

Important Notes**Note**

Refer to [Chapter 3: General Wiring Guidelines](#), while planning your installation. The cable chapter provides specific information on cables and wiring and should be considered during the installation planning stage.

Note

Installers should be familiar with basic automotive wiring. It is recommended that installation personnel complete the appropriate Qualcomm training courses prior to installing the TT210 system.

Regulatory Compliance Information**FCC/IC Compliance 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.

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.*

Caution

This equipment should be installed and operated with minimum 20 cm between the radiator and body. This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC/IC.

General Installation Information

Consider the following information while planning a TT210 system installation.

Any changes or modifications not expressly approved by Qualcomm could void the user's authority to operate this equipment

Verify the Trailer/Container Is in Good Condition

Before beginning an installation:

- Thoroughly evaluate the area *prior* to installation to ensure the area where the installation will take place is in good condition. Determine if the TT210 system can be installed on the trailer/container. The following are some deterrents that can impact an installation or result in additional procedures:
 - The trailer/container-nose plywood goes all the way to the roof.
 - The vertical support rails are too narrowly placed.
 - There is obvious and extreme damage to the trailer/container nose at the TT210 system installation area.
- The trailer/container top rail above the 7-way should be flat and free of bends or deep dents.
- The trailer skin above the 7-way, about an inch from the top rail, should be sturdy and free of any serious damage.
- The 7-way connection points should be inspected for general cleanliness and corrosion.
- Verify that there is voltage on pin 7 and at all 7-way connection points when external power is applied.

Survey the Trailer/Container

Survey the trailer/container and decide where *exactly* to install the hardware. Typically in dry van installations, the terminal is in the 7-way bay and the cargo sensor is in the adjacent bay.

Terminal and Cables

Make sure that the TT210 system terminal and cable locations do not hinder normal operation or maintenance of the trailer/container. Also make sure the TT210 system terminal and cables are installed and/or stored safely out of the way of possible damage by cargo or other factors.

What to Consider Before Installing the System

- Drill holes only when necessary and in concurrence with the customer.
- Qualcomm recommends you use existing holes on the trailer/container for cable routing whenever possible.
- Use silicone (RTV) sealant when necessary to prevent leakage.

Installation Guidelines

When making installation decisions, consider safety, security, quality and reliability, and accessibility.

Safety, Reliability, and Accessibility

- Use eye protection when using a drill or performing work that poses any hazard to the eyes.
- Use ear protection in a noisy working area.
- Wear appropriate clothing or uniforms and safety shoes.
- Make sure you know what is behind the area before you drill.
- Make sure ladders and portable scaffolding are in good condition.
- Place ladders in safe positions.
- Install equipment so it will not cause damage to the trailer/container or hardware over time or will work loose over time.
- Make sure there are no loose components/cables and no unsecured components.
- Use solid mounting surfaces.
- Install all components in a location where they will not be abused.
- Route all cables away from sharp or abrasive areas where they might become damaged.
- Choose a location where components are safe from tampering.
- Choose a location where future maintenance can be easily serviced.

Typical TT210 Installation Sequence

Trailers, containers, and flatbeds often differ from manufacturer to manufacturer. The TT210 system was designed to work with a variety of trailer/container types, however, every installation is unique and should be thoroughly planned out before implementation.

1. Identify the installation location.
2. Mount the unit.
3. Route and connect cables and wires.
4. Identify which cargo sensor mount to use.
 - If 3" from the skin to liner, use internal mount
 - if between 2" and 3" from skin to liner, use 1" pan
 - if container or plate nose or less than 2", use the 3" pan
5. Install the optional cargo sensor and/or door sensor if desired.
6. Install battery into unit.

7. Close the unit.
8. Use the configuration tool software to configure the TT210 system and to verify the system is working properly. The software is also used to diagnose any problems with the system.
9. Perform system verification.

Tools and Supplies Needed for Installation

The following tools and supplies are recommended for performing installations.

- Laptop with XP or higher for running the Configuration Tool software
- Pop-rivet gun (suitable for use with 3/16" rivets)
- Wire crimper/stripper/cutter
- Felt-tip pen (or grease pencil, or scratch awl)
- 7/16" deep socket and ratchet
- 1/2" deep socket and ratchet
- 3/8" nut driver or socket and ratchet
- Metal cutting shear
- Assorted 7-way receptacle tools
- 20-foot portable scaffold or 20-foot ladder
- Cable anchors/tie wraps
- Drill (battery only recommended)
- 3/8" drill bit
- 3/16" drill bit
- Assorted drill bits
- 7/8" hole saw
- 12-tooth hole saw or higher hole saw or step drill. DO NOT use 7-tooth hole saws.
- Rubbing alcohol and a towel
- Fish tape for routing wires
- Assorted tools for removal of plywood (typically a Robertson bit, #2 Phillips bit, etc.)
- Extra step-down butt splices
- Nylon insulated seamless butt connectors
- Sawzall (for plate nose cargo sensor hole)

Note

High-torque/low RPM drill motors should be used for all steel drilling.