![Trane logo]

Installation Instructions

Tracer® TU Adapter (Wired/Wireless)

Part Numbers: X13651529010 (Kit) and X13651532020 (Adapter only)

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

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Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE	Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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⚠ WARNING

Proper Field Wiring and Grounding Required!
Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

⚠ WARNING

Personal Protective Equipment (PPE) Required!
Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.

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⚠ WARNING

Follow EHS Policies!
Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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Revision History

Updates to:
- Part numbers
- Compliance listings

Introduction

The Tracer TU Communication Adapter allows the Tracer TU service tool to connect to a remote unit controller through a zone sensor or wireless connection.

Note: The adapter is designed exclusively for use with the new generation of Trane controllers (Trane UC and Symbio controllers). Do not use the adapter with ZN, VV, AH, and MP LonTalk communicating controls.

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Packaged Contents

Part number X13651529010 includes the following items:
- One (1) Tracer TU Communications Adapter
- One (1) USB cable for use between a laptop PC and the adapter

Part number X13651532020 includes only the adapter without cables.

Note: Visually inspect contents for obvious defects or damage. All components have been thoroughly inspected before leaving the factory. Any claims for damage incurred during shipment should be filed with the carrier.

Compliance

FCC ID: W7Z-ZICM357SP2
IC   8254A-ZICM357SP2
UKCA Marked
CE Marked

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.

Cet appareil est conforme à la partie 15 du règlement du FCC. Son fonctionnement fait l'objet des deux conditions suivantes : (1) Cet appareil ne produit pas de brouillage nuisible, et (2) cet appareil doit pouvoir recevoir n'importe quel type d'interférence, y compris les brouillages pouvant occasionner un fonctionnement non désiré.

Adapter Software and USB Driver Installations

Perform the following steps to load the adapter software and the USB driver.
1. Connect the adapter to a laptop using the standard USB cable.
   A small message box appears at the bottom of the screen near the system tray indicating that adapter software is being installed.
2. Wait for the installation to complete.

Note: Before using the adapter, confirm that (1) the zone sensor has wired communication with the unit controller, or (2) the controller has a Wireless Comm

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Interface (WCI). (For wired communication, see the sensor's installation instructions for details.)

Note: When discovering and installing expansion modules, the adapter cannot connect to a unit controller. Both the adapter and the expansion modules use the IMC connection to communicate with the unit controller, which results in a conflict during discovery. Once the expansion modules are installed, the adapter can communicate with the unit controller.

Connecting to a Device

When the adapter software and driver have been installed, establish a wired or a wireless connection to the controller as shown in Figure 1 by performing one of the following tasks:

- Physically connect the adapter to a zone sensor using an RJ-22 cable and then establish a connection using the **TU Adapter - Wired** option on the Tracer TU Startup Task Panel.
- Use the **TU Adapter - Wireless** option on the Tracer TU Startup Task Panel, join Tracer TU to a wireless network, and then attach to a member device.

(See the procedural information in the *Startup Task Panel Help* and the "Accessing Wireless Devices and Maintaining Networks" section of the *Tracer TU Help for Programmable Controllers*, which is accessible from the Help menu in the Tracer TU window. Finally, each wireless dialog box has context-sensitive Help.)

Note: It is not possible to make both a wired and a wireless connection simultaneously.

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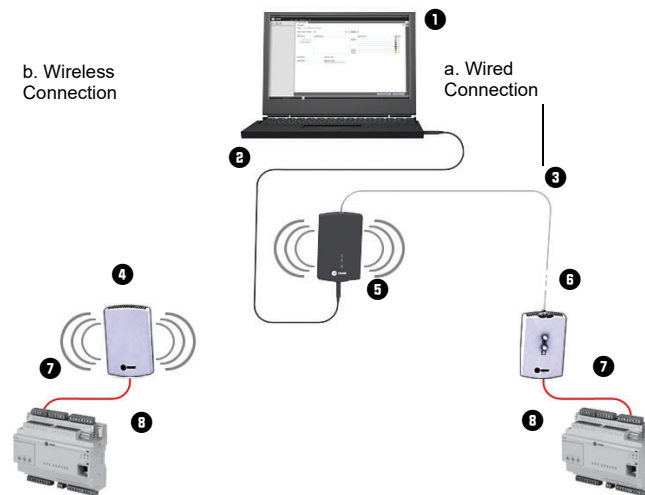**Figure 1.   Wireless or wired connection through the adapter**

Table 1.   Adapter connection components

1.	Tracer TU
2.	USB Type A/B cable
3.	RJ-22 cable (user supplied)
4.	Wireless Comm Interface (WCI) (not simultaneous with wired)
5.	Adapter
6.	Wired zone sensor connection (not simultaneous with wireless)
7.	IMC wires
8.	Trane unit controllers

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Adapter Operations

Once communication with the unit controller or WCI has been established, use the Tracer TU service tool as if it is directly connected to the USB port of the controller.)

