INLINE®8

USER MANUAL

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INTRODUCTION

The INLINE8 is an RP1210C compliant vehicle adapter for use with PC-based diagnostic software applications such as INSITE™ and Guidanz®.

PRODUCT SPECIFICATIONS AND SYSTEM REQUIREMENTS

PC Requirements

Operating System Requirements
Windows 10 or Windows 11
Minimum PC Requirements
Intel Core i5 or faster
1 GB RAM
100 MB free hard disk space
1 available USB 2.0 port
Bluetooth® wireless card
Wireless PC card

Supported Protocols and Standards

RP1210 Protocols	
CAN (GMLAN, J2284)	**X**
CAT CDL	**X**
J1708/J1587	**X**
J1850 (VPW – GM)	**X**
J1939	**X**
ISO 15765	**X**
ISO 9141-2	**X**
ISO 14230 (KWP2000)	**X**

Supply Voltage

The following table specifies the voltage required by the INLINE 8.

Vehicle Input Voltage Range	8-30 VDC
USB Voltage	5.0 VDC

Temperature

The INLINE 8 shall operate over the following temperatures and meet all its functional and performance specifications.

Storage Range	-40° to 176° F	(-40° to 80° C)
Operating Range	0° to 149° F	(-18° to 65° C)

Electromagnetic Compatibility

The INLINE 8 complies with FCC, IC, CE, and UKA standards regarding electromagnetic compatibility.

Electrical Protections

- Fused @ 5.2A.
- Reverse voltage, transient, and ESD protections.

Wireless Safety

When configuring adapter as a WiFi access point, users are responsible for selecting the appropriate region and ensuring they use an authorized channel for their area.

WARNING:

DO NOT ATTEMPT TO USE REPROGRAMMING FEATURES

WHILE IN BLUETOOTH® OR WI-FI® MODE (use USB mode).

Note: *Check the Cummins website for the latest product specifications and system requirements.*

https://www.cummins.com/support/digital-products-and-services-support/inline-support

INSTALLATION NOTES

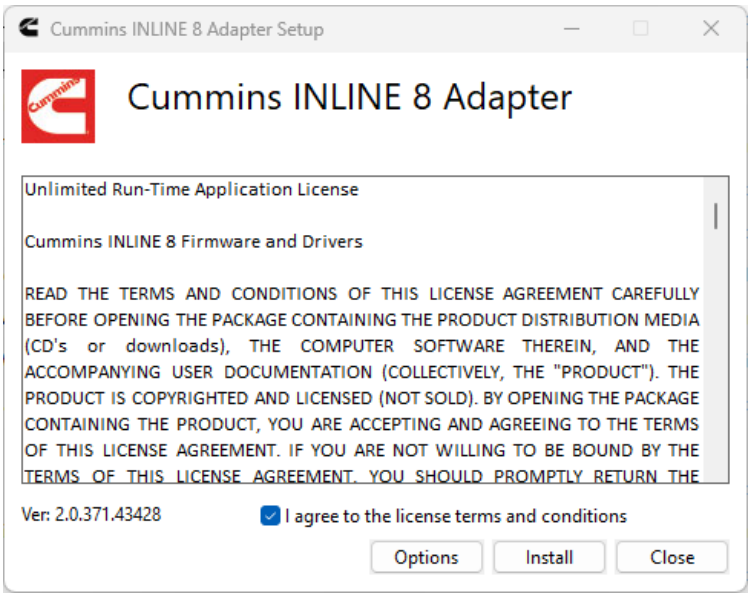
Before installing drivers and adapters, note:

- Installation requires administrator privileges.
- Installation steps (and subsequent screens) will vary based on user systems (Windows OS version)**.**
- Download the latest adapter drivers from: https://www.cummins.com/support/digital-products-and-services-support/inline-support
    - If using drivers downloaded from the website, begin the installation process by running the downloaded file.

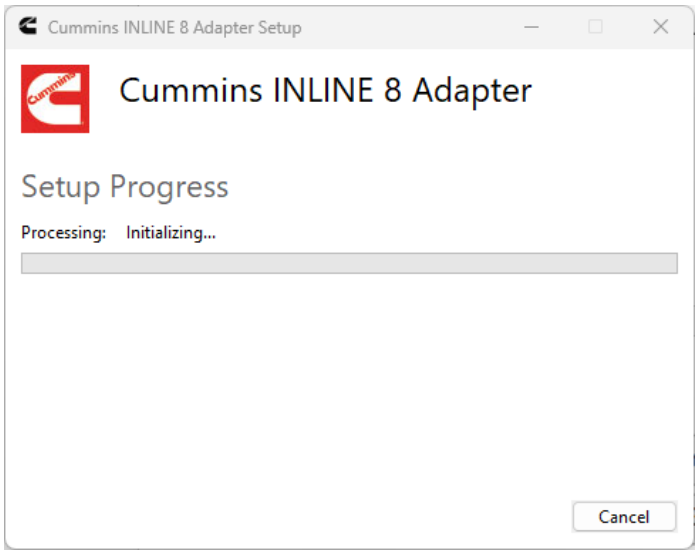
Driver Installation

Periodically check https://www.cummins.com/support/digital-products-and-services-support/inline-support for the latest driver updates.

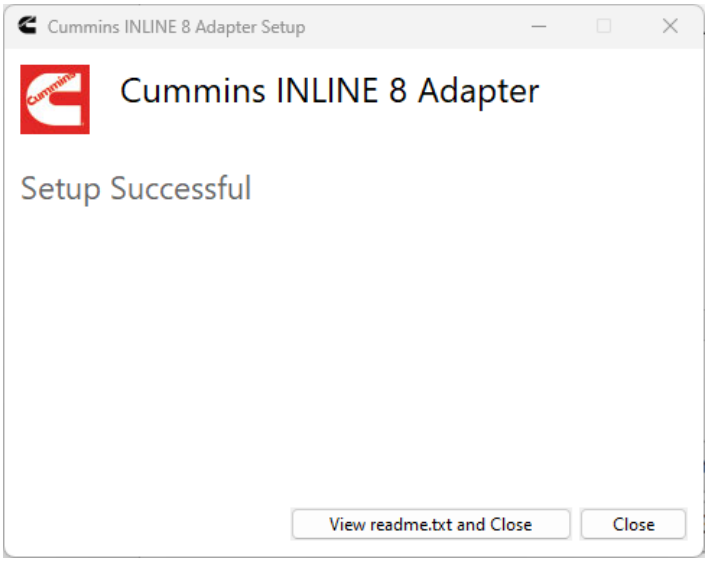
1. If the install program does not start automatically, start the program by running the **INLINE8_v[version].exe**.
2. The Installer will appear. Agree to the license, then select "**Install**" to begin.



3. The installation procedure will continue.



4. Click the "**Close**" button.



Once the latest drivers are installed, the adapter is ready to use for USB connections. For wireless connections see Cummins Adapter Tool -> Settings -> Wireless Configuration

WIRELESS CONFIGURATION WALKTHROUGHS

This section describes the easiest ways to configure your INLINE 8 adapter for wireless communication and use with a Windows PC. For more info and advanced features see Cummins Adapter Tool and Pairing Button.

WARNING:

DO NOT ATTEMPT TO USE REPROGRAMMING FEATURES
WHILE IN BLUETOOTH® OR WI-FI® MODE (use USB mode).

Bluetooth

Bluetooth is the easiest way to use your adapter wirelessly.

1. Plug the USB cable into the USB port on the PC.
2. Connect the other end of the USB cable to the port labeled Computer on the adapter. Connect the diagnostic cable to the 26-pin connector and attach the diagnostic cable connector to the diagnostic port on the vehicle (the vehicle connection is optional at this point in the process).

3. You will see the "**Power**" LED on solid **Green**, the "**Computer**" LED flash **Green** slowly, and the "**Vehicle**" LED off indicating the adapter is ready for a data connection.
4. Open Cummins Adapter Tool:

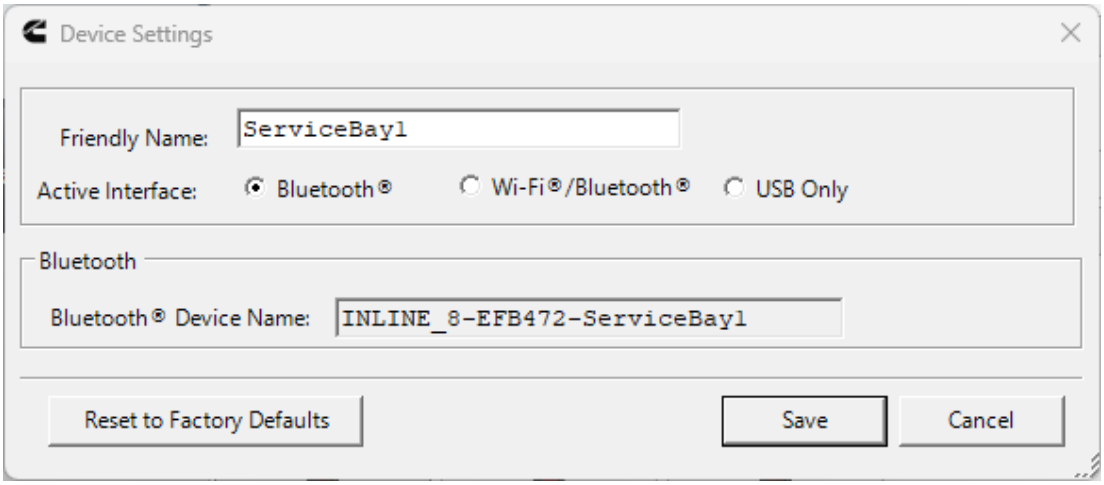
   (***Start Button***) ▶**All** ▶ **Cummins INLINE 8 Adapter** ▶ **Cummins Adapter Tool**

