HELP

TRIMBLE® ACCESS™ SOFTWARE

®Trimble.

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Getting Started

Welcome

Welcome to the Trimble® Access™ software version 2014.20 Help.

This help system makes it easy to find the information you need to effectively use the full capabilities of the Trimble Access software.

For information that extends or updates this Help:

- Go to the Trimble website (www.trimble.com).
- Contact your local Trimble dealer.

Trimble Access Overview

The Trimble Access software provides a collection of survey tools for use in the field, and web-based services for the office and in the field. These programs are installed on the controller, the office computer, or on servers hosted by Trimble.

The following table describes the function of each of the system components, and where they are installed.

Application	Function	Installed On...	Standard / Optional
Trimble Access Installation Manager	Installs and updates controllers with the latest changes to applications and services through Microsoft ActiveSync technology or the Windows Mobile Device Center.	Office Computer	Standard
The Trimble Access menu	- Starts applications and services on the controller. - Switches between running applications and services on the controller. - Generates system notifications alerts. - Used to log in to the Trimble Connected Community to access web services, including AccessSync.	Controller	Standard
General Survey	A general surveying application for common field survey tasks for optical and GNSS sensors.	Controller	Standard
Internet Setup	A wizard to simplify the setup of cellular Internet connections.	Controller	Standard
Settings	Define settings for the entire system in one place. Settings include units, connection settings (including survey styles and radio), feature libraries, and other general configurations.	Controller	Standard
Roads	Specialized road application to define, survey, and report on road jobs.	Controller	Optional
Tunnels		Controller	Optional

	Specialized tunnel application to define, survey, and report on tunnel jobs.		
Mines	Specialized mines application to position drilling equipment and report on mines jobs.	Controller	Optional
Monitoring	Specialized monitoring application to define, monitor and report on monitoring jobs.	Controller	Optional
Land Seismic	Specialized land seismic application to stakeout pre-plot definitions.	Controller	Optional
AccessSync	A service that allows for cable-free transfer of the Trimble Access software files from the field to the office and vice versa using an Internet connection. When transferring files from the office to the field, files are automatically converted to the version required by the field controller.	Controller	Optional
GNSS Forecast	A planning tool to forecast suitability for GNSS surveying, based on the availability of satellites and ionospheric conditions at a specified location.	Controller	Optional
Trimble Connected Community	- A web-based set of tools, managed and hosted by Trimble that allows individual organizations to share information quickly and easily across the Internet. - Enables you to create projects and manage hardware and services within the Trimble Access software. - Provides a landing place for files that are transferred to and from the field by the AccessSync service.	Trimble hosted server	Optional
Trimble Connected Community Explorer (TCCE)	- A plug-in for the Microsoft Windows XP, Vista, and Windows 7 operating systems that makes an organizations file and folder structure in the Trimble Connected Community available in My Computer and Windows Explorer areas of the local user's computer. TCCE significantly improves navigation through the Trimble Connected Community by allowing a user to manage files and folders in the same way as in Windows. - Allows automatic synchronization between a selected folder on the local computer and a selected filespace/ folder on the Trimble Connected Community. TCCE can keep up to 10 pairs of folders synchronized.	Office Computer	Optional
Aerial Imaging	Specialized application for operating the Trimble UX5 aerial imaging rover. This application is only available for installation on a Trimble Tablet controller.	Controller	Optional
Equipment Manager	The Equipment Manager Agent software works with the Trimble InSphere™ Equipment Manager web-based application to enable central management of company field equipment. For more information go to www.trimbleinsphere.com/insphere/equipment-manager.	Controller	Optional
TerraFlex™	The mobile component of the Trimble TerraFlex cloud subscription-based solution for mobile geospatial data collection. For support and information go to www.trimbleinsphere.com/insphere/terraflex-data-collection.	Controller	Optional

Access Marketplace	Allows browsing of available applications for Trimble Access, including Trimble applications, partner applications, and regional applications. Regional applications are innovative solutions that are not for sale but highlight the capabilities of the Trimble Access Software Development Toolkit. Examples are China Electricity and China Survey Toolkit.	Controller	Standard
Utility Survey	Enables detection and collection of 3D positions of underground utilities in real time from within Trimble Access.	Controller	Optional
Level Me	Specialized application for determining elevations through observation, calculation, and compensation with precise trigonometric leveling using a Trimble S Series total station.	Controller	Optional
BathySurvey	Specialized application for adding depths to a GNSS position record from a range of echo sounders.	Controller	Optional
BestFit	Specialized application for calculating best-fit solutions for well-defined 3D geometric elements, such as lines, planes, circles, spheres and cylinders.	Controller	Optional
RM3D Output	Specialized application for the design, monitoring, data collection, and set out of rail tracks.	Controller	Optional
ARCH.e	A set of computer tools for recording and managing data during archaeological excavations.	Controller	Optional
Athletics	Specialized application for measuring results at athletic events.	Controller	Optional

Notes

- All upgrades to the software on the controller must be made through Microsoft ActiveSync technology or the Windows Mobile Device Center connection to the office computer.
- Services on the field controller send and receive data through an Internet connection to the Trimble hosted server.

Supported Controllers

The Trimble Access software runs on the following controllers:

- Trimble TSC3 controller
- Trimble TSC2 controller
- Trimble Tablet
- Trimble CU controller
- Trimble Geo7X handheld
- Trimble GeoXR handheld
- Trimble Slate controller
- Trimble S3 controller (integrated into the Trimble S3 total station)
- Trimble M3 controller (integrated into the Trimble M3 total station)
- Some third-party Windows computers are supported. The following models have been tested with Trimble Access:
    - Motion F5t Tablet PC

♦ Panasonic Toughbook 19

Note - Throughout the Trimble Access documentation, users of third-party Windows computers should refer to the notes and sections for the Trimble Tablet, unless otherwise stated.

For more information, go to www.trimble.com/Survey/Trimble-Access-IS.aspx and download the *Trimble Access for Windows Minimum Requirements* bulletin.

Installing and updating the software

You can install Trimble Access software using the Trimble Access Installation Manager online or you can download a copy of the Trimble Access Installation Manager and all application files and licenses for installation to your controllers at a later date, when you may not have access to an internet connection.

Installing and updating the software using the Trimble Access Installation Manager online

Use the Trimble Access Installation Manager to install software and updates for all Trimble Access applications on your controller.

Installing and updating the software using the Trimble Access Installation Manager offline

Download a copy of the Trimble Access Installation Manager and all application files and licenses.

