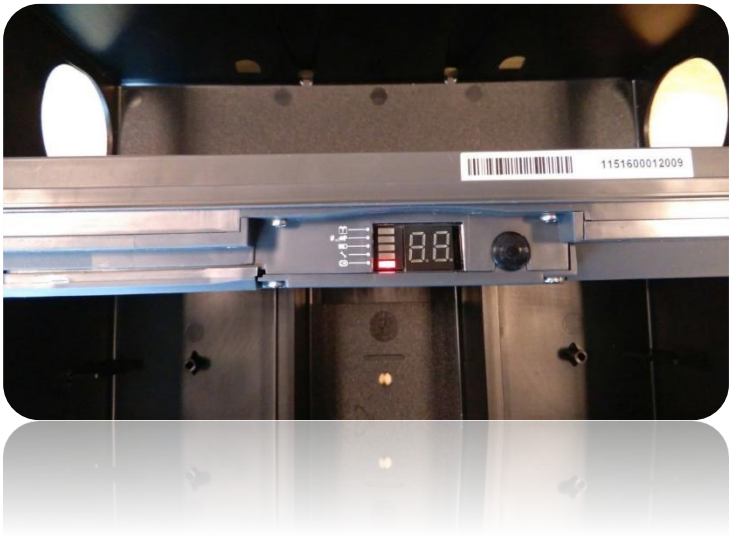
Dual AutoGate Connect Instruction Manual



Relates to :
Dual AutoGate Connect – 304854

This product has LongReach Technology Inside

This manual is based on the latest information and is provided subject to alteration.

NOTICES

LIMITATION OF LIABILITY AND DAMAGES

The product and the software within are provided on an “as is” basis. The manufacturer and manufacturer’s resellers (collectively known as “The Sellers”) disclaim all warranties, express, implied or statutory, including and without limitation the implied warranties of non-infringement, merchantability or fitness for a particular purpose, or any warranties arising from course of dealing, course of performance, or usage of trade. In no event will the sellers be liable for damages or loss, including but not limited to direct, indirect, special, wilful, punitive, incidental, exemplary or consequential damages, damages for loss of business profits, or damages for loss of business of any customer or third party arising out of the use or the inability to use the product, including but not limited to those resulting from defects in the product or documentation. In no event shall the sellers’ total cumulative liability of each and every kind in relation to the product exceed the cost to replace the product.

Product disposal instructions
for residential users

The Waste of Electrical and Electronic Equipment (WEEE) Directive (2002/96/EC) has been put in place to recycle products using best available recovery and recycling techniques to minimise the impact on the environment, treat any hazardous substances and avoid increasing landfill. The symbol shown above and on the product means that the product is classed as Electrical or Electronic Equipment and you should not put it into your domestic waste bin. When you’ve no more use for it, please dispose of the product according to your local authority’s recycling scheme. For more information, please contact your local authority or the retailer where you bought the product.

Safety Instructions

- This product is intended for indoor or outdoor use.
- Only use the battery packs part number 300076 supplied by Rentokil Initial for this product. NOTE: This battery pack is not rechargeable and should never be recharged.
- If the Dual AutoGate is stored unused for a long period, the batteries should be removed.
- Do not use the device if it is damaged.
- Only trained personnel should open the device.
- Do not expose the device to corrosive liquids.
- This device contains Radio Emitting devices and should not be used near to life support systems.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children should be supervised to ensure that they do not play with the appliance.

Note: If the equipment is used in a manner not specified by the manufacturer then the protection provided by the equipment may be impaired.

Pest Connect Overview

Pest Connect is a system that enables remote monitoring of devices. Data from sensors is sent to a Connect Control Panel which establishes a secure connection to a central server where the data is passed to the Rentokil Systems.
Typical sensors that are used in the Pest Connect system are the Connect Radar mouse trap and the Dual AutoGate Connect, shown below in Figure 1.
A typical installation will have many sensors communicating to the Connect Control Panel and a single control panel can manage up to 300 sensors. Where necessary multiple Control Panels could be deployed onto a site and up to 8 co-located control panels are permitted. In such a system if the sensors fail to connect to the Control Panel they will scan for alternative Control Panels to ensure high levels of connectivity.
NOTE: The control panels that are suitable for using with Dual AutoGate Connect must also be equipped with LongReach technology.