5. Select "**Cummins INLINE 8**":

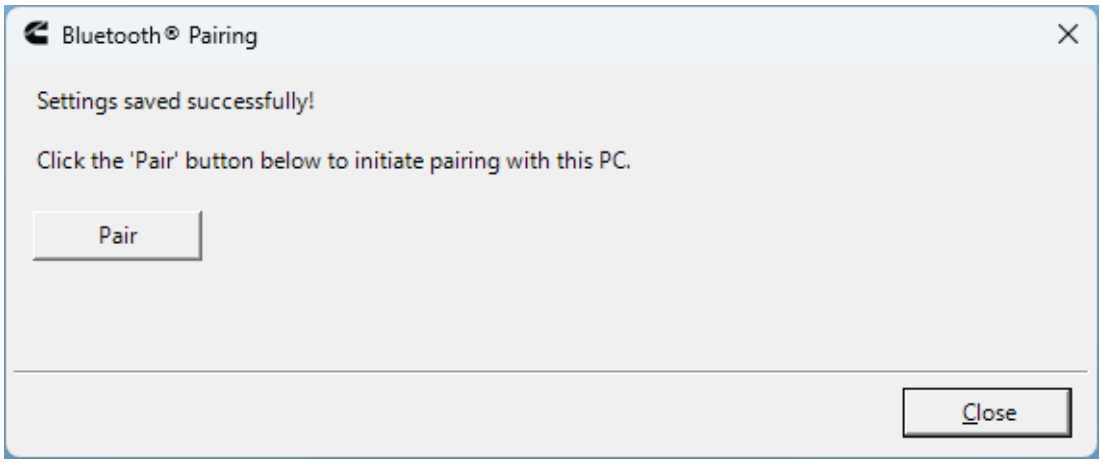
6. Click the "**Configure**" button:

7. In device settings window, ensure adapter is configured for Bluetooth.
   Optionally: Give the adapter a friendly name (e.g. Bay_2) to make it easier to recognize.
8. Click save.

Note: *It may take a few seconds to save settings.*

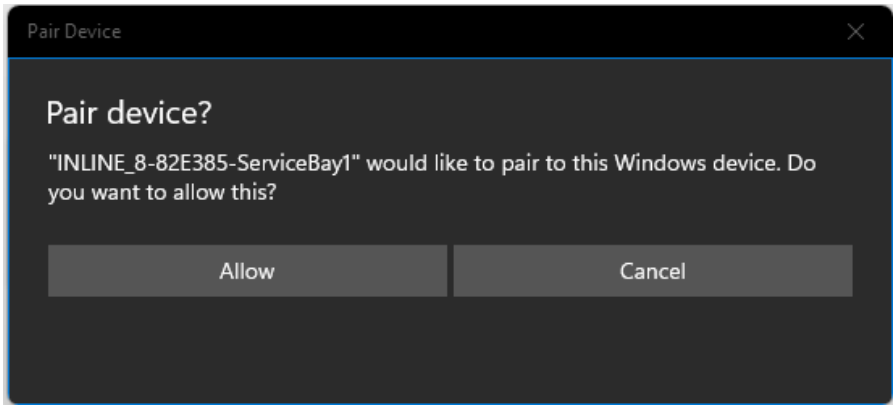


9. On the next window, click "**Pair**":

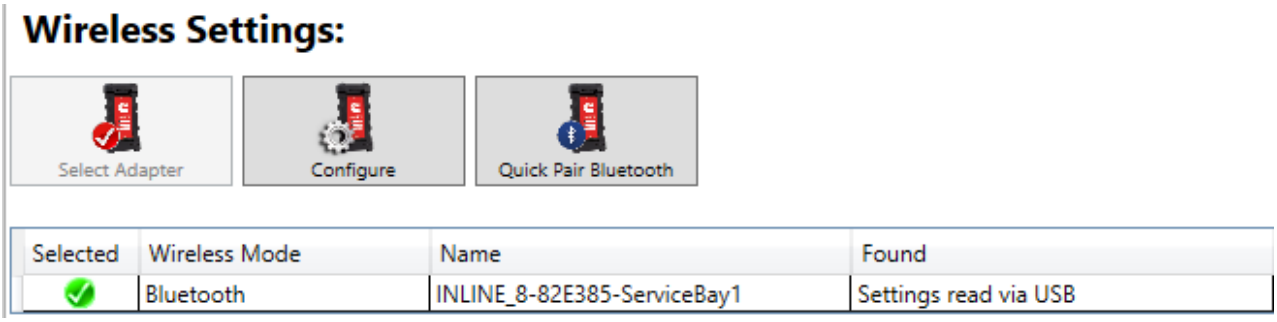


10. When the device is found, Microsoft Windows will prompt you to add a new device. Click on the notification and then accept the new device.

11. Windows will prompt you again to allow pairing with the adapter. Click "**Allow**."



12. The adapter will then be paired with the PC. Adapter Tool will automatically select the paired adapter as your preferred adapter:



***Note**: If you have more than one adapter, you can change your preferred adapter by highlighting the desired row and clicking "**Select Adapter**."*

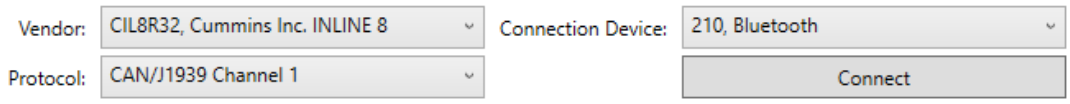
13. Disconnect USB cable and connect adapter to a vehicle.
14. Computer LED will be blue and will flash the ready to connect blink pattern to show it is ready to accept connections.

You should now be able to use your adapter in Bluetooth mode with all RP1210 compliant diagnostic tools.

It is recommended that you use the Test Connection tab of Adapter tool to make a test connection using Bluetooth.

1. Click "**Test Connection**":

2. Select “**CIL832**” for Vendor, “**CAN/J1939 Channel 1**” for Protocol and “**210, Bluetooth**” for Connection Device, then click “**Connect**”:



3. On successful connection, Computer LED will be solid Blue.
4. Ensure you disconnect before using any diagnostic software.

WIFI (Access Point Mode)

1. Plug the USB cable into the USB port on the PC.
2. Connect the other end of the USB cable to the port labeled Computer on the adapter.
3. Connect the diagnostic cable to the 26-pin connector and attach the diagnostic cable connector to the diagnostic port on the vehicle (the vehicle connection is optional at this point in the process).
4. You will see the “**Power**” LED on solid **Green**, the “**Computer**” LED flash **Green** slowly, and the “**Vehicle**” LED off indicating the adapter is ready for a data connection.

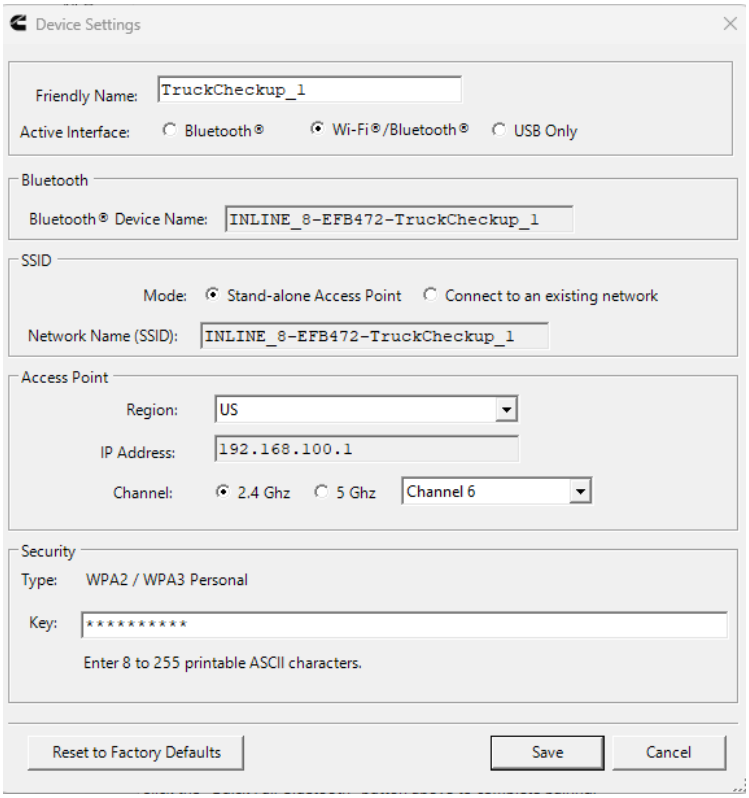
5. Open Cummins Adapter Tool:

   (***Start Button***) ▶**All** ▶ **Cummins INLINE 8 Adapter** ▶ **Cummins Adapter Tool**