When you create an offline version of the Trimble Access Installation Manager:

- You must list the serial numbers for the controllers to be updated offline so that all the licenses for the controllers are included in the offline installation. Only those controllers that have had their licenses downloaded can be updated offline.
- You can select the version of the Trimble Access software to be available for the offline installation. You can then use the Licenses only option to download additional licenses. You must use the Licenses only option to download additional licenses if you purchased new licenses for existing controllers, or if you include additional controllers in the offline installation.

For more information see: www.trimble.com/taim/

Uninstalling software

Whenever you update a controller, TAIM automatically reinstalls and everything that is already installed on the controller. TAIM does not allow you to deselect applications or languages that are already installed.

If for any reason you want to uninstall Trimble Access software applications you have installed to your controller, use the *Add/Remove Programs* feature on the controller.

Note - Because the controller is still licensed for the application, the next time you run TAIM, the check box for the application is selected by default. To prevent reinstalling the application you have removed, you must clear the check box next to the application name before you click *Install.*

Similarly, to remove a language version of Trimble Access that you no longer need, remove it using the *Add/Remove Programs* feature on the controller. Because the language is no longer installed, the check box next to the language is not selected the next time you run TAIM.

Licensing the software

Every Trimble Access application must be licensed in order for you to install and operate the software.

When you purchase an additional component for the Trimble Access software, or extend an existing license, the license file is updated on the Trimble hosted server. To download the new license file, do one of the following:

- Connect the controller to the office computer through Microsoft ActiveSync technology or the Windows Mobile Device Center and then run the Trimble Access Installation Manager.
  This updates the license **and** the software.

- With an Internet connection established, tap the Trimble button in the Trimble Access task bar, or the task bar in the application that you are currently running and then select *About* from the drop down menu. Then tap the *License* button to begin the download process.
  This updates **only** the license.

About

To access a list of all Trimble Access applications installed on the controller, their version numbers, license information, and EULA (End User License Agreement), tap the Trimble button in the Trimble Access task bar, or the task bar in the application that you are currently running and then select *About* from the drop down menu.

The *About* dialog shows two dates; the *License expiry date* and the *Software warranty expiry date:*

  License expiry date

  This refers to the date until which the software or service can be used. Perpetual licenses do not have
  a license expiry date. Timed licenses show the expiry date of the current license on the controller.
  However, as the timed licenses are automatically extended, the date shown is the date that the
  currently downloaded license expires. As long as you maintain your subscription, all you need to do
  to update a license is to run the Trimble Access Installation Manager software, or if the controller is
  connected to the Internet, tap the *License* button in the *About* dialog.

  Software warranty expiry date

  The software warranty expiry date field shows the date the warranty expires, or *On subscription* that
  relates to timed license subscriptions, which do not expire if the subscription is maintained. If the
  software warranty has expired, you can continue to operate the software and are entitled to minor
  updates of the software. New improved versions of the software require a valid warranty.

For information on Hardware Extended Warranties or Software Maintenance, contact trimble_supportsales@trimble.com.

Legal Notices

Trimble Access

Trimble Access Features

Use the Trimble Access menu to start and navigate between each of the applications and services within the Trimble Access software.

To start the Trimble Access software, do one of the following:

On a Geo7X/GeoXR controller:

- Tap Trimble Access from the [Start] menu.

On a TSC2/TSC3 controller:

- Press the Trimble hardkey.
- Tap Trimble Access from the [Start] menu.

On a Trimble CU controller:
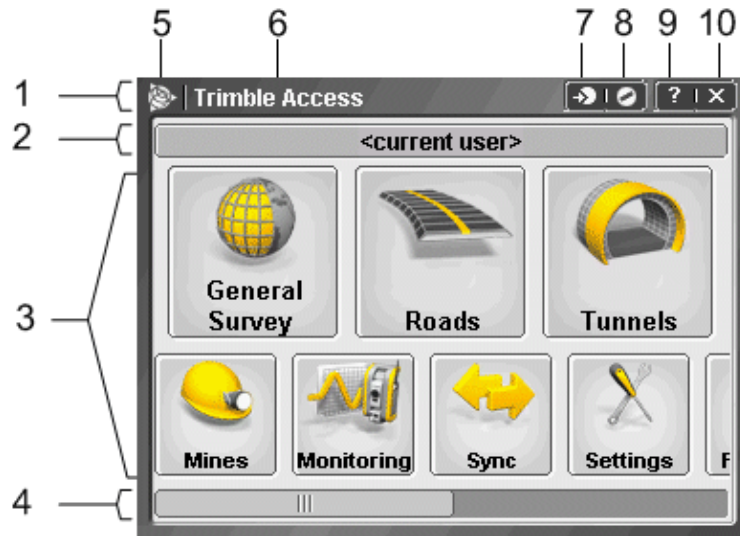
- Tap [Start / Programs].

On a Trimble Tablet:

- From the desktop tap the Trimble Access shortcut icon.

Note - On starting the Licence Agreement is displayed for acceptance. De-select the *Show on startup* field if you do not want to see the aggreement every time you start Trimble Access.

The following diagram and table show the key features and functions of the software:

Item	Feature	Function
1	Trimble Access task bar	Appears in every screen within the Trimble Access software to enable switching between applications and services and to provide system information.
2	Login button	Shows who is currently logged in to the system; if no one is logged in, it says *Tap here to log in.* This also shows the name of the folder where all data will be stored on the controller. Tap the Login button to log in or change users.
3	Application buttons	Tap an application button to start or switch to that application.
4	Scroll bar	Scroll to see more Trimble Access applications.
5	Trimble button	From the Trimble Access menu, tap the Trimble button to: - view information about the installed Trimble Access applications, including versions and licensing information. - Arrange icons. For all other applications, tap the Trimble button to return to the Trimble Access menu to switch applications.
6	Title	Title information shows either the current application or service running or the name of the current screen.
7	Internet connection button	Shows if there is a current Internet connection: ▶ indicates there is an Internet connection. ✗ indicates there is no Internet connection.
8	Alerts button	Alerts provide useful system information to the user. Tap the alert button to view the notification. There are different levels of alerts: ✓ Information alert: for example, a new file has been downloaded by the AccessSync service. ➖ Warning alert: for example, AccessSync is suspended because the Internet connection has been lost. ❗ Critical alert: for example, a license is about to expire and an application will no longer be useable.

		indicates that there are no notifications.
9	Help button	Tap this button to open the onboard help files.
10	Close button	From the Trimble Access menu, tap this button to close all Trimble Access applications. In other applications, tap this button to close only the current application.

Logging in to Trimble Access in the field

Every user must log in to the Trimble Access software the first time the system is run to define the directory that their data will be stored in. All Trimble Access files will be stored in a folder under [\Trimble Data\<username>].