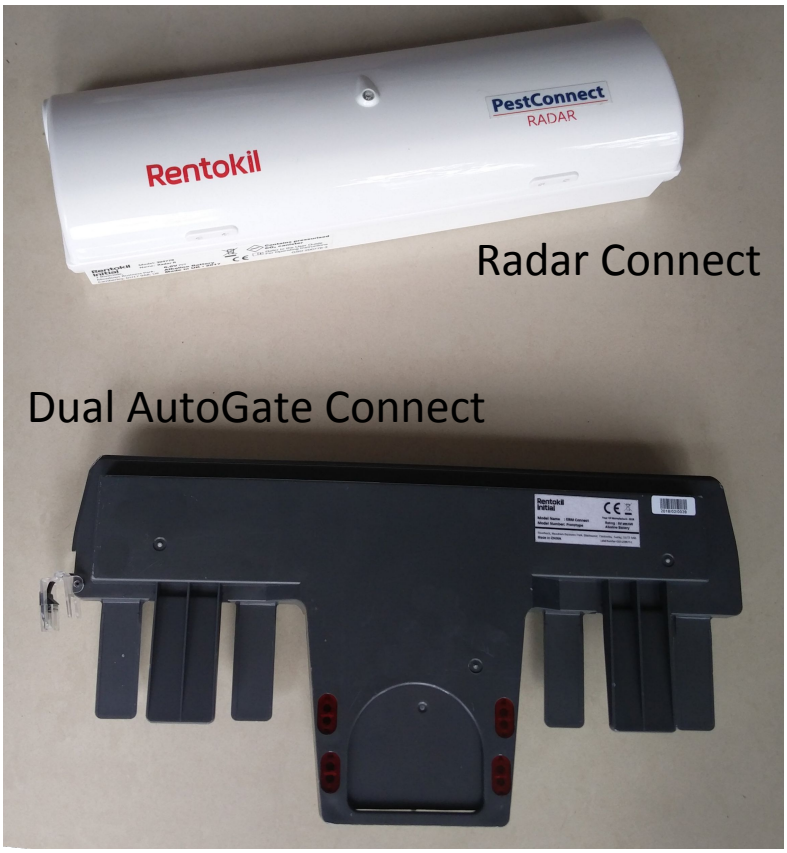


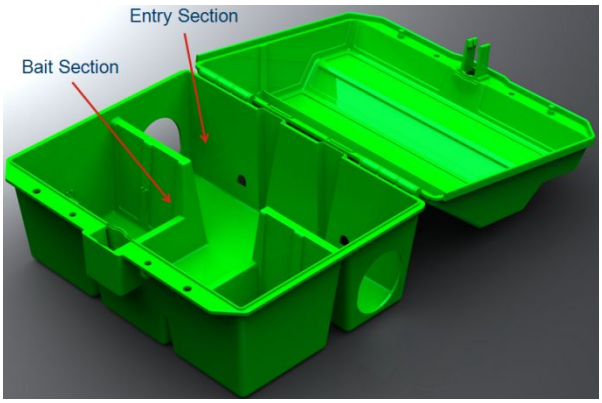
Figure 1: Connect System Overview

Product Description

Dual AutoGate Connect is a battery powered unit that has been designed to detect rats and mice and provides a barrier between the entry section of a bait box and the bait section. Dual AutoGate Connect units have two sets of infrared emitters which continuously pulse light, and are reflected off the rodent's fur, bouncing back to the infrared detectors. The higher sensors are used to detect rats and if the beams from both detectors are broken simultaneously then this counts as one trigger. The lower sensors are used to detect small rodents and if the beams from both detectors are broken within one second of each other then this counts as a trigger. Once the sensor is triggered 3 times, with at least a five minutes of no trigger activity, the gate will open allowing the rats to access the bait in the bait section of the box.