6. Select “**Cummins INLINE 8**”:

7. Click the "**Configure**" button:

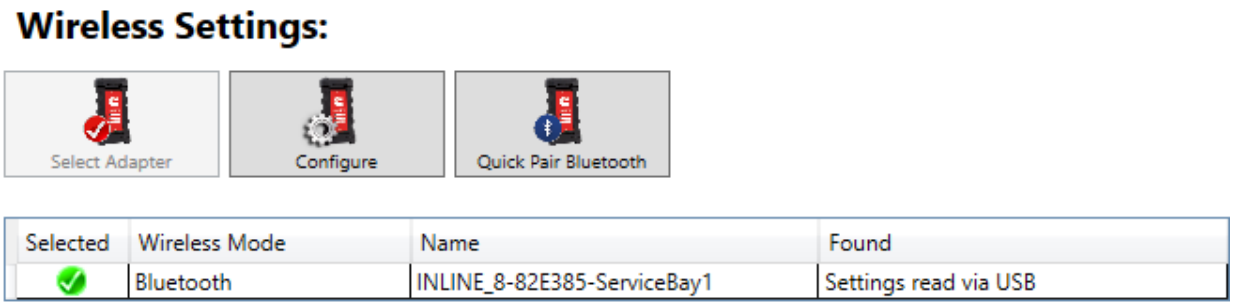
8. In device settings window:
    a. Optionally: Give the adapter a friendly name (e.g. Bay_2) to make it easier to recognize
    b. Select WiFi/Bluetooth
    c. Enter a WiFi password (This password is your choice, remember what you use, it will be needed later)



9. Click "**save**".

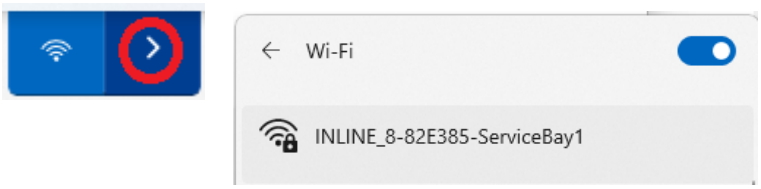
Note: *It may take a few seconds to save settings.*

10. Adapter Tool will automatically select the newly configured adapter as the preferred adapter for wireless communication:

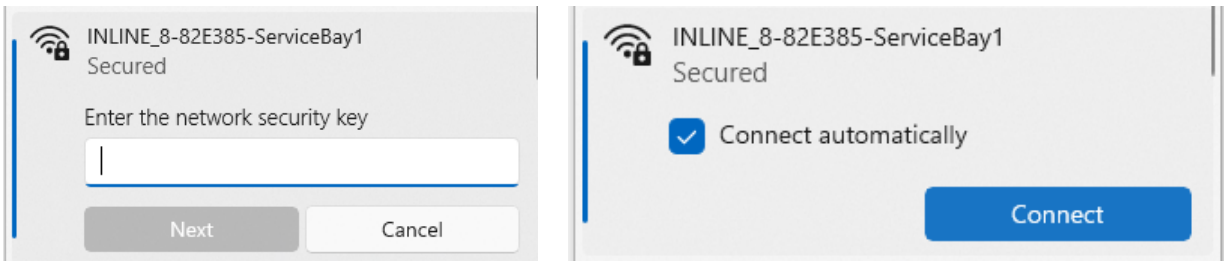


Note: *If you have more than one adapter, you can change your preferred adapter by highlighting the desired row and clicking "Select Adapter."*

11. You should now be able to use your adapter in WiFi mode with all RP1210 compliant diagnostic tools.
12. To connect to WiFi node:
    a. Disconnect USB cable
    b. Connect adapter to vehicle
    c. Computer LED will be Yellow and flash the Ready to Connect blink pattern. This shows it is advertising.
13. Find and connect to your adapter's WiFi network:



14. Click "**Connect**", enter your password, then click "**Next**."

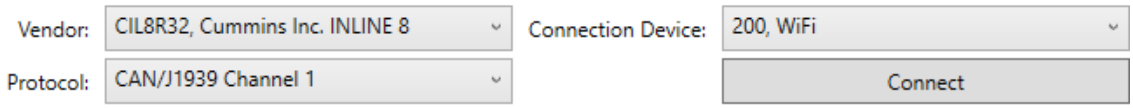


15. Upon successful connection, computer LED flash the slow blink pattern to show a connection to computer has been made.

It is recommended that you use the Test Connection tab of Adapter tool to make a test connection using WiFi.

1. Click "**Test Connection**":

2. Select "**CIL8R32**" for Vendor, "**CAN/J1939 Channel 1**" for Protocol and "**200, WiFi**" for Connection Device, then click "**Connect**":



3. On successful connection, Computer LED will be solid Yellow.
4. Ensure you disconnect before using any diagnostic software.

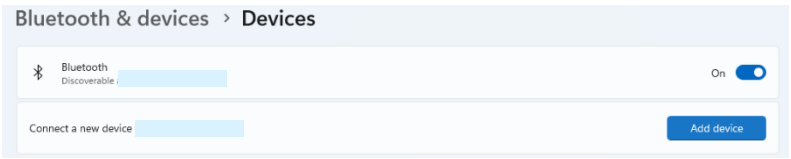
PAIRING BUTTON

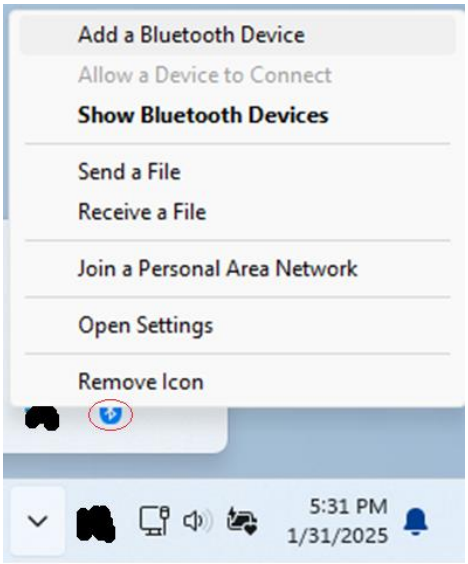
Bluetooth Pairing with PC Using the Pairing Button

Note: *To perform Bluetooth pairing, your adapter must be in Bluetooth mode, adapter must be connected to a vehicle, must not be connected via USB and must not have an active diagnostic connection. To ensure you are in the proper state to initiate pairing check the Computer LED. It should be blinking the Ready to Connect pattern.*

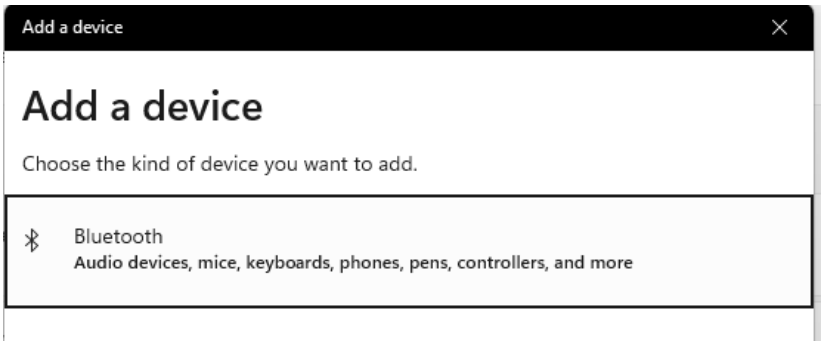
Holding the pairing button for 3 seconds will enable pairing mode. Device will stay in pairing mode for 20 seconds. It is recommended that you navigate to the appropriate menu in your system before activating pairing so you don't miss the 20 second window.

1. To pair with your adapter in Windows 11, right click the Bluetooth icon in your system tray, and click "**Add a Bluetooth Device**."
2. When the "**Bluetooth & devices**" window opens, click "**Add device**."