Logging in enables you to:

- Separate and distinguish your files from those of other people who use the same controller.
- Easily manage data between particular field crews within an organization.

Logging in is required by the AccessSync service to:

- Authenticate access to services from the field.
- Ensure that files are transferred to the correct controllers in the field, and to the correct organization, project site and folder location in the office.
- Enable you to pick up any controller and access your field project data.

To log in to Trimble Access software:

1. From the Trimble Access menu, tap *Login* and then select the *Login Mode*.

Login mode	Use when...	Function
[Offline]	You do not currently have an Internet connection. **or** You have not purchased any online services, such as AccessSync.	Defines the directory that your data will be stored in. All Trimble Access files will be stored in a folder under [\Trimble Data\<username>].
[Online]	You have purchased online services, such as AccessSync. **and** You currently have an Internet connection.	- Defines the directory that your data will be stored in. All Trimble Access files will be stored in a folder under [\Trimble Data\<username>]. - Authenticates that the user has access to services from the field. - Ensures that files are transferred to the correct controllers in the field, and to the correct organization, site, and folder location in the office.

1. Enter your user details. Do one of the following:
  - If you are logging in offline and have not purchased online services such as AccessSync, you

can enter any username as this is used only to define the data folder name. You do not need a password.

Tap *Next.*

Review the user settings and then tap *Finish.*

♦ If you are logging in offline, but you intend to use online services such as AccessSync in the future, enter your Trimble Connected Community username (Member ID). You do not need a password.
The username is used to set up your data folder; when you try to use online services, this will be used for authentication.

Tap *Next.*

If you have previously logged in online, you see the list of available Trimble Connected Community sites available for transferring data to. Select a site and then tap *Next.* When you next obtain an Internet connection, you can transfer files without logging in again.

If you have not previously logged in online, you can review the user settings and then tap *Finish.*

♦ If you are logging in online, you must enter your Trimble Connected Community username (Member ID) and password. Enter the Trimble Connected Community organization *short name* or select from the list. These user details are used to set up the data folder ***and*** for authentication.
Tap *Next.* The Trimble Access software uses the Internet connection to contact the Trimble hosted servers to authenticate your login details. Once authenticated, the Trimble Access software obtains a list of available Trimble Connected Community sites, with which you can synchronize files using the AccessSync service.

Select a Trimble Connected Community site from the drop-down list. This site is where files will be transferred to and from using the AccessSync service.

Tap *Next.*

Review the Login settings and then tap *Finish.*

Notes

♦ The AccessSync service will always synchronize data to the current Trimble Connected Community site. If this site is incorrectly set, data may be transferred to the wrong site.
♦ The list shows only Trimble Connected Community sites within the organization that you have access to. For more information, see Trimble Connected Community permissions.
♦ Make sure that you have the correct date set on your controller. Otherwise, login may fail.
♦ To delete a username tap the *Delete* button. The associated data folders are not removed. If you want to remove these folders they can be manually removed using the *Files* application.

To log in as a different user on the controller:

1. Tap the login button on the Trimble Access menu.
2. Log in with the new username and password.

   Notes

   ♦ The current user is shown on the Login button on the Trimble Access menu.
   ♦ When switching users, you must restart the specialized applications to ensure that data is stored in the correct location.

Switching between applications and services in the field

You can run more than one application at a time and easily switch between them. For example, you can switch between functions in *Roads, Tunnels, Mines,* and *General Survey.*

To run more than one application at a time, use the Trimble button or Trimble icon in the top left corner of the screen to open the Trimble Access menu. From there, you can run the other application.

To switch between applications:

- Tap the Trimble button in the task bar to access the menu of available applications and services currently running, including the Trimble Access menu. Select the application or service to switch to.
- On the TSC2/TSC3 controller, a short press of the Trimble button accesses the menu of available applications and services currently running, including the Trimble Access menu. Select the application or service to switch to.
- On the Geo7X/GeoXR controller, tap the Trimble button to access the menu of available applications and services currently running, including the Trimble Access menu and the Windows *Start Menu.*
- Tap *Switch to* and then select the required function from the list. If the *Switch to* button is not on your current screen, press **CTRL W** to open the *Switch to* pop-up list.
- Press **CTRL TAB.** This is the keyboard shortcut to scroll through the current list of Switch to functions.
- Tap *Favourites* or press **CTRL A** to select a preconfigured favorite.
- On a TSC2/TSC3 controller, configure the [Left App] button and [Right App] button for the functions you want to run. This method opens an application even if that application is not running.

For more information, see Trimble Access Buttons.

Tip - You can use this functionality to return to the main menu of the application you are currently running e.g. if you are running the *Define* option in Trimble Access Roads and you want to view the *Map,* tap the Trimble button and select Trimble Access Roads from the drop down list.

The same job can be used in the following applications at the same time:

- Trimble Access General Survey
- Trimble Access Roads

- Trimble Access Tunnels
- Trimble Access Mines

For more information, see Jobs.

Arrange Icons

You can change the order of application icons displayed in the Trimble Access launcher. To do this:

1. Tap the Trimble button in the top left corner of the task bar.
2. Select *Arrange icons.*
3. Tap an application name to select it, and then use the arrow buttons to the right of the application names to move the application.

Survey Settings

Settings Menu

Use *Settings* from the Trimble Access menu to configure common configuration settings that are shared among multiple programs.

The following programs use common configuration settings that are available from Settings:

- Trimble Access General Survey
- Trimble Access Roads
- Trimble Access Tunnels
- Trimble Access Mines

Use the Survey styles menu to:

- Create and edit survey styles

Use the Templates menu to:

- Create, edit, rename, or delete a template.
- Import a template from another job.

Use the Connect menu to:

- Configure the Internet setup
- Create GNSS contacts for use with cellular modems
- Configure Auto connect options
- Configure Trimble VX Spatial Station or Trimble S Series total station and Trimble 5600 total station Radio settings
- Configure Bluetooth connections
- Configure the Wi-Fi image transfer settings. Only available if you are using a controller with Wi-Fi image transfer software installed.

Use the Feature library menu to:

- Create and edit feature libraries

Use the Language menu to:

- Change the language.
- Switch on or off sound events.
- Switch on or off the Trimble keyboard (supported third-party Windows computers only).

Language

To change the language of the General Survey software:

1. Transfer the language file to the controller.
2. From the Trimble Access menu, tap *Settings / Languages.*
3. Choose the required language from the list.
4. Restart the General Survey software.

Internet Setup

Creating an Internet connection using the Internet Setup wizard

Internet connection settings are managed in *Internet Setup.* To get to the *Internet Setup* screen in Trimble Access, do one of the following:

- From the Trimble Access menu, tap *Internet Setup.*
- Tap *Settings / Connect / Internet Setup.*
- Tap the Internet Connection button (or) from the Trimble Access task bar.