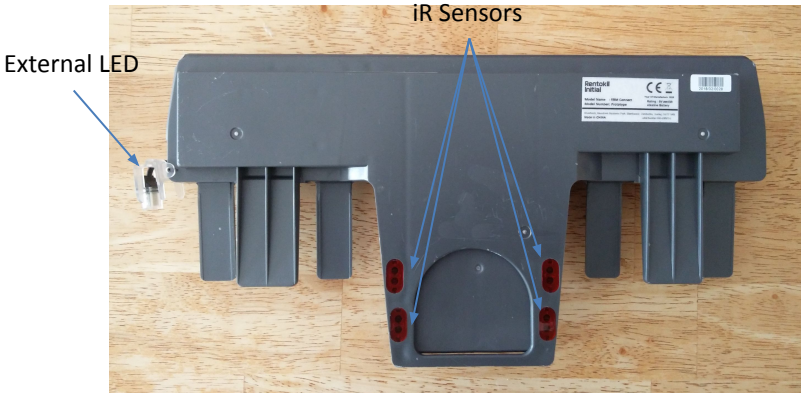
Note: Five minutes of no activations is required to re-arm the sensors to ensure that the gate is not triggered three times by one visiting rodent.

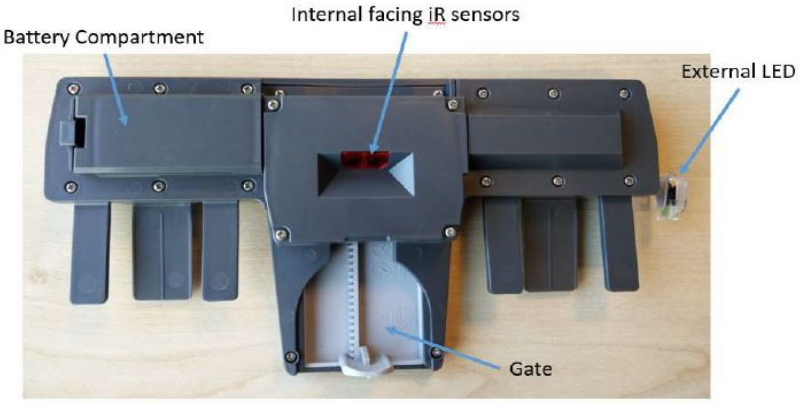
Dual AutoGate Connect features a motorised door capable of opening and closing. This enables the bait to be isolated again after the baiting period by automatically closing again after, for example 5 days. There is also an enhanced display that enables the technician to view, for example, number of days since baiting started, number of activations and battery level.

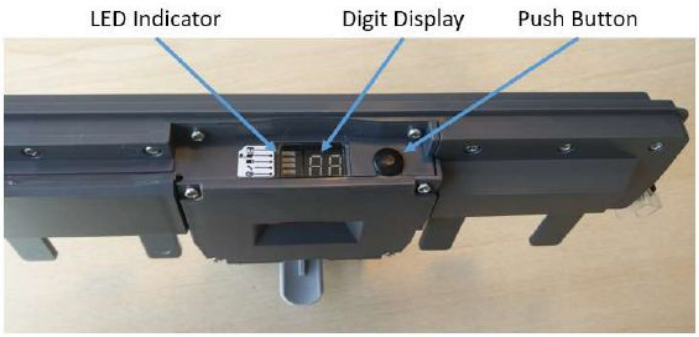


The Dual AutoGate Connect units will fit into FT150 and FT155 bait boxes (shown below).