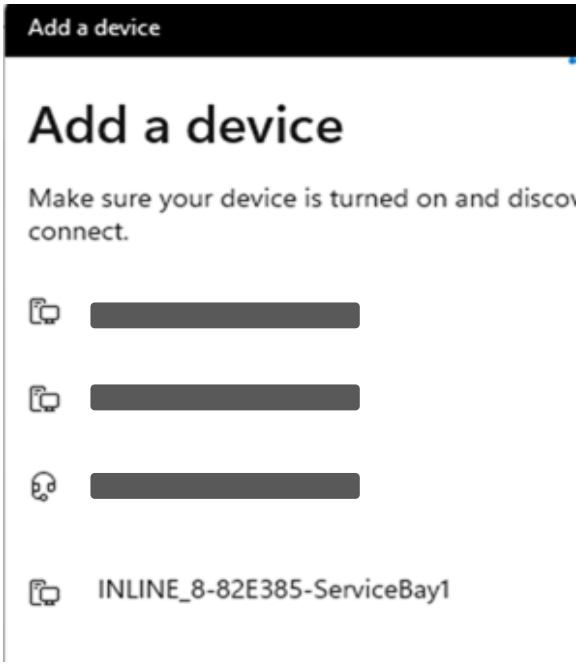


3. On the next window, click "**Bluetooth**".

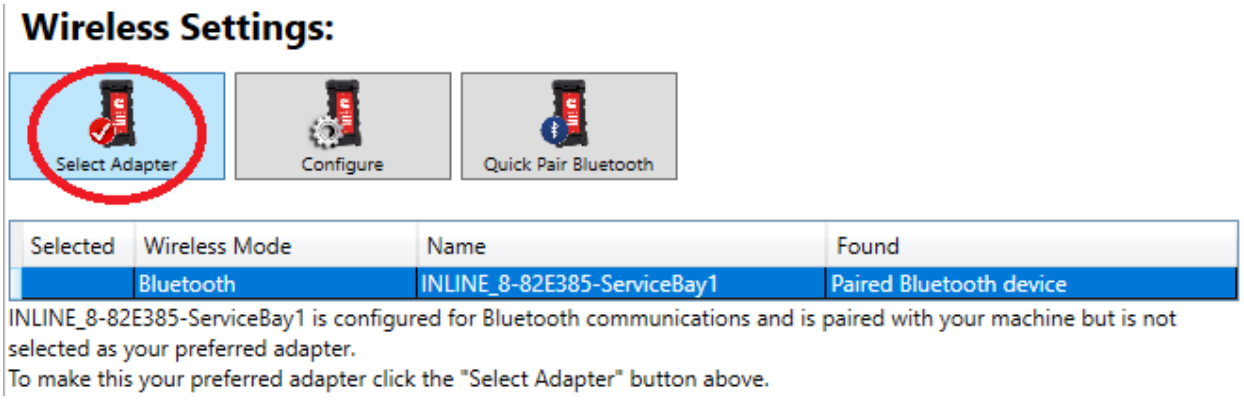


4. Press the button for at least 3 seconds. Computer LED will begin to flash rapidly. Wait a few seconds for Windows to discover your adapter, then select it.

Note: *The default identifier for your adapter is printed on the back label (e.g. INLINE_8-82E385-ServiceBay1); this will always be included in the advertised Bluetooth name.*



After pairing, your adapter must still be selected as the preferred wireless adapter in Adapter Tool:



Switch Wireless Mode

If WiFi settings are configured on your unit, you can switch between Bluetooth and WiFi mode by holding the pairing button for 10 seconds.

LED INDICATORS

LEDs provide status information to the user. The meaning of each blink pattern and color are documented below.

Power LED | (GREEN)

Off = No power

Solid = Normal operation

Slow Blink = Device is in USB firmware update mode.
If USB firmware update is interrupted, the adapter can get stuck in this state. If this happens, connect USB and use Adapter Tool or diagnostic software to make a connection; this will force a firmware update.

Vehicle Data LED | (GREEN)

Off = No data

Solid = Data

Computer LED

Blink Patterns

The following blink patterns are used for the Computer LED.

Name	Pattern	Meaning
Ready to Connect (RTC)	○ ● ○ ● ○ ● ● ● ● ● ● ●	Adapter is waiting to connect to a wireless network
Slow	○ ○ ○ ○ ● ● ● ● ○ ○ ○ ○	Adapter has connected to network, but no diagnostic application has connected
Solid	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	Diagnostic application has connected
Fast	○ ● ○ ● ○ ● ○ ● ○ ● ○ ●	Bluetooth pairing

Off

If Computer LED is off and Power LED is solid, USB is not connected, and wireless communication is disabled.

Green = USB

Slow Blink = Cable connected to PC, but no diagnostic software connected
Solid = Diagnostic software connected

Blue = Bluetooth®

Blue RTC blink = Ready to connect
Blue Solid = Client(s) connected
Blue Fast blink = Pairing Mode

Yellow = Wi-Fi ® Access Point

Yellow RTC Blink = Wi-Fi access point is ready to connect
Yellow Slow Blink = A computer as connected to the Wi-Fi access point
Yellow Solid = Application connected

White = Use Wi-Fi ® on Existing Network

White RTC Blink = Wi-Fi existing network, ready to connect
White Slow Blink = Wi-Fi existing network, connected to PC
White Solid = Wi-Fi access point, application connected

Red

Wireless connection error occurred. Check your settings. If using existing network, ensure your password is correct.

NOTE: *Bluetooth® and Wi-Fi® shall not be enabled if there is a USB connection.*

Special LED Indications

LED Boot Sequence

At startup Power, Vehicle and Computer LEDs will illuminate in sequence.

LED Wireless Firmware Update Sequence

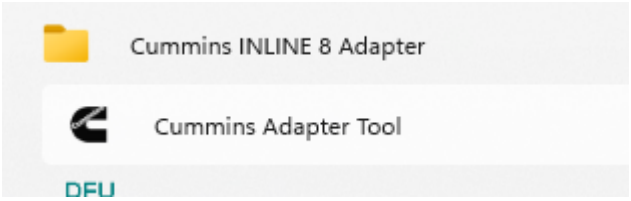
When completing a wireless device firmware update, Power, Vehicle and Computer LEDs will cycle until the update has completed. This usually takes about 20 seconds.

CUMMINS ADAPTER TOOL

The Cummins Adapter Tool allows you to test and configure your INLINE 8 Adapter. The tool can be found at:

(***Start Button***) ▶**All** ▶ **Cummins INLINE 8 Adapter** ▶ **Cummins Adapter Tool**

It can also be found by clicking Start Button and searching for "**Cummins Adapter Tool.**"

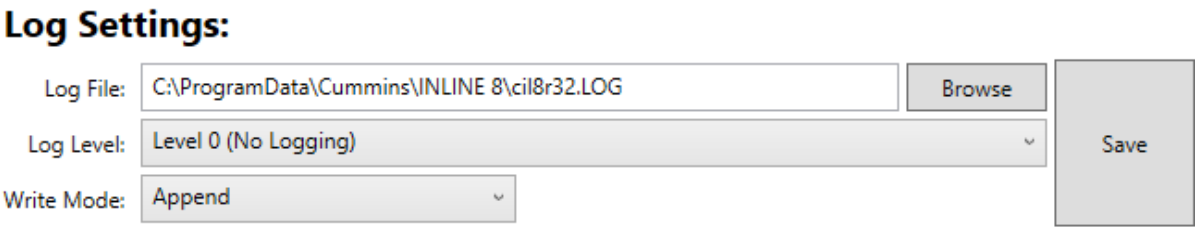


Settings

The Settings tab allows users to view and configure adapter settings. Available features vary based on the selected adapter. Use the "Adapter" drop down to pick the adapter to configure setting for.

Logging

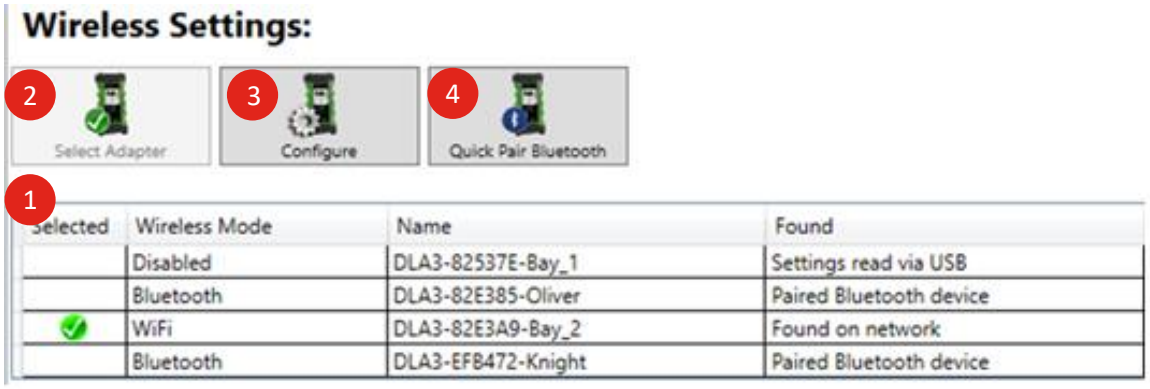
User can enable logging on their RP1210 adapters. The file to log to, logging level and write mode can all be set.



Wireless Configuration

WARNING: DO NOT ATTEMPT TO USE REPROGRAMMING FEATURES WHILE IN BLUETOOTH® OR WI-FI® MODE (use USB mode).

User can configure wireless settings for their INLINE 8.



1. The discovered adapters grid shows devices that were found on your network, paired with your PC, or connected via USB. Columns shown:
   a. **Selected:** Checkmark appears next to your preferred adapter for wireless connections
   b. **Wireless Mode:** WiFi, Bluetooth, or Disabled
   c. **Name:** The name of your adapter. Name will be in the format: INLINE_8-[Unique ID]-[Optional Friendly Name]. Friendly name is configurable. The fixed portion of the name is printed on the units back label:

   d. **Found:** Indicates how Adapter Tool found the adapter.
   Note: an adapter configured for Wireless, might be found via USB if USB cable is connected.
2. The select adapter button sets the preferred adapter for wireless connections. Highlight the row of the adapter you want to select before clicking Select Adapter. A checkmark will indicate which adapter has been selected. You must have a selected adapter to connect with WiFi or Bluetooth.

   The configure button brings up a dialog to configure the wireless settings of your INLINE 8. The adapter must be connected via USB cable to perform configuration. SeeConfigure (Wireless).
3. Quick Pair Bluetooth is an easy way to pair your INLINE 8 with your PC. The adapter must be connected via USB cable to complete the quick pair. See Quick Pair Bluetooth.