The Internet Setup wizard helps you to easily configure an Internet connection on a controller. Once the connection is configured, you can use Internet Setup to quickly connect or disconnect to the Internet. You can use this connection to log in online to the Trimble Connected Community service and then run the following segmented applications:

- Trimble Access AccessSync
- Trimble Access General Survey
- Trimble Access Roads
- Trimble Access Tunnels
- Trimble Access Mines
- Trimble Access Monitoring
- Trimble Access GNSS Forecast
- Trimble Access Internet

Internet Setup supports modem/phone Internet connections as well as Wi-Fi connections.

The steps required to connect to the Internet depend on the controller you are using. For more information, see the sections below:

- Connecting to the Internet on a Trimble non-Tablet controller
- Connecting to the Internet on a Trimble Tablet

Connecting to the Internet on a Trimble non-Tablet controller

To connect to the Internet on a TSC3 / Slate / Geo7X / GeoXR, create an Internet connection using the controller's internal modem.

The Trimble CU and TSC2 controllers do not have an internal cellular modem so you must use an external phone or modem to connect to the Internet. Before you start, do one of the following:

- If you are using a cable, connect the cellular modem data cable to the serial port on the controller.
- If you are using Bluetooth wireless technology, make sure that Bluetooth is enabled, and that the cellular modem is paired and connected.

Once you are connected to the phone or modem, create an Internet connection as you would if you were using a controller with an internal modem.

Alternatively, if you are using a TSC3 / TSC2 / Geo7X / GeoXR controller you can connect to the Internet using the internal Wi-Fi radio.

To activate a Trimble controller on a CDMA network:

If you are using a second generation Trimble Tablet, a Geo7X, or a TSC3 controller with an integrated dual-mode modem in the United States and have the appropriate subscription, you can use it to access the Verizon CDMA network. The dual mode modem can run in GSM/GPRS mode or CDMA mode.

All second generation Trimble Tablets and Geo7X controllers have a dual-mode modem. TSC3 controllers with a dual-mode modem have a part number ending in -002 (for example TSC3112-002). To check the part number of your TSC3 controller, remove the battery to view the label affixed to the left side of the battery compartment.

The phone must be "activated" before accessing the CDMA network. You may need to provide the MEID to your service provider before activation. This only needs to be done once. The phone must be registered in order to activate it.

To activate the phone on a Geo7X/TSC3 controller:

1. From the Trimble Access menu, tap *Internet Setup.*
2. Tap *GSM/CDMA settings.*
2. Select CDMA mode.
4. Tap *Activate.*

To activate the phone on a second generation Trimble Tablet, refer to the Support Note "Yuma 2: Activation of CDMA/Verizon Connectivity" available from www.trimble.com.

To create or edit an Internet connection using a phone/modem for a Trimble non-Tablet controller:

1. From the Trimble Access menu, tap *Internet Setup.*

2. Select *Phone / Modem.*
   Note - If you are using a controller with an integrated dual-mode modem, tap *GSM/CDMA settings* to switch the modem to the desired mode. If you are using a CDMA network, you must activate the phone before you can use it. See "To activate a Trimble controller on a CDMA network" above.

3. Tap the New/Edit button.
4. From the drop-down list, select the *Port.* This is the type of connection from the controller to the cellular modem. If you are using:
   ◊ If you are using the controller's internal modem select *Internal modem.*

> **Tip -** Access for the SIM card is under the battery on the TSC3 controller, and is through a port on the left side of the Slate / Geo7X / GeoXR controller.

 ◊ If you are using a mobile Internet CF card, select *mobile internet modem.*
 ◊ If you are using Bluetooth wireless technology, select *Bluetooth.*
 ◊ If you are using a cable, select *Hayes Compatible on COM1.* If you are using a CU controller, you may need to select *Hayes Compatible on COM2.*

If you select *Bluetooth,* select the Bluetooth device from the drop-down list, which shows all modems that are paired with the controller. If your device does not appear in the list, you must pair the device.

To pair a device on a TSC3 / Slate / Geo7X / GeoXR controller:

 a. Tap *Create Partnership.*
 b. In the *Mode* tab, make sure that *Turn on Bluetooth* is selected, the device is visible and that Bluetooth is also enabled in the modem.
 c. Tap the *Devices* tab and then select *Add new device.* This initiates a scan for other Bluetooth devices.
 d. Select your device from the list and then tap *Next.*
 e. If required, enter a passkey and then tap *Next.*
 f. Tap *Done* to return to *Internet Setup.*

To pair a device on a TSC2 controller:

 a. Tap *Create Partnership.*
 b. In the *Mode* tab, make sure that *Turn on Bluetooth* is selected, the device is visible and that Bluetooth is also enabled in the modem.
 c. Tap the *Devices* tab and then select *New Partnership.* This initiates a scan for other Bluetooth devices.
 d. Select your device from the list and then tap *Next.*
 e. If required, enter a passkey and then tap *Next.*
 f. Tap *Finish* and then tap *Ok* to return to *Internet Setup.*

To pair a device on a Trimble CU controller:

 a. Tap *Create Partnership.*
 b. In the *Mode* tab, make sure that *Turn on Bluetooth* is selected, the device is visible and that Bluetooth is also enabled in the modem.
 c. Tap the *Scan Device* button. This initiates a scan for other Bluetooth devices.
 d. Select your device from the list and then use the arrow button to move it from the *Untrusted device* window to the *Trusted device* window.
 e. If required, enter a passkey.
 f. Tap *Ok* to return to *Internet Setup.*

5. If your modem requires a PIN, select *My Modem Requires A PIN,* enter the PIN and then tap *Ok.*
6. Tap *Next.*

7. Select the details for your *Home network location, Service provider,* and *Plan.*

If these details are not in the list, you can manually configure them:

    a. Tap *Add Service Provider.*
    b. For the *APN,* either enter a value, select *None,* or use the *Select Access Point Name (APN)* wizard. In the wizard, select your country in the *Location* field, and select your *Provider and plan.* Tap *Accept.* The *APN* field is updated.
    c. In the *Number to dial* field, enter *99***1#. The *99***1# is a standard access code for mobile Internet. If you are unable to connect using *99***1#, contact your mobile Internet provider.
    d. Enter a *Username* and *Password* if required by your network connection.

Tip - If you are using a TSC3/Slate/Geo7X/GeoXR controller and you have selected an internal modem, tap the *Detect* button to extract the service provider information detected by the SIM card.

8. Tap *Next.*
If you are using a controller with an integrated dual-mode modem, and if the modem is set incorrectly for your connection type, you are prompted to switch modes.

