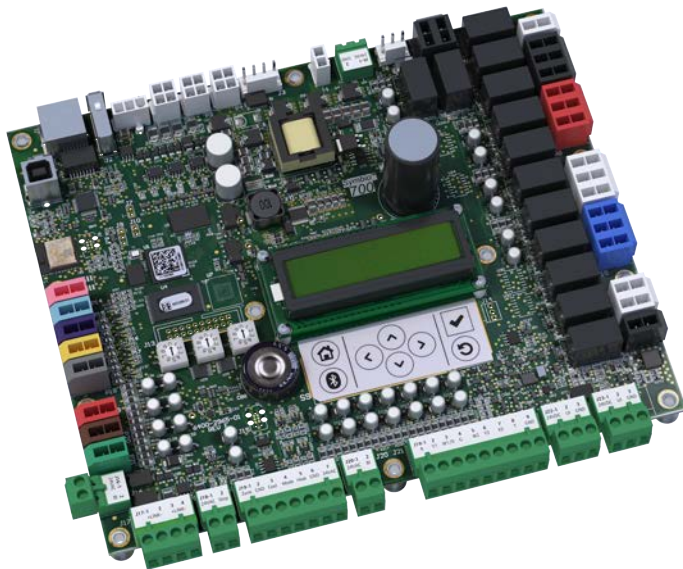




Installation Guide

# Advanced Symbio™ 700 Controller Field Installed Kit

Used with Precedent®, Voyager™ 3, Axiom™  
Rooftop, 15-25 Tons Foundation™, and Odyssey™  
with Symbio 700 Controls



## ⚠ 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.



## Introduction

Read this manual thoroughly before operating or servicing this unit.

## Warnings, Cautions, and Notices

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:



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



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.

### **⚠ 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 Labelling 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.**

## **⚠ 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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## **Inspection**

1. Unpack all components of the kit.
2. Check carefully for shipping damage. If any damage is found, report it immediately, and file a claim against the transportation company.
3. Visually inspect the components for shipping damage as soon as possible after delivery, before it is stored. Concealed damage must be reported within 15 days.
4. If concealed damage is discovered, stop unpacking the shipment.
5. Do not remove damaged material from the receiving location. Take photos of the damage, if possible. The owner must provide reasonable evidence that the damage did not occur after delivery.
6. Notify the carrier's terminal of damage immediately by phone and by mail. Request an immediate joint inspection of the damage by the carrier and the consignee.

**Note:** *Do not attempt to repair any damaged parts until the parts are inspected by the carrier's representative.*



# Table of Contents

General Information .....	5	Step 3: Remove the Old Controller Board .....	8
Overview .....	5	Step 4: Install the New Symbio 700 Advanced Board.....	8
Parts List .....	5	Step 5: Upgrade the New Symbio 700 Advanced Board Firmware .....	8
Installation .....	6	Method A: Use the Symbio™ Service and Installation App (preferred) .....	8
Step 1: Download Latest Firmware .....	6	Method B: Use Tracer TU .....	8
Intallation .....	7	Step 6: Restore the Backup to the New Symbio 700 Advanced Board.....	9
Step 1: Download Latest Firmware .....	7	Method A: Use the Symbio™ Service and Installation App (preferred) .....	9
Step 2: Backup the Existing Controller .....	7	Method B: Use Tracer TU .....	10
Method A: Use the Symbio™ Service and Installation App (preferred) .....	7		
Method B: Use Tracer TU .....	7		



# General Information

## Overview

This field-installed kit is designed for use with the following units equipped with a fully operational basic Symbio™ 700 controller:

- Precedent™
- Voyager™ 3
- Odyssey™ units
- Axiom™ Rooftop
- 15-25 Tons Foundation™

The purpose of this kit is to replace a basic Symbio™ 700 Controller to an advanced Symbio controller, providing enhanced controller capabilities such as advanced

troubleshooting, communications, programming, and remote access.