Hardware Overview

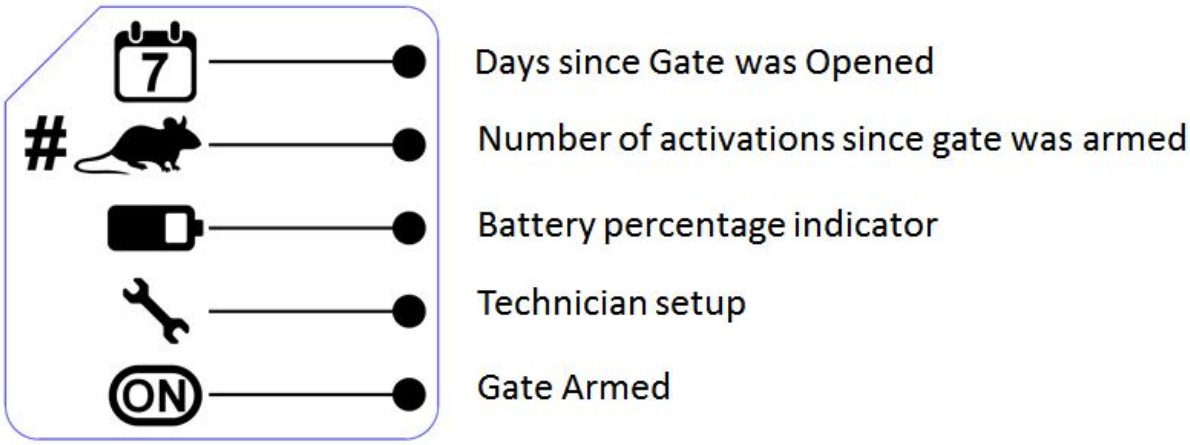






User Interface

Pressing the push button will activate the display and then successive presses will move the LED to the next position. The display items are shown below.



Days since Gate was Opened – represents the number of days since the gate was first opened. This corresponds to the number of days since the rodents could have been exposed to the bait.
Number of Activations since gate was armed – represents the count of the number of times that a rat has been in the bait box. If the button is pressed again then dots will appear at the bottom of the display together with the number of times that small rodents had been in the box.
Battery Percentage Indicator – represents the battery level as a percentage.
Technician Setup – when this item is selected all of the sensors must be activated in order to arm the Dual AutoGate Connect device.
Gate Armed – means that the Dual AutoGate has been set up correctly. Note: If this LED is lit together with any of the first 3 then the gate will continue to function after the display goes out.

Indicating that there have been 4 activations

User Interface Example

System showing it is in Battery indicator mode and 99% of the battery power is remaining

Installing a Dual AutoGate

Open the bait box that you wish to install the Dual AutoGate in.
With the “External LED” on the Dual AutoGate on the right hand side, insert the Dual AutoGate into place such that the door is in the middle of the bait box and the support arms are either side of the walls as shown below.

Setting the Dual AutoGate

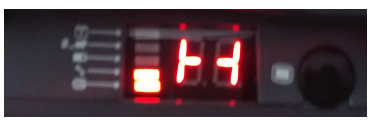
Push the button to scroll through the menu in order to set the Dual AutoGate.
The Dual AutoGate is only successfully set when the (ON) indicator is displayed.

When the "Technician Setup" is selected then the door will move up/down/up to test the motor and door sensors. If there is an error then E4 will be displayed on the display.
After successfully testing the door the display will show 2 dots to indicate that it is ready to test the sensors as shown below.

Ready to test sensors.

Move hand in front of the Bait side sensor and the middle bars will be displayed as shown.

Move hand in front of the right hand Entry side sensor and right bar is displayed as shown.



Once all of the sensor beams have been tested then the display will be as shown.

Once all 3 sensors have been tested (in any order) the radio will scan for connection to a Control Panel. If connected it will display "r" and a number. The number is the signal strength from 0-9. E.g. "r8" as shown. If there is no connection only the "r" will be displayed while scanning.

Once the Gate is tested the ON symbol is lit as shown.

Checking the Dual AutoGate

When the Dual AutoGate is visited there are two options to check the functions:

Checking without resetting the Dual AutoGate:

If the Dual AutoGate is open when visited then it is possible to verify the number of days that the gate has been open, the number of rodent visits, battery percentage by pressing the button. The (ON) LED will also be lit (see below) in the case that the Dual AutoGate is armed and in that case the full technician test is not required. If the technician test is not carried out then the #Days and #Rodents counts on the display will not be reset and the gate will close as expected after the programmed number of open days.

Checking with a Service Reset:

If the Dual AutoGate is closed when visited then it is recommended to do a full technician test. In this case scroll down to the 🔧 position and carry out the technician test. This will reset the #Days and #Rodents counts on the display to zero.

Signal Strength Test

When finding a good position to place the bait box and Dual AutoGate it is possible to run a signal test where the signal strength is shown every 2.5 seconds on the display.

Scroll to the 🔧 position until the two dots are displayed (shown blow). Press the button and the Dual AutoGate will start Signal Strength test mode. Press the button again to return to the technician test. Note: This mode will timeout after 2 minutes.