9. Enter a name for the connection setup and then tap *Finish.*

Notes

♦ If a connection of the same name already exists, you are prompted to overwrite the old connection. If you do not want to overwrite the old connection, tap *No* and then save the new connection with a different name.
♦ If the default service provider details are modified, the new details are saved to a [userserviceproviders.xml] file, located on the controller under [\Program Files\Trimble\Common]. If you want to recover the default values, you must remove this file from the controller.
♦ You cannot connect to the Internet using a CompactFlash card that has a modem PIN set. If you are using a CompactFlash card in the TSC2 controller, make sure that the SIM does not require a PIN.
♦ After three attempts to unlock the SIM card using an incorrect PIN, the SIM card is blocked, except for emergency calls. You are prompted to enter a PUK (Personal Unblocking Key) code. If you do not know the PUK for your modem, contact the supplier of the modem SIM card. After ten unsuccessful attempts to enter the PUK, the SIM card is invalidated and is no longer operable. When this occurs, you must replace the card.

To connect, disconnect, or view the current state of your phone/modem internet connection on a Trimble non-Tablet controller:

Once you correctly save a connection, you can use it to easily reconnect to the Internet:

1. From the *GPRS Connection* drop-down list, select the pre-configured connection.
2. If using Bluetooth technology, make sure that *Turn on Bluetooth* is selected.

3. Tap *Connect.*

Once the connection is established, the *Internet Setup* status bar updates to *Internet connection <connection name> established,* and the *Connect* button changes to *Hang up.* To disconnect, tap *Hang Up.*

When there is no connection, the *Internet Setup* status bar updates to *Internet not connected* and the *Hang Up* button changes to *Connect.*
There is also an Internet connection indicator in the task bar, which is visible in other Trimble Access screens.

Tip - To enable other applications on your non-Tablet controller, such as a web browser, to use the Internet connection you have set up in Trimble Access, make sure the *Programs that automatically connect to a private network should connect using* setting is set to **TrimbleNet.** To edit this setting, from the Windows *Start* menu, tap *Settings* / *Connections* and then tap the *Connections* icon. Select the *Advanced* tab and then tap *Select Networks.*

Notes

⬧ The current ActiveSync or Wi-Fi connection to the controller is displayed in the Internet Setup wizard.
⬧ When you have a Wi-Fi connection to a camera, the Internet setup wizard may incorrectly report that a Wi-Fi connection was established.
⬧ To use a Wi-Fi connection to a camera and an Internet connection at the same time, you must first create the Internet connection and then create the connection to the camera.

To create or edit an Internet connection using a Wi-Fi connection for a TSC3 / TSC2/ Geo7X / GeoXR controller:

1. From the Trimble Access menu, tap *Internet Setup.*
2. Select *Wi-Fi.* This enables Wi-Fi on the controller.
   Note - To disable Wi-Fi on the controller, select the *Phone / Modem* option.

3. To configure and connect to Wi-Fi:
   ◊ On the TSC2 controller tap *Start* / *Settings* / *Connections* / *Wireless manager.*
   ◊ On the TSC3 controller tap *Start* / *Settings* / *Connections* / *Wi-Fi.*
   ◊ On the Trimble Geo7X controller tap the Trimble button, select *Start menu* and then select *Settings* / *Connections* / *Wireless Manager.* Tap *Menu* and then select *Wi-Fi Settings.*
   ◊ On the Trimble GeoXR controller tap the Trimble button, select *Start menu* and then select *Settings* / *Connections* / *Wi-Fi.*
   If you have already configured and connected to the network, the controller automatically connects to this network if it is in range.

Connecting to the Internet on a Trimble Tablet

The second generation Trimble Tablet has a dual-mode cellular modem. If you are using a CDMA network, you must activate the phone before you can use it. For more information, refer to the Support Note "Yuma 2:

Activation of CDMA/Verizon Connectivity" available from www.trimble.com.

The first generation Trimble Tablet controller does not have an internal cellular modem. You must connect to the Internet using an external phone or modem, or using the Tablet's integrated Wi-Fi radio.

Connect the Tablet to the Internet using one of the following methods:

- An external phone or modem connected using Bluetooth wireless technology
- The Tablet's internal cellular modem (second generation Trimble Tablets only)
- The Tablet's integrated Wi-Fi radio

To create a new network connection on the Trimble Tablet using an external phone or modem connected using Bluetooth:

Note - Make sure that you have paired with your Bluetooth modem before creating a network connection.

1. From the main Trimble Access menu, tap *Settings / Connect / GNSS contacts.*
2. From within GNSS contacts, tap the arrow on the right of the *Network connection* field.
3. From the Network connection page, tap *Add.*
4. Enter a *Name* for the network connection.
5. Select a *Bluetooth modem* from the list of paired devices.
6. For the *APN,* either enter a value, select *None,* or use the *Select Access Point Name (APN)* wizard. In the wizard, select your country in the *Location* field, and select your *Provider and plan.* Tap *Accept.* The *APN* field is updated.
7. In the *Number to dial* field, enter *99***1#. The *99***1# is a standard access code for mobile Internet. If you are unable to connect using *99***1#, contact your mobile Internet provider.
8. Enter a *Username* and *Password* if required by your network connection.
9. Tap *Accept* to create the new network connection.

Notes

- To view the settings of an existing network connection, highlight the connection and then tap the *Edit* softkey.
- To create a network connection outside of GNSS contacts, use *Internet Setup* from Trimble Access menu or select *Settings / Connect / Internet Setup. Internet Setup* will take you directly to the Windows Network and Sharing Center.

To create a new network connection on the Trimble Tablet using the internal modem (second generation Trimble Tablets only)

Do one of the following:

- Set up a network connection using the Windows Network and Sharing Center, selecting *Sierra wireless WWAN modem* as the modem type. Then from the main Trimble Access menu, tap *Settings / Connect / GNSS contacts.* From within GNSS contacts, tap the arrow on the right of the *Network connection* field and select the network connection you created. Enter

a *Username* and *Password* if required and then tap *Accept.*
- ♦ From the *Start* menu, select *Programs / Sierra wireless* and use the AirCard Watcher utility to connect to the Internet. Then from the main Trimble Access menu, tap *Settings / Connect / GNSS contacts.* From within GNSS contacts, tap the arrow on the right of the *Network connection* field and select the network connection named *Wi-Fi, ActiveSync.* Tap *Accept.*

To create or edit an Internet connection using a Wi-Fi connection for the Trimble Tablet:

1. From the Trimble Access menu, tap *Internet Setup.*
2. The Windows *Network and Sharing Center* screen is displayed. Select *Set up a new connection or network* to create a Wi-Fi network. See Windows Help for further details.