**Note:** *This kit will not work if with a failed Symbio 700 controller or if the unit does not have a Symbio 700 controller.*

For more detailed information on the Symbio 700 controller, see the Symbio 700 Controller User Guide - BAS-SVU054\*-EN.

## Parts List

- Advanced Symbio™ 700 Controller
- USB storage device
- Information label



# Installation

## Step 1: Download Latest Firmware

Before attempting to upgrade to the advanced board, confirm the latest available firmware is installed on the new controller.

1. Visit [trane.com](http://trane.com) and download the latest firmware for the Symbio 700. Scan the QR code below for quick access.

Figure 1. Firmware download page



2. Copy the firmware to the USB storage device provided with this kit.
3. Confirm the firmware is located in the root folder of the USB drive and not in a subfolder. Symbio 700 only recognizes firmware in the root folder.

**Note:** *If using Tracer TU to upgrade the firmware, save a copy of the firmware to the local hard drive.*



# Installation

## Step 1: Download Latest Firmware

Before attempting to upgrade to the advanced board, confirm the latest available firmware is installed on the new controller.

1. Visit [trane.com](http://trane.com) and download the latest firmware for the Symbio 700. Scan the QR code below for quick access.

Figure 2. Firmware download page



2. Copy the firmware to the USB storage device provided with this kit.
3. Confirm the firmware is located in the root folder of the USB drive and not in a subfolder. Symbio 700 only recognizes firmware in the root folder.

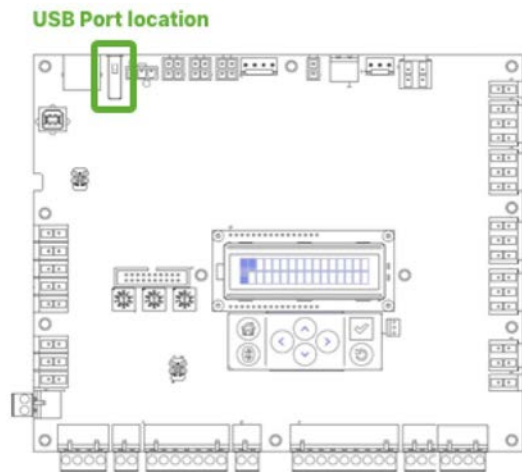
**Note:** If using Tracer TU to upgrade the firmware, save a copy of the firmware to the local hard drive.

## Step 2: Backup the Existing Controller

### Method A: Use the Symbio™ Service and Installation App (preferred)

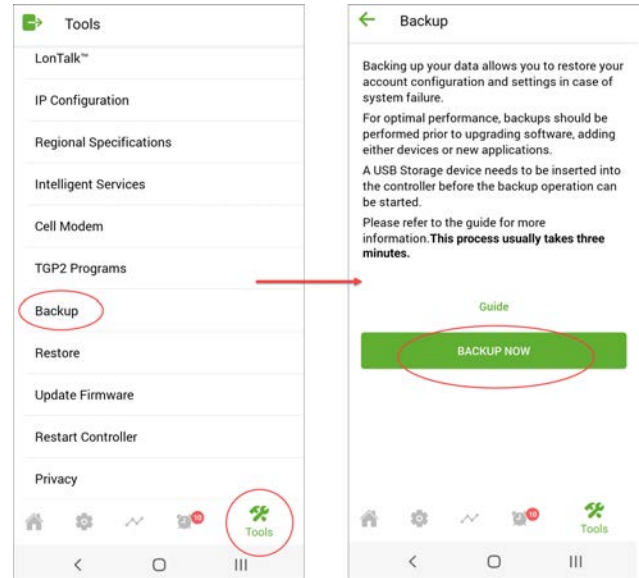
1. Insert the provided USB storage device into the existing Symbio 700 USB port J2.

Figure 3. USB J2 port location



2. Open the Symbio Service and Installation App. See Symbio 700 Controller User GuideBAS-SVN054\*-EN for more information on the app.
3. Connect to the Symbio 700 controller.
4. Select **Tools > Backup**.

