case from the back case by depressing the two locking tabs at the top of the unit with the blade of a medium size screwdriver.
3. Disconnect the battery connector from the receptacle on the PC board.

Note: Proceed to step 4 if a communications module is already installed in the control. If this is a new installation, proceed to step 7.

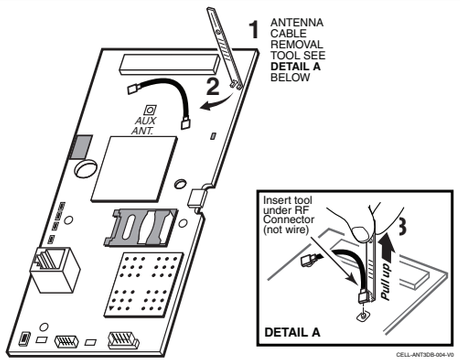
4. Locate the RF cable.



5. Slip the Antenna Cable Removal Tool (p/n 700-03513) under RF Cable connector as shown.

DO NOT use the tool to pry the connector loose. Instead, pull directly upward, perpendicular to the circuit board. Do not pull on the cable.
USE CAUTION not to damage the adjacent components when inserting the Antenna Cable Removal Tool.

6. Pull directly upwards until the connector detaches from the module's receptacle as shown in Detail A. (This cable is no longer needed.)
7. Repeat step 5 and 6 to disconnect the cable from the module. (This cable is no longer needed.)

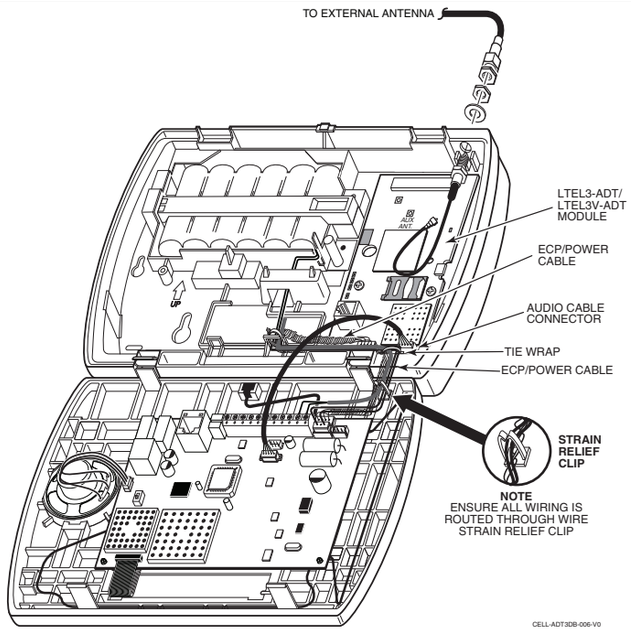


Install the CELL-EXT Adapter Cable on the PC Board

1. Connect the CELL-EXT cable to the receptacle on the module as shown.
2. Holding the cable between the thumb and middle finger, with the index finger on the back of the connector.
3. Align the connector vertically with the receptacle on module (the cable should be leading away from the module).
4. Gently press directly downward to mate both connectors. There should be a "snap" to confirm the mating.

Note: If this is a new installation, proceed to step 5. If a communications module is already installed in the control, proceed to step 8.

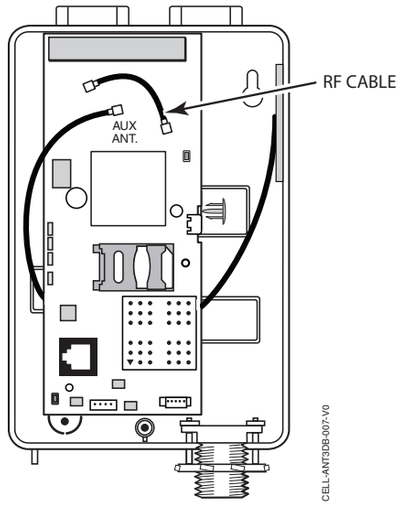
5. Install the module in the control.
6. Secure the module in the control with the three screws. (refer to the CELL-EXT Cable Routing Diagram)
7. Connect the ECP/Power Cable and Audio Cable (if used) to the PC board. Secure the cable(s) to the tie wrap point(s) on the control with the provided tie wrap(s) as shown. (refer to Figure 2)
8. Route the external antenna cable through the control rear case and connect the CELL-EXT cable to the WA7626-CA adapter cable. (The lock washer should be under the nut.)
9. Permanently mount the external antenna.
10. Connect the battery connector to the receptacle on the PC board.
11. After the wiring connections are made, snap the front and back case closed.
12. Plug the power supply into a 24-hour, 110VAC unswitched outlet.