File Transfer

Transferring Files between the Controller and the Office Computer

This topic describes how to transfer data between a Trimble controller and an office computer. It lists the types of files that can be transferred, and shows how to connect the equipment for transfer.

Note - Reference to a Trimble CU refers to all versions of the Trimble CU including the Trimble CU (Model 3) controller. When required, the Trimble CU (Model 3) controller is specifically mentioned. A Trimble CU (Model 3) controller can be indentified by the label on the back.

For more information, see:

File transfer between a Trimble controller and the office computer

Using TabletSync to connect a Trimble Tablet controller to an office computer

Using a USB memory stick to transfer files to and from a Trimble Tablet controller

Connecting a Trimble non-Tablet controller to the office computer using Microsoft ActiveSync technology

Connecting a Trimble non-Tablet controller to the office computer using Windows Mobile Device Center technology

Using Bluetooth to Connect a Trimble non-Tablet controller to an Office Computer

Configuring Wi-Fi for a Trimble non-Tablet controller

Using the Trimble Data Transfer Utility

Using Microsoft Explorer with the Microsoft ActiveSync/Windows Mobile Device Center technology enabled

File conversion

Transferring a Geodimeter (GDM) job file

Transferring a Zeiss M5 file

Transferring ESRI Shapefiles

Creating ESRI GeoDatabase XML files

AutoCAD Land Desktop software

File transfer between a Trimble controller and the office computer

You can transfer various types of files between a Trimble controller and the office computer, including data collector (.dc) files, feature code files, digital terrain models (DTM), and language files. The file transfer process on the Trimble controller is controlled by the office computer software, once you have established a connection between the controller and office computer using the Microsoft ActiveSync/Windows Mobile Device Center technology.

For a Trimble non-Tablet controller, you can transfer files using:

- The Trimble Data Transfer utility with Microsoft ActiveSync/Windows Mobile Device Center technology enabled
- Microsoft Explorer with the Microsoft ActiveSync/Windows Mobile Device Center technology enabled

For a Trimble Tablet controller, you can transfer files using:

- Trimble Connected Community Explorer using AccessSync
- Trimble TabletSync
- Adding the Trimble Tablet to a network
    - Network/Internet connections:
        - ◊ Wi-Fi
        - ◊ Ethernet cable using USB adaptor, or docking station
        - ◊ Cellular modem connected by Bluetooth, USB, or express card

- USB memory stick

Using TabletSync to connect a Trimble Tablet controller to an office computer

TabletSync enables a Trimble Tablet to connect with a host computer running Trimble Business Center and/or Office Synchronizer. TabletSync is installed on the Trimble Tablet when you first install Trimble Access. To use TabletSync it must first be configured.

Note - The following instructions assume TabletSync has never been configured on the Trimble Tablet. If it has and you wish to change the configuration settings, see To configure TabletSync after initial configuration.

To configure TabletSync:

1. Open the TabletSync program on the Trimble Tablet. The first time you open the program, the *Device Setup* dialog displays.
2. Complete the fields:
    - *Device name* - Enter the name of the Trimble Tablet computer.
    - *Field crew name* - This field is optional.
    - *Synchronizer root folder on the host PC* - Enter the full path to the Office Synchronizer root folder located on the host computer or on another computer accessible by the host computer via a network connection (for example, C:\Trimble Synchronizer Data).

The Folder for this device field displays the path you entered in the previous field, along with a new subfolder named the same as the device (for example, C:\Trimble Synchronizer Data\Device 01).

Note - Specifying the root folder path is required by Office Synchronizer.

Trimble Access programs already installed on the Trimble Tablet are displayed in the *Installed Applications* list.

3. Click *OK*

The newly entered name for the Trimble Tablet displays in the *Device Name* field in the TabletSync window.

4. In the TabletSync window, click the button
5. In the *Enter Host Name* dialog, enter the name of the host computer. The host name is case sensitive.

You can determine the name of the host computer by right-clicking Computer or My Computer in the host computer's Start menu and selecting Properties.

6. Click *OK*

The name is added to the *Hosts list* in the TabletSync window. You are now ready to connect the Trimble Tablet to the host computer.

Connecting to and disconnecting from the Trimble Tablet:

Before connecting or disconnecting to the Trimble Tablet, ensure TabletSync is configured on the Trimble Tablet as described in the previous section and the correct host name has been selected from the *Hosts list* in the TabletSync window.

Note - If Trimble Office Synchronizer or Trimble Business Center is running on an office computer with a Windows XP operating system then certain configuration steps need to be taken. Refer to the Trimble Business Center help.

To connect or disconnect the Trimble Tablet:

1. Ensure Trimble Business Center and/or Office Synchronizer is running on the host computer.
2. Connect the Trimble Tablet to the same network to which the host computer is connected.
3. Open the TabletSync program on the tablet computer, and select the appropriate host from the *Hosts list* . If the selected host computer is found on the network, the *Connect button* is enabled.
4. Click the *Connect button* . When the connection is complete, a *Connected to Host Name* message displays in the status bar.
5. Use Trimble Business Center and/or Office Synchronizer to transfer and synchronize data between the Trimble Tablet and the host computer.
6. When you are done, click the *Disconnect button.*

To configure TabletSync after initial configuration

After initial configuration, you can reconfigure TabletSync by opening it on the Trimble Tablet and making changes as necessary (for example, select or enter a different host computer name).

If the Trimble Tablet is connected to the host computer, you can also configure it using the Office Synchronizer program. Select *Tools / Device Setup* in the Office Synchronizer window.

Using a USB memory stick to transfer files to and from a Trimble Tablet controller

You can use a USB memory stick to transfer files from one computer to another. A memory stick, also called a flash drive, plugs into the USB port of the Trimble Tablet. From the Trimble Access menu, tap *Files* to access *File Explorer* to copy files to and from the memory stick.

Tip - Data on the Trimble Tablet is stored in the folder C:\ProgramData\Trimble\Trimble Data.

You can also transfer data to and from a Trimble controller using other Trimble software packages. For more information, refer to the help provided with the Trimble office software.

Connecting a Trimble non-Tablet controller to the office computer using Microsoft ActiveSync technology

To transfer General Survey files between the General Survey software and the office computer, you must use Microsoft ActiveSync technology on either a Guest or Partnership connection.

Note - To connect using a LAN (Local Area Network), you must create a partnership. However, you cannot create a partnership on a LAN connection. To create a partnership, you must connect the controller to the office computer using a serial cable, USB, or infrared connection.