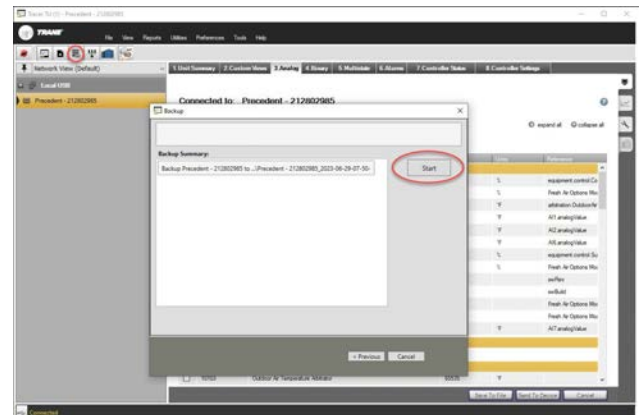
Figure 4. Backup controller



### Method B: Use Tracer TU

1. Connect a laptop to the existing Symbio™ 700 controller using the USB service tool port P13 (USB port B).
2. Start Tracer TU on the laptop.
3. Connect to the local controller using the **Direct Connection** option.
4. Select **Utilities > Backup Utility** to perform a local backup of the unit.

Figure 5. Tracer TU Backup Utility screen



## Step 3: Remove the Old Controller Board

### ⚠ WARNING

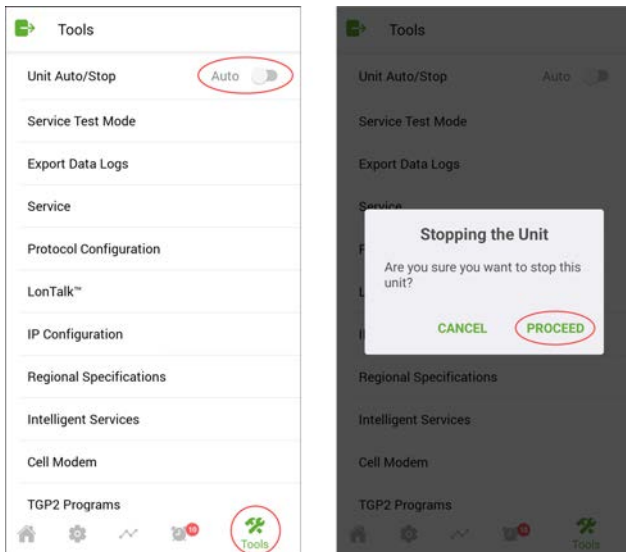
#### Hazardous Voltage!

Failure to disconnect power before servicing could result in death or serious injury.

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Verify that no power is present with a voltmeter.

1. After successfully backing up the controller, navigate to **Tools**.

**Figure 6. Manually stop unit**



2. Toggle the **Unit Auto/Stop** setting to off.
3. Click **PROCEED** to confirm stopping the unit.
4. When the unit has stopped, disconnect and lock out power from the unit.
5. With the unit powered down, disconnect all factory Molex-style connectors on both sides and top of the board and the field terminals Phoenix-style connectors at the bottom of the original Symbio 700 controller board.
6. Unscrew all ten screws and remove the existing board from the unit.

## Step 4: Install the New Symbio 700 Advanced Board

1. With the unit still powered down, install the new Symbio 700 board in the exact same location where the original board was mounted.

**Note:** The Basic and Advanced Symbio 700 boards have the same dimensions and layout.

2. Reconnect the Molex-style connectors. Factory connectors are color coded. Match the color between wire harness and board connectors.
3. Reconnect the field terminals Phoenix-style connectors at the bottom of the controller.
4. Carefully inspect and confirm that ALL terminals are connected back to the new control board.