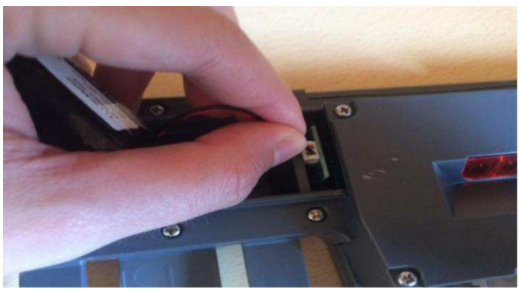
In signal strength test mode, a value between “r0” and “r9” will be displayed. Dual AutoGates should not be deployed when the signal strength shows “r0” and installing another Control Panel would be advised.

Changing the Battery

Alkaline batteries should be disposed of in accordance with local, national or state regulations, or recycled where such facilities exist. It is recommended that battery packs are replaced every 12 months, irrespective of use, to ensure that they are fit for purpose. Exhausted batteries are to be removed from the Dual AutoGate and disposed of as above.

1) Remove the battery cover by pushing the clip

2) Remove the old battery and recycle.



3) Push the button to ensure that any remaining charge on the board is discharged before plugging the new battery into the board.

Operating Modes

Sensing Modes:

Rats only mode:

In this mode only the top sensors are active and so the gate will only open if these sensors detect rats. The number of triggers can be seen on the display and it should be noted that the number of “mouse” triggers will always be 0 in this mode.

Rats and Mice Mode:

In this mode the lower sensors are active and if there is a detection then the upper sensors are checked to verify whether it was a Rat that triggered the sensors. Note: It requires 3 triggers from Rats or 3 triggers from small rodents to cause the gate to open. The number of triggers can be seen on the display.

Trigger Modes:

Ordinary Open mode:

In the “Ordinary” trigger mode the gate will open when there have been 3 triggers from either Rats or 3 triggers from small rodents.

Instant Open Mode:

In “Instant Open” mode the gate will open when there has been a single trigger, depending on the sensing mode, this will be either from rats or small rodents.

Advanced Settings

Depending on customer or country requirements it may be necessary to turn on/off or reduce the intensity of the external LED to avoid unwanted attention or to adjust the number of days that the gate remains open before closing again.

Adjusting the Sensing Mode

Selection of "Rat and Mice" mode

Selection of "Rat only" mode

The sensing mode can be set to "Rats only" or "Rats and Mice":

1. While there is nothing on the digit display press and hold the button
2. Counter begins to count upwards from zero to five followed but 'A'
3. Wait for the display to show the setting next to the 'A'
4. Press the button to select the sensing mode required from the symbols above
5. Wait for the display to go off for the setting to be stored

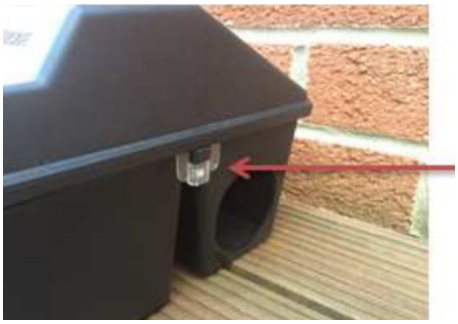
Adjusting the Gate open time

Once the door has opened and the bait exposed, the time to which the door is closed can be modified from the default setting of 5 days. This can be set by following these steps:

1. While there is nothing on the digit display press and hold the button
2. Counter begins to count upwards from zero to five followed but 'A'
3. Press the button again to display 'b'
4. Wait for the display to show the value
5. Push the button to select the number of days between '0 – 30' (Note: 0 means that the gate will stay open and 1 to 30 is the number of days that it will stay open.) Pressing the button again once it reaches 30 will start again at 0.
6. Release the button and wait 5 seconds for the setting to be stored.

Advanced Settings (Cont.)

Adjusting the External LED



The LED can be set to Low, Medium, High or OFF. To select the required mode follow the steps below:

1. While there is nothing on the digit display press and hold the button
2. Counter begins to count upwards from zero to five followed but ‘A’
3. Press the button again to display ‘b’ and again to display ‘C’
4. Wait for the display to show the value next to the ‘C’
5. Press the button to scroll through and choose a setting required. 3=bright, 2 = medium, 1 = low and 0 = Off.
6. When the desired value is displayed then wait until the display goes off and the value will be saved.