To establish the connection:

1. Make sure that the Trimble controller and office computer are switched on.
   Disconnect any devices that are communicating with the controller, and close down any applications to ensure that the communications ports are available.
2. On the office computer, select *Start / Programs / Microsoft ActiveSync* to start the ActiveSync technology.

   You only need to do this the first time to configure the connection settings. Subsequent connections start Microsoft ActiveSync technology automatically.

3. In Microsoft ActiveSync, select *File / Connection Settings* to configure the connection method. Select the appropriate option for *Serial/Infrared* and specify the communications port, USB, or Network.
4. Connect the Trimble controller to the office computer. Use one of the following methods:
   ♦ Serial cable
   ♦ USB cable (using the Multiport adaptor)
   ♦ Network (Ethernet) card (using the Multiport adaptor)
   ♦ Infrared (if your controller supports it)
   ♦ Docking station (connected by USB to the office computer. Only available with a Trimble CU)
   ♦ Bluetooth wireless technology

5. The Microsoft ActiveSync icon on your Windows taskbar will start spinning and the Trimble controller prompts you with the message, "Connect to desktop". Tap *Yes.*
6. If the message does not appear on the Trimble controller and the Microsoft ActiveSync icon does not spin, there is a connection problem. Check that the connection settings in the Microsoft ActiveSync technology are correct and that there are no applications using the COM port on the Trimble controller.

   If the controller fails to connect, a message may appear to advise that the connection is busy. Alternatively, an Error 678 message may appear to advise that the connection is not established. Remove the cable connected to the controller, perform a soft reset, and then reconnect the cable. When the cable is reconnected the [Connect to desktop] message appears, select [Yes] to connect.

   For more information on how to perform a soft reset, see Perform a soft reset.

If you have not already created a partnership between this computer and the controller, the Microsoft ActiveSync connection wizard prompts you to do so during the connection process. Creating a partnership is not essential, but it does have some advantages, as shown in the following table.

Connection Type	Advantages	Disadvantages
Guest	Fewer questions to answer on initial connection Safer (because synchronization cannot adversely impact data either on your controller or your PC) For use on borrowed or shared computers	Slower subsequent connections (one more step per connection that requests for partnership) LAN connection is not possible
Partnership	Fast subsequent connections (one fewer step per connection) Once a partnership is established, you can connect to the office computer through a LAN (the fastest connection) The controller clock is set to match the office computer clock	More questions to answer on initial connection Synchronization is not supported on the controller If the clock on the office computer is wrong, it will make the clock on the controller wrong Partnership is deleted when you perform a hard reset on the controller

To create a Partnership:

1. On the [New Partnership] dialog select [Yes] then [Next].
2. To allow only one partnership with this controller, select [Yes] then [Next].
3. Select the synchronization settings, we recommend clearing all check boxes. Select [Next] to continue.
4. The setup is now complete, select [Finish] to exit the Guide. You have now completed the ActiveSync

connection process and formed a partnership.

To transfer General Survey files using Trimble Data Transfer, see Using the Trimble Data Transfer Utility.

For more information, refer to the Microsoft ActiveSync Help. On the office computer, click *Start / Programs / Microsoft ActiveSync.*

Note - When the Microsoft ActiveSync technology is enabled, it takes control of the communication ports on the computer. This makes them unavailable to other applications. To transfer files to and from earlier versions of the General Survey software or Trimble GNSS receivers, you must reconfigure the *Connection Settings* in Microsoft ActiveSync to make the required communication port available. Then use the Trimble Data Transfer utility directly.

Connecting a Trimble non-Tablet controller to the office computer using Windows Mobile Device Center technology

To establish the connection:

1. Make sure that the Trimble controller and office computer are switched on.
   Disconnect any devices that are communicating with the controller, and close down any applications to ensure that the communications ports are available.
2. Connect the Trimble controller to the office computer. Use one of the following methods:
   - Serial cable
   - USB cable (using the Multiport adaptor)
   - Network (Ethernet) card (using the Multiport adaptor)
   - Infrared (if your controller supports it)
   - Docking station (connected by USB to the office computer. Only available with a Trimble CU)
   - Bluetooth wireless technology
   The office computer automatically connects and the Windows Mobile Device Center home page appears.

3. Select **Connect without setting up your device.**

To transfer General Survey files using Trimble Data Transfer, see Using the Trimble Data Transfer Utility.

For more information, refer to the Windows Mobile Device Center Help. On the office computer, click *Start / Programs / Windows Mobile Device Center.*

Using Bluetooth to connect a Trimble non-Tablet controller to an office computer

You can use Bluetooth wireless technology to establish a connection between a Trimble non-Tablet controller and an office computer. You can then transfer files using Bluetooth technology and the Trimble Data Transfer utility or Microsoft ActiveSync/Windows Mobile Device Center technology.

To set up the connection:

- Install and configure Bluetooth wireless technology

Installing and Configuring the Bluetooth software

Installing and configuring the software and drivers for the Bluetooth hardware will be different from one Bluetooth manufacturer to another. The following steps are generic and should apply to most Bluetooth devices.

1. Follow the Bluetooth manufacturer's instructions to install the software and drivers for the Bluetooth device.

   If your office computer has integrated Bluetooth wireless, follow these steps:

   a. Select *Start / Programs / Software Setup.*
   b. Expand the *Hardware Enabling Drivers* tree structure. Make sure that *Bluetooth* is selected; clear all the others.
   c. Clear the *Software Applications* check box.
   d. Select *Next* to complete the installation.

   If you have an external USB Bluetooth device (such as TDK Systems or DSE Bluetooth dongles manufactured by Cambridge Silicon Radio), use the CD and instructions provided.

2. During the installation process, you should be asked to connect the Bluetooth dongle. If you have not already done this, connect the dongle to the office computer now.
3. If prompted, reboot the system after you install the software.
4. Check the COM port assigned to the Bluetooth device:

   a. Once you install the software, a Bluetooth icon appears in the System tray on the office computer. Right-click the Bluetooth icon.
   b. Select *Advanced Configuration.* In the *Local Services* tab, note the COM port that is assigned to the *Bluetooth Serial Port* service. You must configure this COM port for use with Microsoft ActiveSync.

      Alternatively, select *Start / Programs / My Bluetooth Places* and then select *My Device / My Bluetooth Serial Port / Properties.*

The Bluetooth device is now configured as a COM port on the office computer.

Note - You may need to be a local administrator to install the Bluetooth software.

Configuring Microsoft ActiveSync to use Bluetooth

1. Disconnect any devices that are communicating with the controller and the office computer.
2. Start the ActiveSync technology. On the office computer, select *Start / Programs / Microsoft ActiveSync.*
3. Configure the connection method. In Microsoft ActiveSync, select *File / Connection Settings.*
   a. Select the *Allow serial cable or infrared connection to this COM port* check box.
   b. Select the COM port number (for example COM7) noted earlier that was assigned to the Bluetooth dongle.