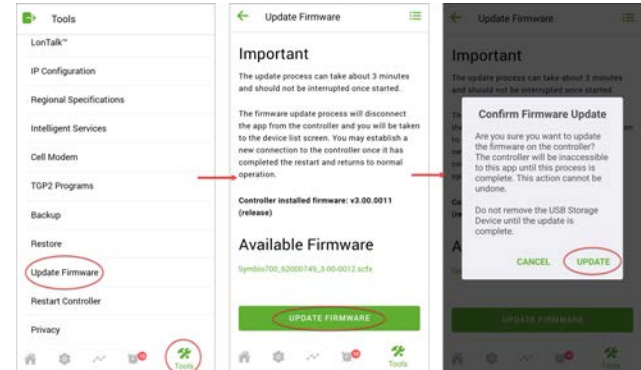
## Step 5: Upgrade the New Symbio 700 Advanced Board Firmware

**Important:** Before attempting to restore the controller backup, confirm the latest available firmware is installed in the new Symbio 700 controller board.

### Method A: Use the Symbio™ Service and Installation App (preferred)

1. Insert the provided USB storage device into the existing Symbio 700 USB port J2.
2. Using the Symbio Service and Installation App, connect to the new controller.

**Figure 7. Firmware update navigation screens**



3. Navigate to **Tools > Update Firmware** and perform the firmware update on the new controller.

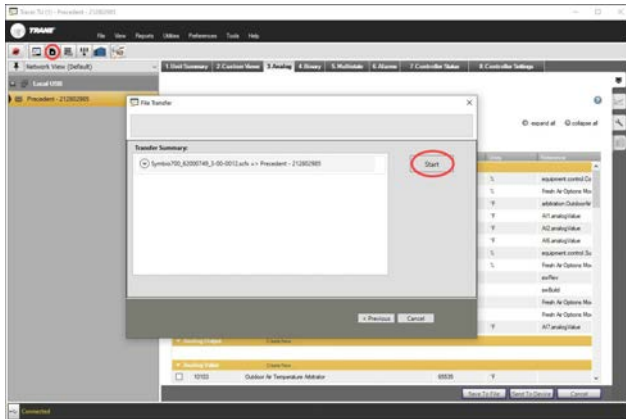
**Note:** Updating the controller firmware may take up to five minutes. During this time, the Bluetooth connection is lost and unavailable. Please follow the update on the Symbio 700 onboard user interface.

### Method B: Use Tracer TU

1. Connect a laptop to the existing Symbio™ 700 controller using the USB service tool port P13 (USB port B).
2. Start Tracer TU on the laptop.
3. Connect to the local controller using the **Direct Connection** option.
4. Select **Utilities > File Transfer Utility**.



**Figure 8. Tracer TU Transfer File Utility**



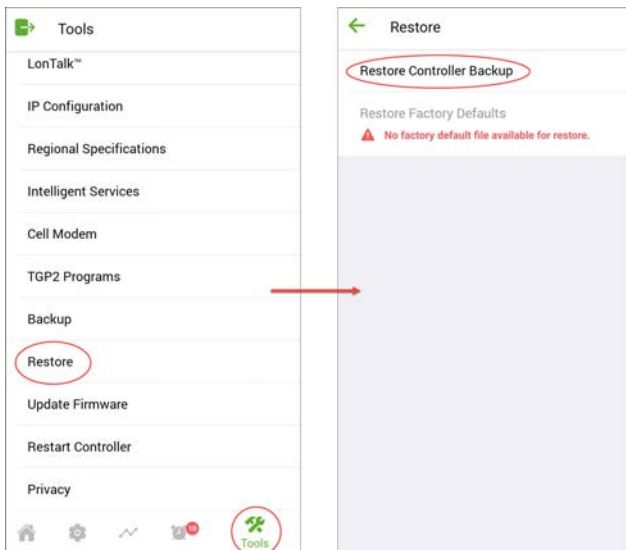
5. Select the previously downloaded firmware file from the local drive and perform a firmware update.