Configure (Wireless)

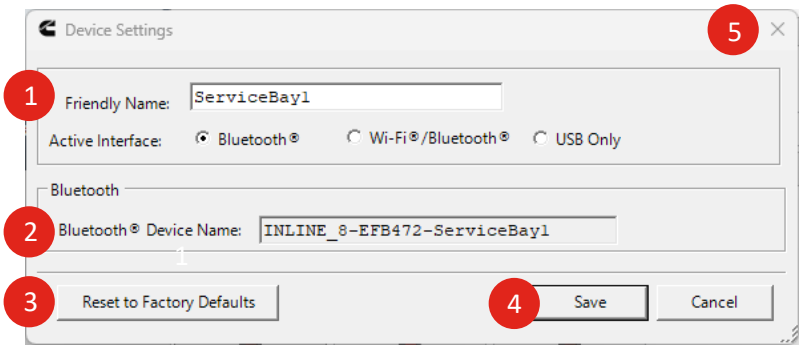
User is presented with three options:

Bluetooth

Configure adapter to use Bluetooth. This is the simplest option to use as it does not require passwords and will not disrupt your connection to the internet.

Note: *Must click "**Save**" to apply settings.*

Note: *Bluetooth will not be enabled while adapter is connected via USB.*

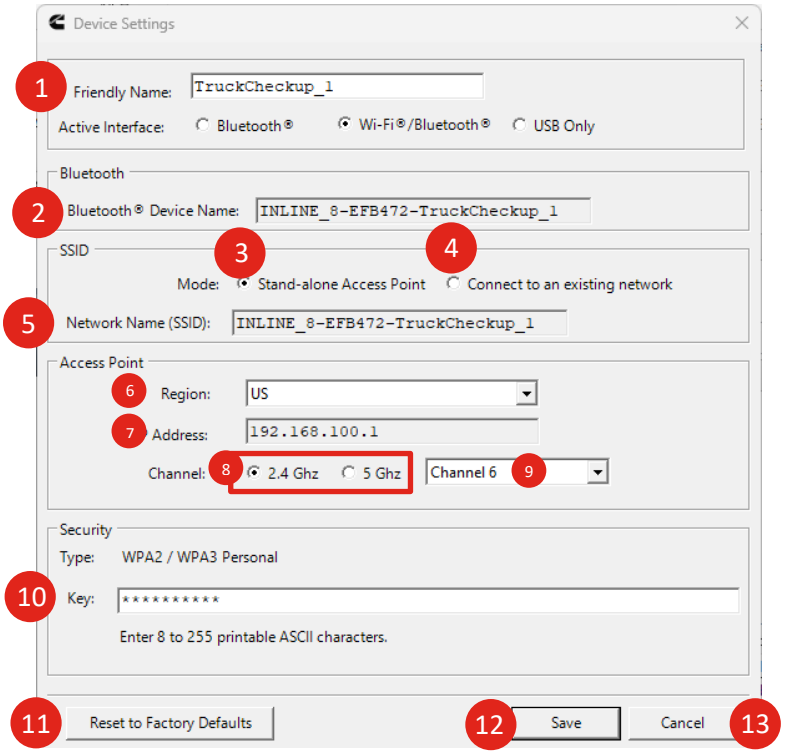


1. [Optional] A meaningful name that will make it easier to identify your adapter.
2. The full Bluetooth device name that will be visible on Windows PC.
3. Resets device to factory defaults. Factory default is Bluetooth enabled, friendly name empty. Additionally, all remembered Bluetooth devices will be deleted from the adapter.
4. Save the desired configuration to the adapter.
5. Close dialog without saving.

Wi-Fi/Bluetooth

Configure WiFi settings for the adapter. Adapter may be toggled between Bluetooth mode and WiFi mode with a 10 second button press.

Settings for WiFi Access Point mode (the most common WiFi mode):

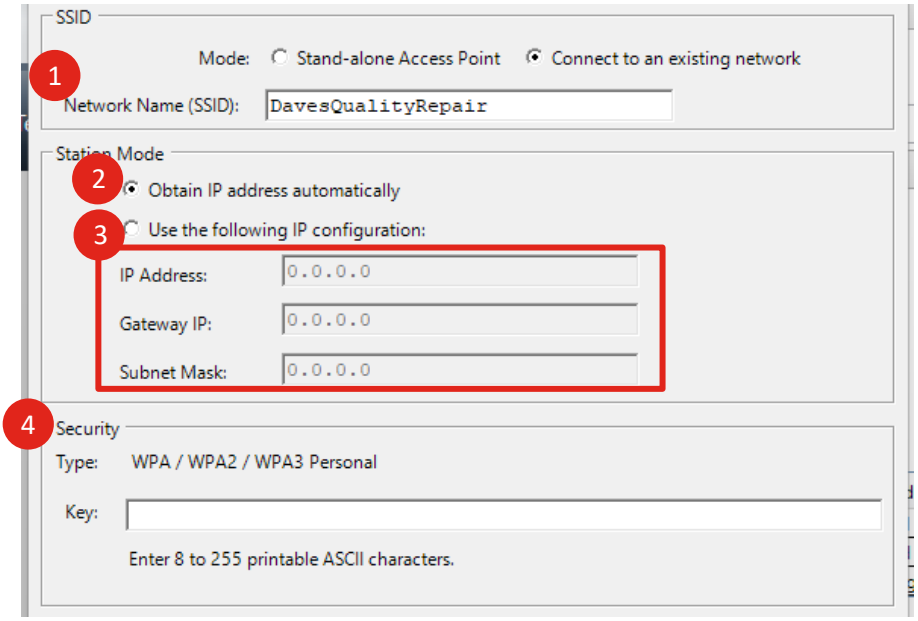


1. [Optional] A meaningful name that will make it easier to identify your adapter.
2. The full Bluetooth device name that will be used if adapter is switched to Bluetooth mode.
3. Use Stand-alone Access Point mode. This is the most common WiFi setup.
   Your adapter will operate like a WiFi hotspot. You will see your adapter as a WiFi option under windows and you can connect directly to it.
4. Connect to existing network. This will connect your adapter to an existing network such as your company's WiFi router. More info is provided in the next section.
5. For Access Point mode, this will be the name your adapter advertises as.
6. WiFi transmission and available channels are locally regulated. Select the most appropriate jurisdiction to ensure you are in compliance. If your country is not listed use WW (worldwide).
7. IP address that will be used by this adapter. Shown here for advanced users.
8. Use 2.4 Ghz band or 5 Ghz band. 2.4 Ghz has better range and works better through obstacles (walls, vehicles, etc.). Use 5 Ghz only if you have a specific need.
9. The wireless channel to use. Proper configuration of channels in your WiFi devices will result in less interference. Consult your IT staff if you wish to optimize. Otherwise, just stick with the default.
10. Specify a password to use when connecting to this adapter.
11. Resets device to factory default. Factory default is Bluetooth with friendly name empty. Additionally, all remembered Bluetooth devices will be deleted from the adapter.
12. Save the desired configuration to the adapter.

13. Close dialog without saving.

Settings for connecting to existing network:

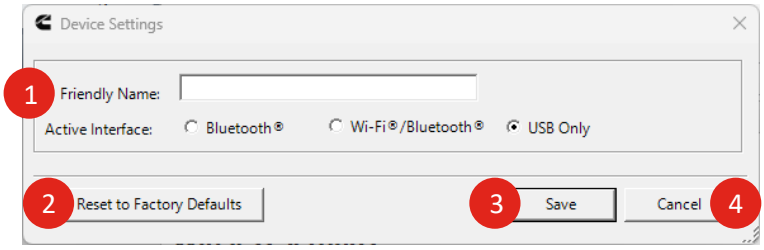
Note: *Please check with your IT support team to ensure your adapter will be allowed to connect.*



1. The network you wish to connect to (E.g. your WiFi router).
2. Select to obtain IP address automatically (known as DHCP). Most users should choose this.
3. Manual IP configuration. This is rarely needed and can cause problems with your network if care is not taken. Do this only in consultation with your IT support team.
4. The password of the WiFi network you are connecting to.

USB Only

Disable wireless for your adapters. Some shops require this for security concerns.



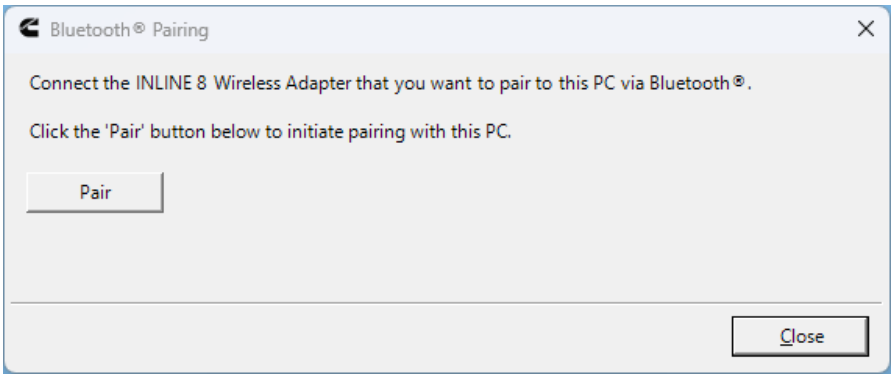
1. [Optional] A meaningful name that will make it easier to identify your adapter.
   Not particularly useful for USB only mode.
2. Resets device to factory defaults. Factory default is Bluetooth enabled, friendly name empty. Additionally, all remembered Bluetooth devices will be deleted from the adapter.
3. Save the desired configuration to the adapter.