LTE-X Series Communication Module

Remove the RF Cable from the PC Board

1. Power down the system, then loosen the captive cover screw and lift the communicator cover. Locate the RF cable on the module PC Board.

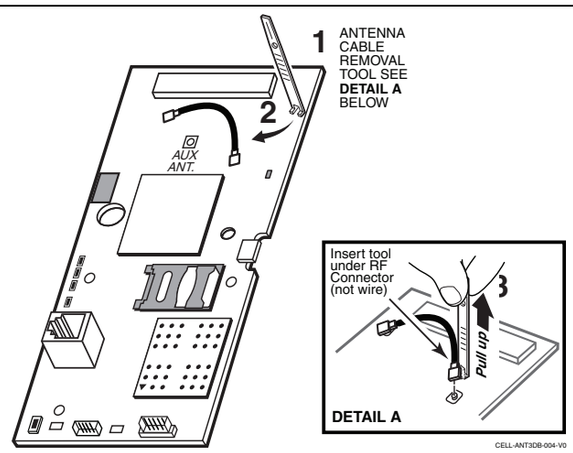


2. Slip the Antenna Cable Removal Tool (p/n 700-03513) under RF Cable connector as shown.

DO NOT use the tool to <u>pry</u> the connector loose. Instead, <u>pull</u> directly upward, perpendicular to the circuit board. Do not pull on the cable.

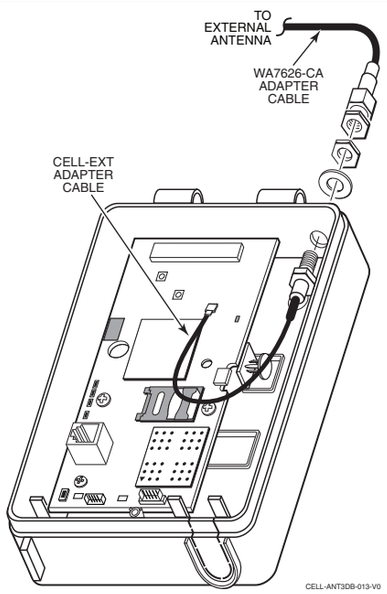
USE CAUTION not to damage the adjacent components when inserting the Antenna Cable Removal Tool.

3. Pull directly upwards until the connector detaches from the module's receptacle as shown in Detail A. Repeat step 3 and 4 to disconnect the cable from the module PCB. (This cable is no longer needed.)



Install the CELL-EXT Cable

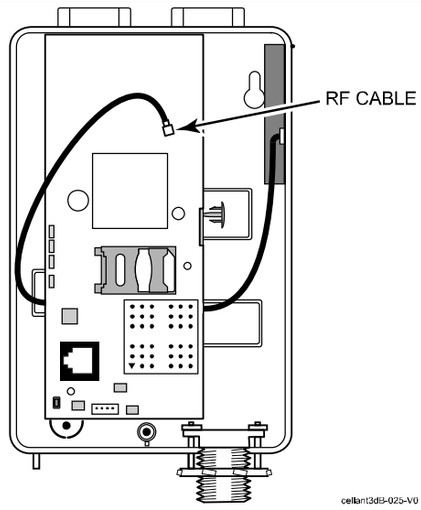
1. Connect the CELL-EXT cable to the receptacle on the PCB as shown.
2. Holding the cable between the thumb and middle finger, with the index finger on the back of the connector.
3. Align the connector vertically with the receptacle on the PC Board.
4. Gently press directly downward to mate both connectors. There should be a "snap" to confirm the mating.
5. Route the other end of the CELL-EXT Cable through the enclosure back and connect to the WA7626-CA adapter cable. Secure with lock washer and nut. (The lock washer should be under the nut.) (refer to Figure 3)
6. Permanently mount the external antenna.
7. Power up the system and allow a few minutes for initialization, then check the signal strength. Signal LED should be lit steady.
8. Close the front cover and secure with screw



LTEM-X Series Communication Module

Remove the RF Cable from the PC Board

1. Power down the system, then loosen the captive cover screw and lift the communicator cover. Locate the RF cable on the module PC Board.

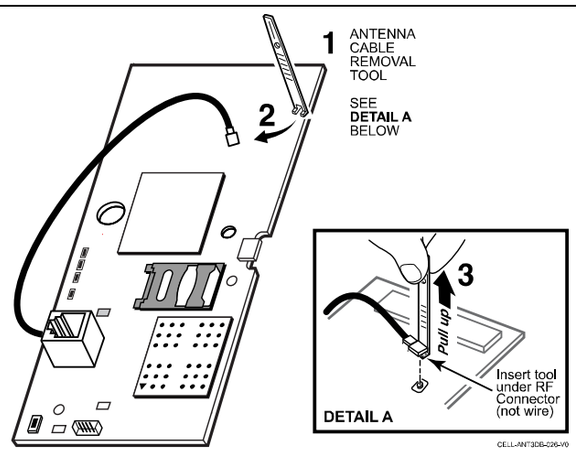


2. Slip the Antenna Cable Removal Tool (p/n 700-03513) under RF Cable connector as shown.

DO NOT use the tool to <u>pry</u> the connector loose. Instead, <u>pull</u> directly upward, perpendicular to the circuit board. Do not pull on the cable.