## Step 6: Restore the Backup to the New Symbio 700 Advanced Board

### Method A: Use the Symbio™ Service and Installation App (preferred)

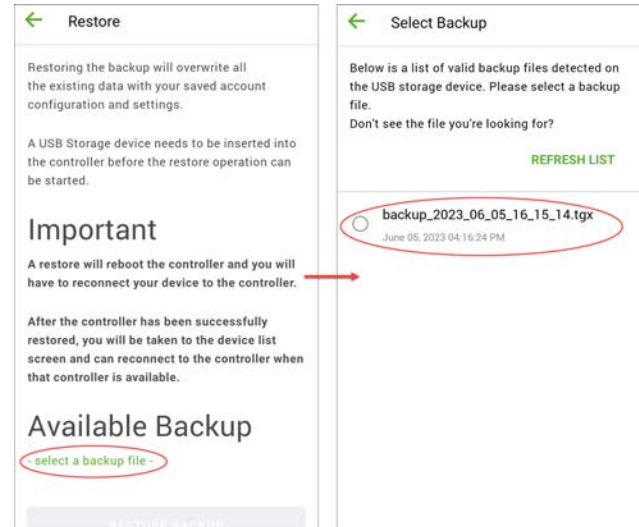
1. With the USB storage device still inserted in USB port J2, reconnect the new Symbio 700 Advanced board using the Symbio 700 Service and Installation App.
2. Navigate to **Tools > Restore**.
3. Select **Restore Controller Backup**.

**Figure 9. Restore Controller Backup**



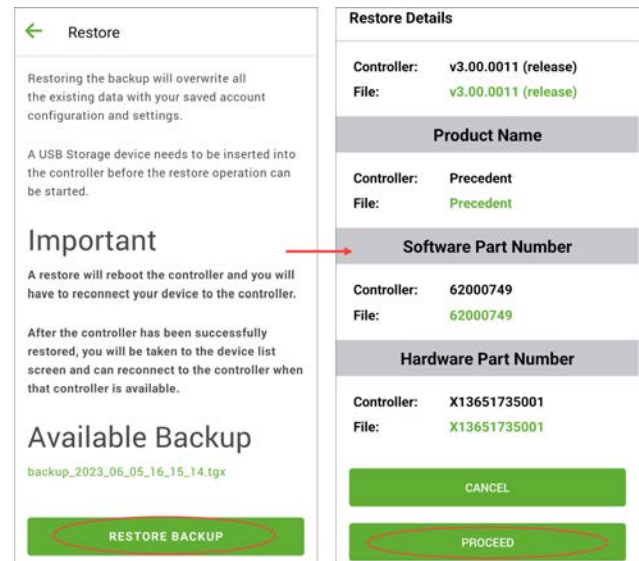
4. Tap **select a backup file**.

**Figure 10. Restore Controller Backup**



5. Choose the backup file to restore.
6. Once the backup file is selected, the **RESTORE BACKUP** option is available. Tap **RESTORE BACKUP**.

**Figure 11. Restore Controller Backup**



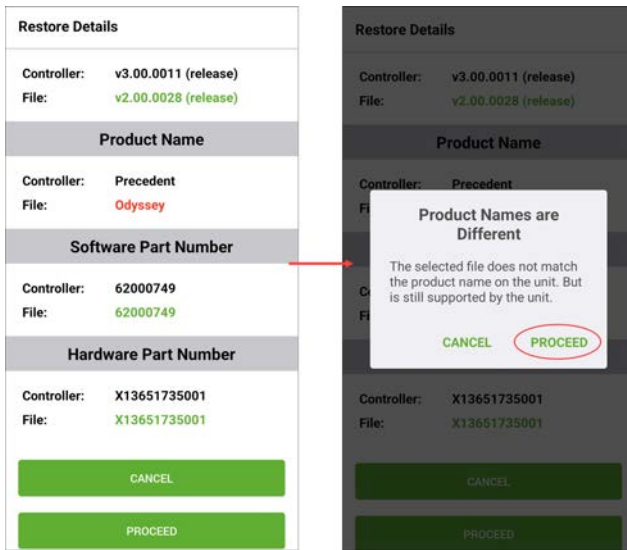
7. The Restore Details screen displays a comparison between the backup file and the new controller. Select **PROCEED** to continue the backup operation.
8. Once the backup is complete, tap **OK**.