4. Close dialog without saving.

Quick Pair Bluetooth

The Quick Pair Bluetooth feature will initiate Bluetooth pairing with a USB connected INLINE 8. For units without a pairing button, this is the only way to pair.

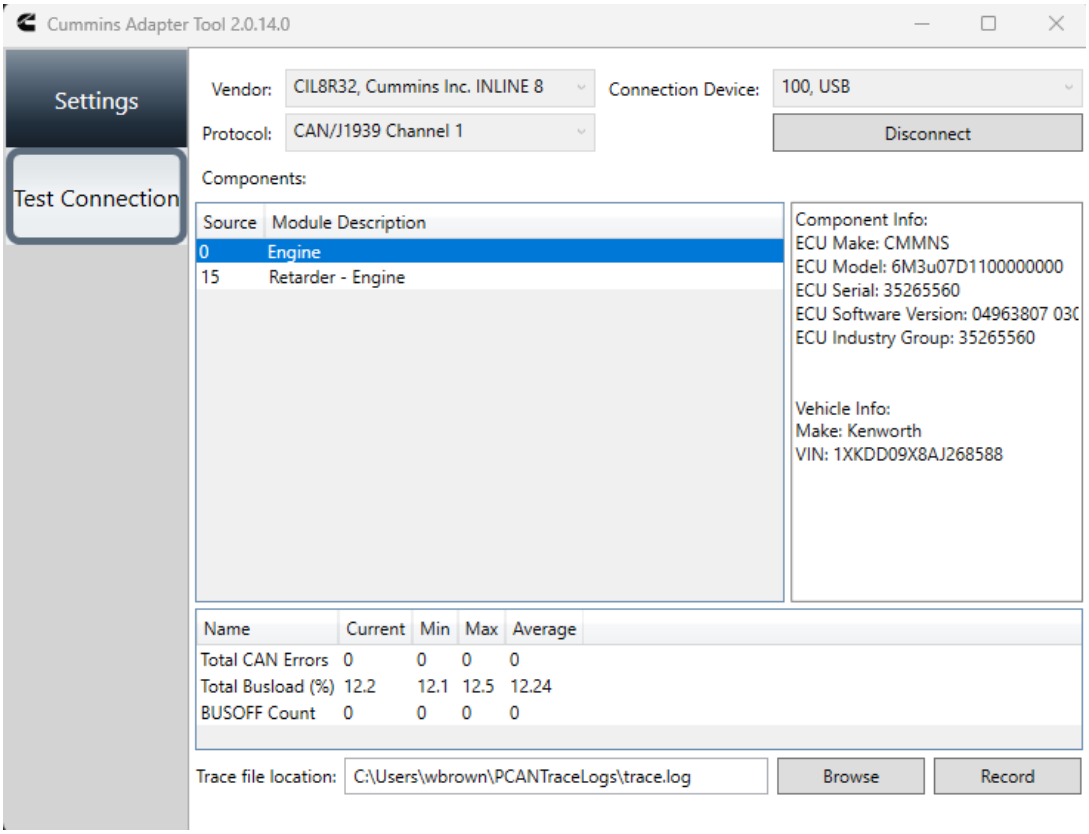
Note: *Adapter must be configured for Bluetooth prior to using this feature*



See also Wireless Configuration Walkthroughs -> Bluetooth.

Test Connection

The "**Test Connection**" tab allows users to verify that the adapter can connect to their vehicle's data buses. Adapter Tool will provide bus statistics and basic SAE component information. All RP1210C adapters are supported.



Vendor: This is an RP1210 term that typically corresponds to your adapter's brand.

Connection Device: Typically, the communication link between adapter and PC (e.g. USB, WiFi, Bluetooth).

Protocol: The vehicle protocol you wish to test.

Connect/Disconnect: Connect or disconnect the test connection.

Note: *If you navigate away from this tab, you will automatically be disconnected.*

Components: Lists components found on your vehicle. Select a component to see more about it in Component Info.

Stats Table: The stats table shows certain errors and busload Information.

Trace File: For use by Cummins support. Can be used to record data from your vehicle.

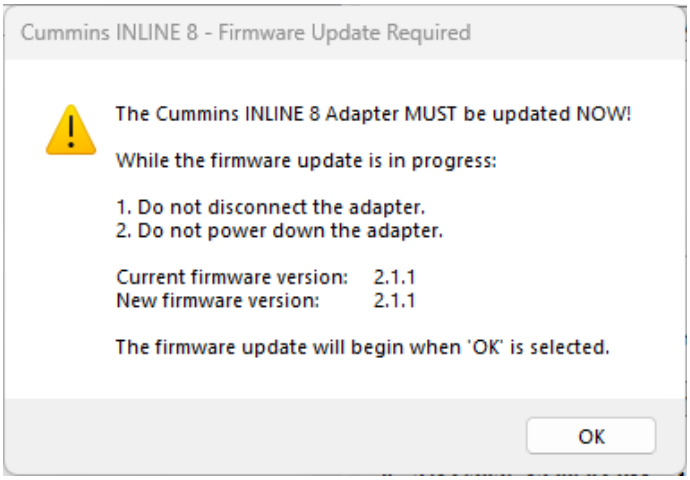
UPDATING ADAPTER FIRMWARE

NOTE: *Check https://www.cummins.com/support/digital-products-and-services-support/inline-support for the latest driver.*

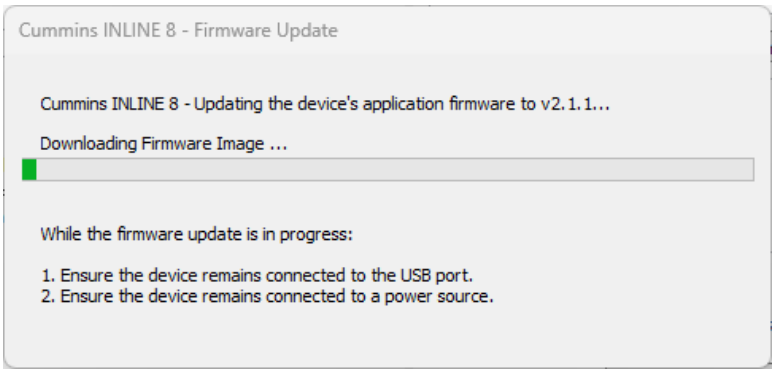
Automatic Firmware Update

Note: *Automatic firmware updates are not supported via wireless connection. Automatic updates must be made using a USB connection. If you are connected wirelessly, and the latest driver detects outdated firmware, an error message will alert you to connect with a USB cable.*

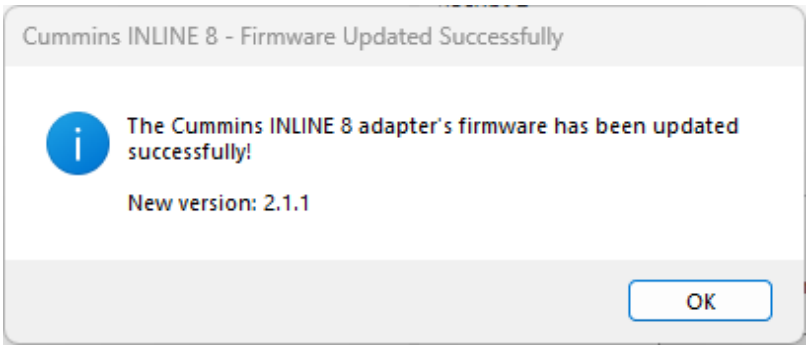
1. When the OEM application connects to the adapter, this dialog displays, and you must select **OK** to begin auto updates:



2. When you select **OK** from the original alert dialog box, this update dialog displays:



3. When the update is successfully finished, this screen displays:



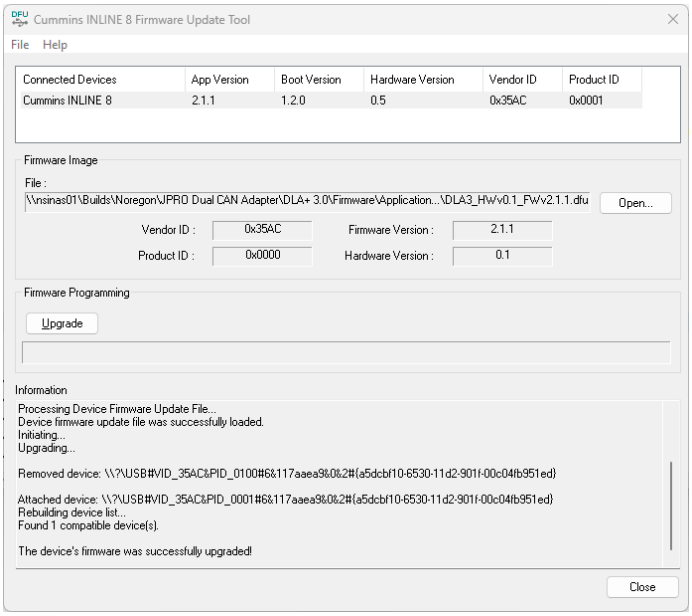
4. If an error is encountered, this type of message displays. Select **OK** to return to your diagnostic application.