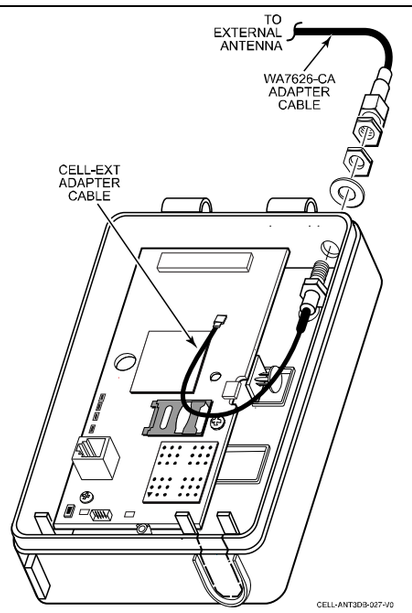
USE CAUTION not to damage the adjacent components when inserting the Antenna Cable Removal Tool.

3. Pull directly upwards until the connector detaches from the module's receptacle as shown in Detail A. Repeat step 3 and 4 to disconnect the cable from the module PCB. (This cable is no longer needed.)



Install the CELL-EXT Cable

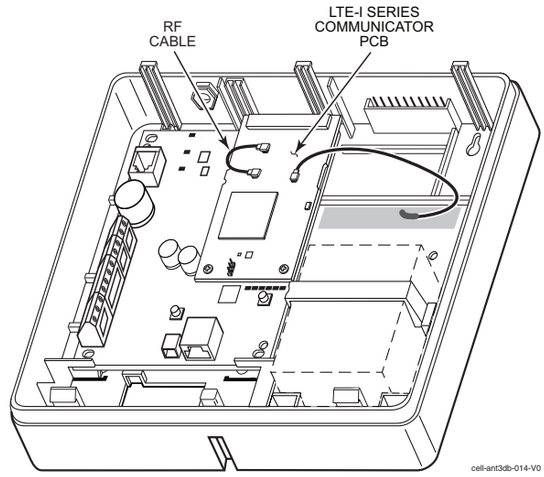
4. Connect the CELL-EXT cable to the receptacle on the PCB as shown.
5. Holding the cable between the thumb and middle finger, with the index finger on the back of the connector.
6. Align the connector vertically with the receptacle on the PC Board.
7. Gently press directly downward to mate both connectors. There should be a "snap" to confirm the mating.
8. Route the other end of the CELL-EXT Cable through the enclosure back and connect to the WA7626-CA adapter cable. Secure with lock washer and nut. (The lock washer should be under the nut.) (refer to Figure 3)
9. Permanently mount the external antenna.
10. Power up the system and allow a few minutes for initialization, then check the signal strength. Signal LED should be lit steady.
11. Close the front cover and secure with screw



LTE-IA/LTE-IV/LTE-IC Communication Module

Remove the RF Cable from the PC Board

1. Power down the system, open the communicator case by pushing in the two bottom tabs with a screwdriver while separating the case front.
2. Locate the RF cable on the LTE-IA/LTE-IV PC Board.

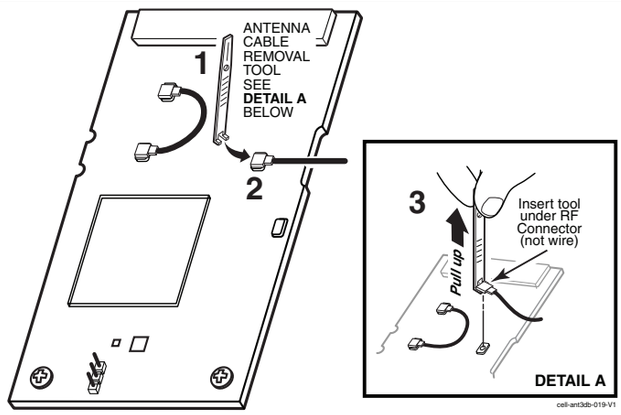


3. Slip the Antenna Cable Removal Tool (p/n 700-03513) under RF Cable connector as shown.

DO NOT use the tool to <u>pry</u> the connector loose. Instead, <u>pull</u> directly upward, perpendicular to the circuit board. Do not pull on the cable.