### Change Product Type

**Important:** All Symbio 700 boards are factory pre-configured as Precedent by default. Follow these steps to change the product type to a different piece of equipment (if appropriate).

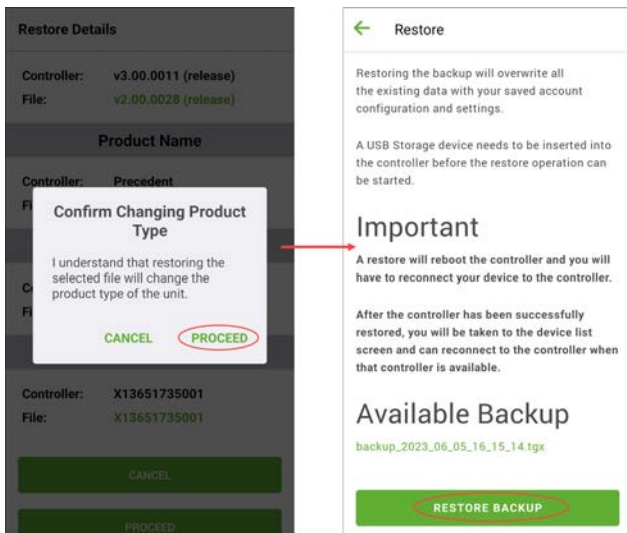
1. Verify the Product Name and tap **PROCEED**.

Figure 12. Confirm product name



2. Confirm the product type and tap **PROCEED**.

Figure 13. Confirm product type

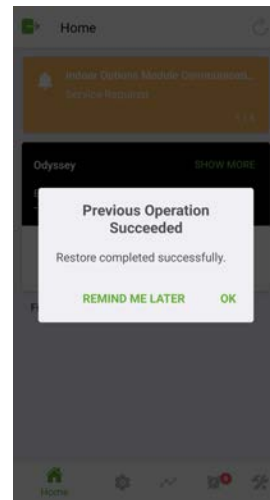


3. Tap **RESTORE BACKUP**.

Updating the controller firmware may take up to five minutes. During this time, the Bluetooth connection is lost and unavailable, Please follow the update on the Symbio 700 onboard user interface.

Once completed, reconnect to the controller using the Symbio Service and Install app. The app will displays the message **Previous Operation Succeeded**, indicating that the restore process was successful. At this point, the unit will resume normal operation, and the installation of the new Advanced Symbio 700 Controller is complete.

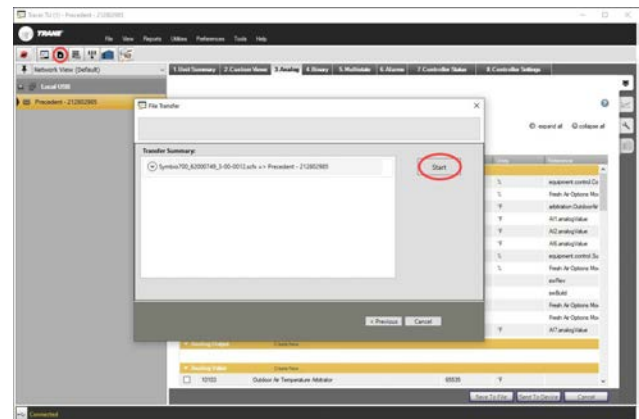
Figure 14. Backup restore complete



## Method B: Use Tracer TU

1. After performing the firmware upgrade, navigate to **Utilities > Transfer File Utility**.

Figure 15. Tracer TU File Transfer Utility



2. Select the backup file to restore and click **Start**.

For additional information on editing configurations, visit the video referenced below.

Figure 16. Editing configurations video QR code





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