Manual Firmware Update

In special circumstances, you can also manually update firmware. Users should only do this if so directed by Cummins support team.

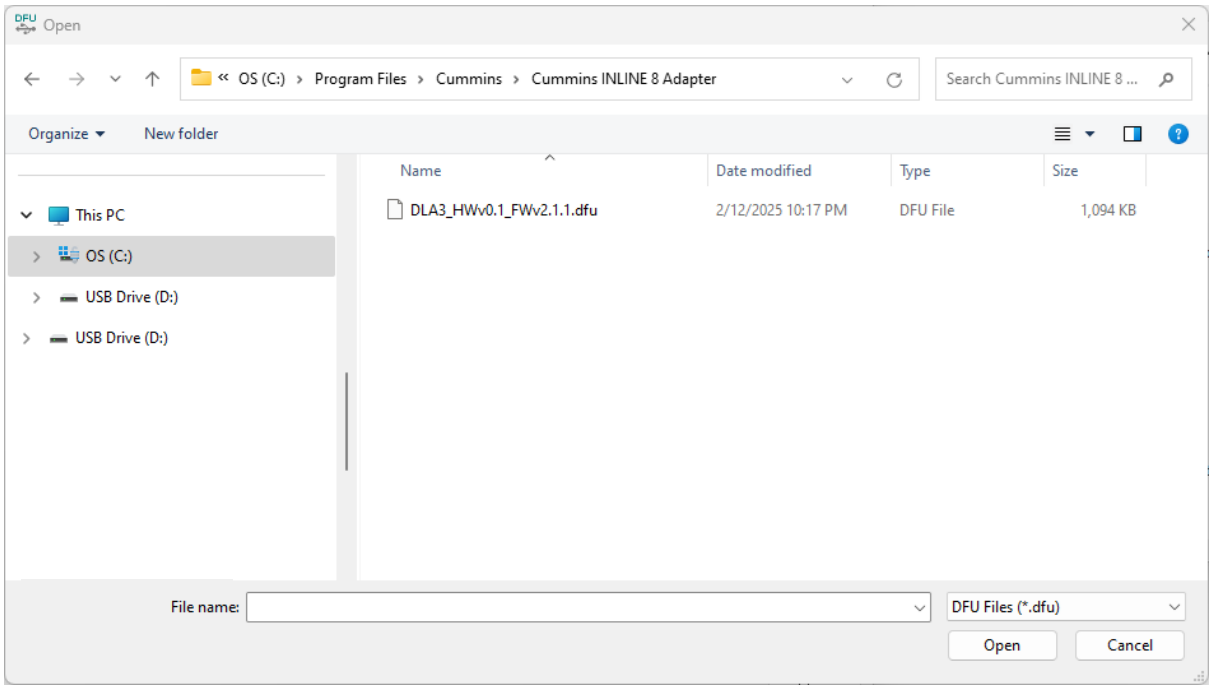
To update the firmware:

1. Plug the USB cable into the USB port on the PC.
2. Connect the other end of the USB cable to the port labeled Computer on the adapter.
3. Launch **Cummins INLINE 8 Firmware Update Tool** from the Start Menu ▶ All Programs ▶ Cummins INLINE 8 Adapter menu.
4. Verify a device shows up in the "**Connected Devices**" list column.

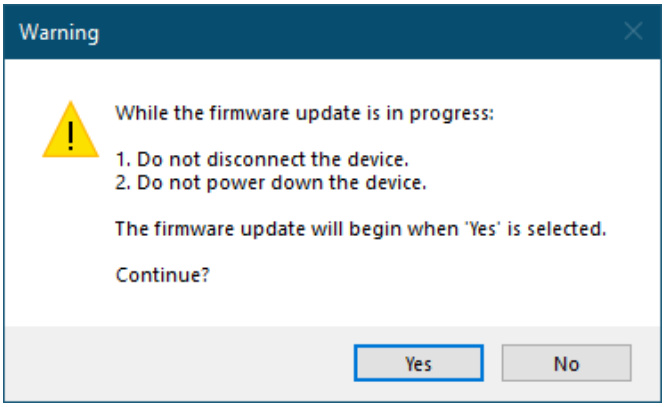


5. Select the **Open…** button contained in the "**Firmware Image**" section.

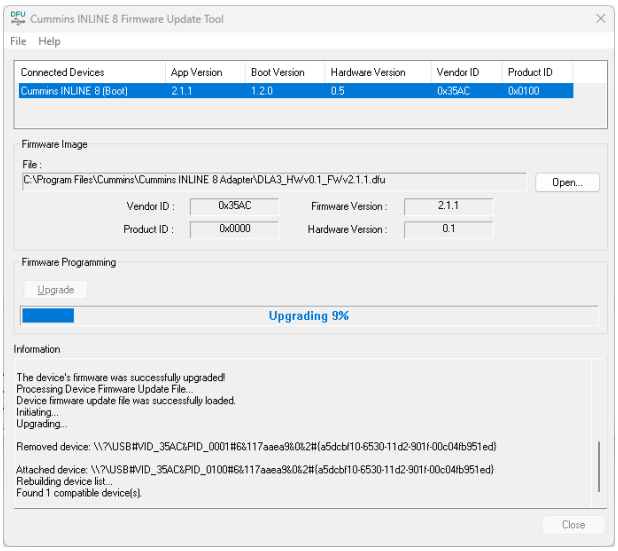
6. Highlight the desired **DFU** file and then click **Open**.



7. Click the **Upgrade** button.
8. Click **Yes** to continue (do not disconnect or power down device).



9. The device will be programmed.



10. Verify that the version is updated in the ‘Connected Devices’ list column.

ADAPTER SELECTION IN DIAGNOSTIC APPLICATIONS

To use your INLINE 8 adapter you will need to select it in your diagnostic applications. The method for doing this varies by application. Typically, you have to pick a *vendor* (corresponds to the adapter brand), and a *device* (corresponds with how your adapter is connected to your PC).

Vendor may be listed as CIL8R32 or “Cummins Inc. INLINE 8”. The device selection options will be like the following:

- 100, INLINE 8, USB
- 200, INLINE 8, WiFi
- 210, INLINE 8, Bluetooth

FREQUENTLY ASKED QUESTIONS AND TROUBLESHOOTING

QUESTION	POSSIBLE CAUSES	SOLUTION
The adapter power light is on, but my application isn't communicating.	The drivers have not been installed	Check to see that the appropriate drivers were installed
	The connection settings are incorrect	Check to see that the connection settings are correct
	The cables are not connected	Check to see if the cables are securely connected
	The vehicle ECU is not powered up	Check to see that the vehicle ignition is on
	Voltage to the adapter is not sufficient	Check to see that a minimum of 8V is being supplied to the vehicle's diagnostic connector
How do I know when the adapter is communicating?		The Power and Vehicle LEDs will be solid Green and the Computer LED will be solid Green, Yellow or White depending on the type of connection – see "LED Indicators" above.
Will the adapter read codes?		The adapter alone will not read codes. You will need INSITE™ , Guidanz® or another RP1210 compliant diagnostics application to do so.
What applications come with the adapters?		Only the drivers are provided as part of the Adapter kit, any applications must be purchased separately.
Will the adapter adjust parameters?		In order to make parameter adjustments, you must use the adapter with an RP1210 compliant diagnostic tool such as INSITE™ or Guidanz®.
Will the adapter work with my software?		Check to see if the application is on the list of supported applications and check the setup instructions that came with your application for guidance.

RP1210 Wireless Reception Guidelines for INLINE 8

Reduce Obstructions between PC and the INLINE 8:

- All metallic surfaces in the area will reflect radio signals and can disturb and reduce reception.
- Non-metallic obstructions will absorb radio signals and can reduce reception. This includes walls, furniture, other vehicles, etc.

Minimize interference:

- Cordless phones share the 2.4Ghz radio band used by the PC and INLINE 8. These devices will interfere with the radio signal. Use cordless phones that use the 5.8Ghz or 900Mhz bands.
- Microwave ovens radiate in the 2.4Ghz radio band used by the PC and INLINE 8. Keep microwave ovens out of the shop area.
- Cell phones interfere with radio signals – keep phone conversations away from the PC and INLINE 8.
- Electrical machinery causes radio noise. Try to stay away from machinery and take note if the signal is affected when certain equipment is activated.

Maximize antenna reception:

- PC/Laptop:
    - Keep antennas away from power cords and other computer wires.
    - A laptop's antenna is contained inside the laptop casing – keep the laptop out in the clear and out of any enclosures.
    - If reception is poor, move the PC to another location. Sometimes moving a few feet can help.