Adapter Power

The USB cable connecting the laptop to the adapter provides power through the laptop USB port. No other connection is necessary to power the adapter.

USB allows a number of devices to share a link. Any USB host (laptop) is required to provide 500 mA at 5 Vdc. The power requirements of the adapter have been minimized so that the adapter can share the USB link with other devices. The total current draw of all connected devices cannot exceed 500 mA.

Normal Operation

Connecting the adapter to a laptop PC starts the adapter. A successful start is indicated when the Status LED changes from solid red to solid green. The Status LED flashes green to indicate active communication through a USB port. (See Figure 2.)

When communication with the unit controller is established, the Receive LED flashes amber as data is received from the unit controller, and the Transmit LED flashes green as data is sent from the adapter to the unit controller. (See Figure 2.)

Figure 2.   Adapter communication status indicated by LEDs

Transmit LED
- Flashing green = sending data to IMC through a wired or wireless connection
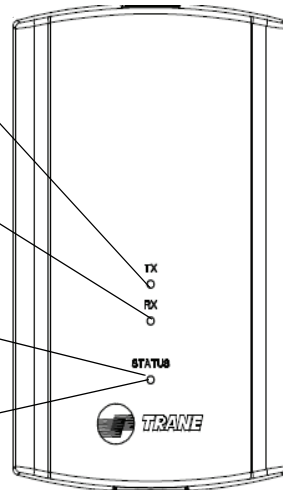
Receive LED
- Flashing amber = receiving data from IMC

Status LED (Startup)
- Solid red = Ready to start up
- Solid green = Operational
- Flashing green = communi- cation via USB

Status LED (Abnormal operation)
- Solid red = Improper operation (May occur after the USB drivers have been installed.)
- Flashing red = Alarm
- Off = Failure

TX
RX
STATUS
TRANE

Abnormal Operations

The Status LED can also indicate abnormal operation. A shift from solid green or flashing green to flashing red indicates that an internal fault has occurred in the adapter.

In these situations, disconnect and reconnect the adapter directly, or perform the following steps:

1. Click the **Safely Remove Hardware** icon in the system tray.
2. Select the **Adapter** from the list of devices.
3. Click **Stop**.
4. Remove the USB cable from the laptop USB port.

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5. Reconnect it to the USB port.

Table 2 lists possible running conditions or error causes and their corresponding Status LED indicators.

Table 2.   Running conditions/error causes with LED statuses

Running Condition/Error Cause	LED Status	LED Transmit	LED Receive	Operating Phase
No power	Off	Off	Off	Start up
Booting up	Solid red	Solid green	Solid amber	Start up
Boot failure	Solid red	Off	Off	Start up
Normal, no USB communication	Solid green	Off	Off	Operational
Normal, with USB communication	Flashing green			Operational
Normal with Wireless/RJ-22 communication		Flashing green	Flashing amber	Operational
Adapter internal fault	Flashing red	Off	Off	Operational

Turning off the Adapter

To turn off the adapter, disconnect the USB cable connecting it to the laptop.

Best Practices

To make the most effective use of the adapter, observe the following best practices.
- The adapter is best suited for making changes to selected setpoints or point configurations. To make changes to configuration variables or setpoints, update device application firmware, transfer large TGP2 files, or restore a

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configuration, connect directly to the controller with a USB cable to obtain the best performance.
- Use care when detaching the RJ-22 connector from the wired zone sensor. The RJ-22 is a locking connector. If pulled sharply, it can damage the zone sensor.
- For maximum wireless signal strength, position the device as close as possible to the target controller's WCI.

Agency Compliance

Both European Union Declaration of Conformity and United Kingdom Declaration of Conformity are available from the local Trane office.