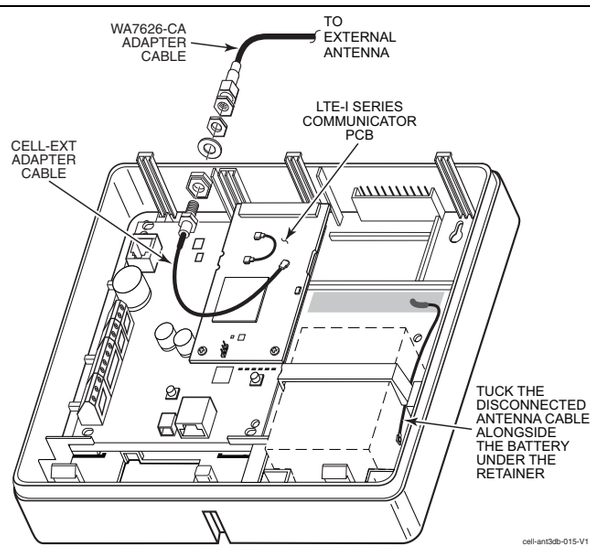
USE CAUTION not to damage the adjacent components when inserting the Antenna Cable Removal Tool.

4. Pull directly upwards until the connector detaches from the module's receptacle as shown in Detail A.
5. Tuck the disconnected antenna cable alongside the battery.



Install the CELL-EXT Adapter Cable

1. Connect the CELL-EXT cable to the receptacle on the PC Board as shown.
2. Holding the cable between the thumb and middle finger, with the index finger on the back of the connector.
3. Align the connector vertically with the receptacle on the PC Board.
4. Gently press directly downward to mate both connectors. There should be a "snap" to confirm the mating.
5. Route the other end of the CELL-EXT Cable through- the enclosure back and connect to the WA7626-CA adapter cable. Secure with lock washer and nut. (The lock washer should be under the nut.) (refer to Figure 4)
6. Permanently mount the external antenna.
7. Power up the system and allow a few minutes for initialization, then check the signal strength. Signal LED should be lit steady.
8. Close the front cover and secure with screw.



Specifications

Frequency & Cellular Bands Supported: ..... 698 - 960 MHz, Bands: 5, 6, 8, 12, 13, 14, 17, 18, 19, 20, 26, 27, 28, 29, 67, 68, 85
.....1710 - 2700 MHz, Bands: 1, 2, 3, 4, 7, 9, 10, 25, 30, 65, 66, 69, 70
Cellular Networks: ..... LTE, WCDMA, CDMA, GSM
Peak Gain: 3dBi
Maximum power:.....30W
Nominal impedance:..... 50 ohms
Pattern: .....Omni Directional
Termination: .....N Female
Operating Temperature:..... -22° to 158°F (-30ºC to 70ºC)
Fully Weatherproof for Outdoor Application
Dimensions: ..... 1.05” x 11.8”
VSWR: .....<3:1
Random Material:..... Fiberglass, White
Polarization: ..... Vertical

FEDERAL COMMUNICATIONS COMMISSION & INDUSTRY CANADA STATEMENTS

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

FCC CLASS B STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA CLASS B STATEMENT

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC / IC STATEMENT

This device complies with Part 15 of the FCC Rules, and Industry Canada’s License-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference (2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la partie 15 des règles de la FCC et exempt de licence RSS d’Industrie Canada. Son fonctionnement est soumis aux conditions suivantes: (1) Cet appareil ne doit pas causer d’interférences nuisibles. (2) Cet appareil doit accepter toute interférence reçue y compris les interférences causant une réception indésirable.

The product should not be disposed of with other household waste. Check for the nearest authorized collection centers or authorized recyclers. The correct disposal of end-of-life equipment will help prevent potential negative consequences for the environment and human health.

RF EXPOSURE

Warning - The internal or external antenna(s) used with this product must be installed to provide a separation distance of at least 7.8 in. (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

Mise en Garde

Exposition aux Fréquences Radio: L'antenne (s) utilisée pour cet émetteur doit être installée à une distance de séparation d'au moins 7,8 pouces (20 cm) de toutes les personnes.

IMPORTANT NOTES ABOUT EXTERNAL ANTENNAS

- If an external cellular radio antenna is used, the antenna may be installed or replaced ONLY by a professional installer.
- The directional gain of any antenna must not exceed the limits specified by the FCC for the type approved radio module.

DOCUMENTATION, SUPPORT AND WARRANTY INFORMATION

Refer to the installation and setup guide for the control with which this device is used for warranty information and limitations of the entire system.

For documentation and online support: www.resideo.com

This product is manufactured by Resideo Technologies, Inc. and its affiliates.

resideo

2 Corporate Center Drive, Suite 100
P.O. Box 9040, Melville, NY 11747

www.resideo.com

R800-26571A 11/20 Rev. A