DEVICE ERROR CODES

RP1210 standard Error Codes	
Code	**Description**
128	DLL was not initialized.
129	The client ID is not valid.
130	The client is already connected to the specified device.
131	The maximum number of connections has been reached.
132	A memory de-allocation error has occurred.
133	A memory allocation error has occurred.
134	The requested device ID was invalid.
135	The specific device does not handle multiple clients.
136	The protocol requested was not found in the API INI file.
137	The API DLL's transmit message queue is full.
138	The API DLL's transmit message queue is corrupt.
139	The API DLL's message receive queue is full.
140	The API DLL's message receive queue is corrupt.
141	The message to be sent exceeds protocol size limit.
142	The interface hardware is not connected (to the computer).
143	The command requested is defined by RP1210A, but not supported.
144	Invalid command number or incorrect parameters.
145	The was a problem in the transmit status to PostMessage.
146	The API was not able to claim the requested address.
147	The message priority could not be set.
148	RP1210_ClientDisconnect was called while blocking was enabled.
149	You can only have one client connected in Raw mode at any given time.
150	You can only have one client connected in Raw mode at any given time.
151	The CAN hardware has issued an error BUS_OFF.
152	The API was not able to request an address.
153	The API was forced to concede the address to another node on the network.
154	The is no description available for the requested error code.
155	You cannot block under Win16.
156	This action is not allowed with multiple clients active.
157	Requested action requires a completed address claim.
158	Requested action requires a valid window handle on ClientConnect.
159	The message was not sent.
160	All message handles have been assigned.
161	The maximum number of filters has been exceeded.

162	Indicates hardware status has changed.
202	A required INI files was not located.
204	A required INI file section was not found.
205	A necessary INI file key was not found.
206	An INI file value was invalid.
207	ERR_DEVICE_NOT_SUPPORTED
208	ERR_INVALID_PORT_PARAM
213	The Command timed out.
220	ERR_OS_NOT_SUPPORTED
222	ERR_COMMAND_QUEUE_IS_FULL
224	ERR_CANNOT_SET_CAN_BAUDRATE
225	ERR_CANNOT_CLAIM_BROADCAST_ADDRESS
226	ERR_OUT_OF_ADDRESS_RESOURCES
227	ERR_ADDRESS_RELEASE_FAILED
230	ERR_COMM_DEVICE_IN_USE
441	The requested protocol is not compatible with an existing datalink.
453	ERR_ADAPTER_NOT_RESPONDING
454	ERR_CAN_BAUD_SET_NONSTANDARD
455	ERR_MULTIPLE_CONNECTIONS_NOT_ALLOWED_NOW
456	ERR_J1708_BAUD_SET_NONSTANDARD
457	ERR_J1939_BAUD_SET_NONSTANDARD
458	ERR_ISO15765_BAUD_SET_NONSTANDARD
600	ERR_INVALID_IOCTL_ID
601	ERR_NULL_PARAMETER
602	ERR_HARDWARE_NOT_SUPPORTED
603	ERR_CANNOT_DETERMINE_BAUD_RATE
Proprietary Error Codes	
704	An invalid buffer parameter was used.
705	The packetization flag should be 1 or 0.
706	Blocking while using window handle notifications is not allowed.
707	One or more of the Filters have an invalid length.
708	The data length for this protocol has been exceeded.
709	The Command buffer is too small.
710	The CAN Bit Timing values are invalid.
711	This command is not supported with the current protocol.
712	The J1939 address is no longer valid.
713	Multiple J1939 clients must use same packetizing methods.
714	Device detected but not responding to commands.

715	Protocol not supported by cable.
716	An existing client is connected to the FLASH protocol.
717	Get device status failed.
718	The command failed. The command required to device to be in 'Boot Mode'.
719	Failed to set device to 'Boot Mode'.
720	Firmware must be upgraded. Switch to a USB connection to upgrade.
721	Vehicle voltage not sufficient to connect to bus.
722	A Bluetooth adapter is not configured for connection.
723	The adapter firmware is newer than what this driver version supports.
724	Failed to obtain the device status.
725	The USB interface is in use. Wireless connections is not allowed at this time.
726	The Wireless interface is in use. USB connections is not allowed at the time.
727	Failed to open a socket to the device.
728	A WiFi adapter is not configured for connection.
729	An existing client is connected to the WIRELESS_CONFIG protocol.
732	Failed to get the protocol connection speed.
733	Incorrect or invalid firmware version for your DLA+ family adapter.
734	Failed to load the registry values for your DLA+ family adapter.
735	Failed to load the firmware update files for your DLA+ family adapter.
736	Failed to update the firmware version of your DLA+ family adapter.
737	Failed to read the firmware version of your DLA+ family adapter.
738	Failed to obtain the device status during firmware update connect.
739	Failed to obtain the device status during firmware perform update.
740	Device is in boot mode.
741	ERR_STALE_CALLBACK
742	ERR_NO_CABLE
743	ERR_WRONG_CABLE_SPECIFIED
744	ERR_GENERAL
745	ERR_OPERATION_NOT_SUPPORTED
746	ERR_DATA_STRUCTURE_NOT_INITIALIZED
747	ERR_DATA_STRUCTURE_NOT_SANE
748	ERR_INVALID_PARAMETER
749	ERR_ADAPTER_BUFFER_FULL
750	ERR_ADAPTER_BUFFER_EMPTY
751	ERR_INSUFFICIENT_STORAGE
752	ERR_ARGUMENT_ARRAY_TO_LARGE
753	ERR_ADAPTER_TIMEOUT
754	ERR_NO_MATCH

755	ERR_OPERATION_PENDING
756	ERR_HARDWARE_PROBLEM
757	ERR_INCORRECT_STATE
758	ERR_INCORRECT_SIZE
759	ERR_INVALID_CHECKSUM
760	ERR_DATA_INCOMPLETE
761	ERR_INTERNAL_ERROR
763	ERR_J1939_INVALID_CLAIM_ADDRESS
764	ERR_J1939_NO_NETWORK_ADDRESS
765	ERR_J1939_FRAME_CONFIRMATION_ERROR
766	ERR_J1939_SEND_ABORTED
767	ERR_J1939_DESTINATION_ALREADY_EXISTS
770	ERR_ISO15675_TX_NO_FLOW_FILTER
771	ERR_ISO15675_TX_RECEIVER_BUFFER_OVERFLOW
772	ERR_ISO15675_TX_INVALID_FLOW_STATUS
773	ERR_ISO15675_TX_UNEXPECTED_FLOW_CONTROL
774	ERR_ISO15765_FLOW_FILTER_ALREADY_EXISTS
775	ERR_PROTOCOL_NOT_SUPPORTED_BY_CABLE
776	ERR_WIFI_NOT_AVAILABLE_ON_DEVICE
777	ERR_FAILED_TO_GET_WIFI_CONFIG
778	ERR_FAILED_TO_SET_WIFI_CONFIG
779	ERR_FAILED_TO_RESET_WIFI_CONFIG
780	ERR_WIFI_CONTROL_FAILED
781	ERR_FAILED_TO_GET_WIFI_MAC
782	ERR_WIFI_FLASHING_FIRMWARE
783	ERR_WIFI_DETECTION_FAILED

LICENSE AGREEMENT

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www.noregon.com

REGULATORY

FCC

- “Model: DLA3” contains FCC ID: 2BLGQDLA3
- 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.
- **FCC CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.
- **Compliance with FCC requirement 15.407(c):** Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinue transmission in case of either absence of information to transmit or operational failure.
- **Frequency Tolerance:** ±20 ppm
- This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
- The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. LBEE5QD1ZM has been tested and found to comply with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines.

IC

- “Model: DLA3” Contains IC: 33122-DLA3

This device complies with Industry Canada Licence-Exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

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Data transmission is always initiated by software, which is the passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets is being transmitted. In other words, this device automatically discontinue transmission in case of either absence of information to transmit or operational failure.

La transmission des données est toujours initiée par le logiciel, puis les données sont transmises par l'intermédiaire du MAC, par la bande de base numérique et analogique et, enfin, à la puce RF. Plusieurs paquets spéciaux sont initiés par le MAC. Ce sont les seuls moyens pour qu'une partie de la bande de base numérique active l'émetteur RF, puis désactive celui-ci à la fin du paquet. En conséquence, l'émetteur reste uniquement activé lors de la transmission d'un des paquets susmentionnés. En d'autres termes, ce dispositif interrompt automatiquement toute transmission en cas d'absence d'information à transmettre ou de défaillance.

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. LBEE5QD1ZM has been tested and found to comply with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules.

Les connaissances scientifiques dont nous disposons n’ont mis en évidence aucun problème de santé associé à l’usage des appareils sans fil à faible puissance. Nous ne sommes cependant pas en mesure de prouver que ces appareils sans fil à faible puissance sont entièrement sans danger. Les appareils sans fil à faible puissance émettent une énergie fréquence radioélectrique (RF) très faible dans le spectre des micro-ondes lorsqu’ils sont utilisés. Alors qu’une dose élevée de RF peut avoir des effets sur la santé (en chauffant les tissus), l’exposition à de faibles RF qui ne produisent pas de chaleur n’a pas de mauvais effets connus sur la santé. De nombreuses études ont été menées sur les expositions aux RF faibles et n’ont découvert aucun effet biologique. Certaines études ont suggéré qu’il pouvait y avoir certains effets biologiques, mais ces résultats n’ont pas été confirmés par des recherches supplémentaires. LBEE5QD1ZM a été testé et jugé conforme aux limites d’exposition aux rayonnements IC énoncées pour un environnement non contrôlé et respecte les règles d’exposition aux fréquences radioélectriques (RF) CNR-102 de l’IC.