Adjusting the Trigger Mode

In Ordinary trigger mode (“O”) the gate will open if there have been 3 activations within 5 days. In Instant trigger mode (“I”) the gate will open on the first activation that is detected. This can be set by following these steps:

1. While there is nothing on the digit display press and hold the button
2. Counter begins to count upwards from zero to five followed but ‘A’
3. Press the button again to display ‘b’ and again to display ‘C’ and again to display ‘d’
4. The value will be displayed next to the ‘d’ as either ‘dI’ for Instant trigger or ‘d0’ for ordinary trigger mode.
5. Press the button to scroll through and choose the required setting
6. When the desired value is displayed then wait until the display goes off and the value will be saved.

Connect Status

The messages that are sent to the server are:

Technician Test Pass: When the AutoGate passes through the technician test and displays the ON indicator.

Technician test Fail: If any of the tests fail when the AutoGate is tested

Technician Visit: If the AutoGate is visited and the button is pressed in any of the first 3 selections but the Technician test is not carried out.

Gate Closed: This is the initial state of the AutoGate and indicates that this gate has not been opened since it was last visited.

Gate Open: If a particular gate sees the programmed number of activations then the gate will open and report this status

Gate Enabled: If another Dual AutoGate in the same zone has detected activity then the server will send a command to the gate to enable instant open mode whereby it will open if there is a single activation. This mode will expire within 45 days if there is no activity.

Gate Re-Closed: After the programmed open time (default 5 days) the gate will close and report this status.

Gate Re-Opened: If another activation is detected then the gate will open immediately and report this status. Note: other gates in the zone are not opened in this case.

iR Sensors Blocked: If there is an issue with the internal sensors then this error status will be sent back.

Other data that is sent back from the AutoGates is: Battery Voltage, Signal Strength, number of activations since reset and active count (i.e. not timed out).

Troubleshooting

Issue	Possible Solution
Nothing on the display when the button is pressed	Insufficient battery voltage - replace the battery pack
External LED does not flash when the gate is opened	The default is for the LED to not flash in the case of opened gates. This can be configured by "adjusting the parameters"
Autogate displays E1 during technician test	The iR sensors on the bait side have not been activated. Ensure that these are clean and not blocked and then re-check.
Autogate displays E2 during technician test	The iR sensors on the entry side have not been activated. Ensure that these are clean and not blocked and then re-check.
Autogate displays E3 during technician test	None of the iR sensors were activated during techincan testing. Ensure that these are clean and not blocked and then re-check
Autogate displays E5 during technician test	The door did not activate the high and low position sensors. Ensure that the gate is not jammed.
'r' displayed prior to technician test	No LongReach radio beacons were found. Ensure that the Control Panel is running and that the network symbol is displayed. The Autogate could be out of range, move the Autogate nearer to the Control Panel to test that it can connect. An additional Control Panel could be required.
'r-' diplayed prior to technician test	Beacon detected but no join response has been received from the Control Panel. If this persists for a few minutes then unplug the battery, push the button (to discharge the capacitor) and replug the battery. If this persists another cause could be that there are more than 300 devices connected to the control panel already.

Technical Details

AutoGate Connect

Power Supply

Battery supply	Use only Rentokil-Initial battery pack 300076 6v output - 4 x AA cell Alkaline battery pack

Interfaces:

Local Area Network (LAN)	868-928M Hz depending on local Approvals Rentokil Initial Propriatary Application Layer Protocol

Connect Device connectivity

Maximum Number of AutoGate units per Control Panel	300

Physical:

Dimensions	308mm x 196mm x 60mm
Material	Halycon Polypropylene PCS18E – HB rated polymer to UL94
Weight	415g (excluding battery)
Operating Temperature	-15ºC to +50ºC
Environmental rating	IP21
Mounting	Mounts in the Rentokil FT150 & FT155 bait boxes

The Autogate is intended for outdoor use but should not be located where more than 3cm of standing water is likely to occur.
In extremely cold environments it should be ensured that more than 40% battery capacity remains before leaving the trap. In temperatures lower than -15C the gate may freeze causing errors to be reported

This product contains the LongReach radio module :

FCC ID: 2AK3PGSD-500349

IC ID: 22407-GSD500349

These will be shown on the approval label attached to the product.

FCC warning statement:
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

ISED warning statement:
This device complies with Industry Canada’s licence-exempt RSSs. Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.