   You only need to do this once to configure the connection settings. Subsequent connections start Microsoft ActiveSync automatically.

4. To close the *Connection Settings* dialog, click *OK.*

Note - Different computer manufacturers may have a different procedure for assigning COM ports for application such as ActiveSync technology.

Configuring Windows Mobile Device Center to use Bluetooth

1. Disconnect any devices that are communicating with the controller and the office computer.
2. Start the Windows Mobile Device Center technology. On the office computer, select *Start / Programs / Windows Mobile Device Center.*
3. Configure the connection method. In Windows Mobile Device Center, select *Mobile Device Settings / Connection settings.*
4. Select the *Allow connections to one of the following* check box and then select *Bluetooth.*

   You only need to do this once to configure the connection settings. Subsequent connections start the Windows Mobile Device Center automatically.

5. To close the *Connection settings* dialog, click *OK.*

Note - Different computer manufacturers may have a different procedure for assigning COM ports for application such as Windows Mobile Device Center.

Configuring the Trimble CU (Model 3) controller and connecting with ActiveSync using Bluetooth wireless technology.

The Bluetooth connection between the controller and the office computer is initiated on the controller:

1. With a Trimble CU (Model 3) controller running the Windows CE operating system version 6.0, first create a Partnership with the office computer using a USB cable ActiveSync connection.
2. Set up and assigned the ActiveSync COM port for Bluetooth correctly on the office computer. To do this, see Installing and Configuring the Bluetooth software and Configuring Microsoft ActiveSync to use Bluetooth.

3. On the controller tap [Start / Settings / Control Panel / Bluetooth Device Properties].
4. Tap the [Power] tab and then select the [Enable Bluetooth] check box.
5. Tap the [Configuration] tab and then select the [Do not query device services] check box.

   Note - A normal scan finds all devices that are in the neighborhood. With an SDP service discovery, when the controller finds a Bluetooth device, the controller interrogates the device to find out what services that device supports.

6. Tap the [Scan Device] tab.
7. To Scan for all available Bluetooth devices, tap [Scan].

   Once the controller completes the scan, the Bluetooth services that were found appear in the [Untrusted] list on the left of the screen.

8. Highlight the Bluetooth device with the blue ActiveSync logo and the name of your office computer. To make the computer a trusted device, tap the --> button in the center of the screen.
9. When the authentication message appears, tap [Yes]. Enter an appropriate PIN when prompted on the Trimble CU (Model 3) controller and the office computer.
10. To make the trusted device active, double-tap the device and then select [Active].
11. To disable authentication, double-tap the device and then clear the [Authenticate] option. This step is optional.
12. To close the Bluetooth manager, tap [OK].
13. From within the control panel, double-tap [PC connection]. If 'Connect using' shows USB, tap [Change...] and then select 'Bluetooth'. Tap [OK] and then tap [OK] again to close.
14. Tap [Start/Run]. In the *Open* field, enter 'repllog' and then tap [OK].

   Once you successfully connect the controller to the office computer, you can use Trimble Data Transfer or the Microsoft ActiveSync technology to transfer files.

Configuring the Trimble CU (Model 3) controller and connecting with Mobile Device Center using Bluetooth wireless technology.

The Bluetooth connection between the controller and the office computer is initiated on the controller:

1. With a Trimble CU (Model 3) controller running the Windows CE operating system version 6.0, first create a Partnership with the office computer using a USB cable ActiveSync connection.
2. Set up for a Bluetooth connection on the office computer. To do this, see Installing and Configuring the Bluetooth software and Configuring Windows Mobile Device Center to use Bluetooth.
3. On the controller tap [Start / Settings / Control Panel / Bluetooth Device Properties].
4. Tap the [Power] tab and then select the [Enable Bluetooth] check box.
5. Tap the [Configuration] tab and then select the [Do not query device services] check box.

   Note - A normal scan finds all devices that are in the neighborhood. With an SDP service discovery, when the controller finds a Bluetooth device, the controller interrogates the device to find out what services that device supports.

6. Tap the [Scan Device] tab.
7. To Scan for all available Bluetooth devices, tap [Scan].

Once the controller completes the scan, the Bluetooth services that were found appear in the [Untrusted] list on the left of the screen.

8. Highlight the Bluetooth device with the blue ActiveSync logo and the name of your office computer. To make the computer a trusted device, tap the --> button in the center of the screen.
9. When the authentication message appears, tap [Yes]. When prompted on the controller, enter an appropriate PIN. When prompted on the office computer, enter the same passkey and then click OK.
10. To make the trusted device active, double-tap the device and then select [Active].
11. To disable authentication, double-tap the device and then clear the [Authenticate] option. This step is optional.
12. To close the Bluetooth manager, tap [OK].
13. From within the control panel, double-tap [PC connection]. If 'Connect using' shows USB, tap [Change...] and then select 'Bluetooth'. Tap [OK] and then tap [OK] again to close.
14. Tap [Start/Run]. In the *Open* field, enter 'repllog' and then tap [OK].

Once you successfully connect the controller to the office computer, you can use Trimble Data Transfer or the Mobile Device Center technology to transfer files.

Configuring the Trimble CU and connecting with ActiveSync using Bluetooth.

The Bluetooth connection between the controller and the office computer is initiated on the controller:

1. Create a Partnership with the office computer using a USB cable ActiveSync connection.
2. Set up and assigned the ActiveSync COM port for Bluetooth correctly on the office computer. To do this, see Installing and Configuring the Bluetooth software and Configuring Microsoft ActiveSync to use Bluetooth.
3. To prepare for a scan:
    ♦ On the controller, tap [Start / Settings / Control Panel / Bluetooth Device Properties].
    ♦ To enable Bluetooth, if it is not already enabled, select the [Enable Bluetooth] check box.
    ♦ Tap the [Configuration] tab and then select the [Perform SDP On Scan] check box.

Note - A normal scan finds all devices that are in the neighborhood. With an SDP service discovery, when the controller finds a Bluetooth device, the controller interrogates the device to find out what services that device supports.

4. Tap the [Scan Device] tab.
5. To Scan for all available Bluetooth devices, tap [Scan Device].

Once the controller completes the scan, the Bluetooth services that were found appear in the [Untrusted] list on the left of the screen.

6. Highlight the Bluetooth device with the blue ActiveSync logo and the name of your office computer. To make the computer a trusted device, tap the --> button in the center of the screen.
7. When the authentication message appears, tap [Yes]. Enter an appropriate PIN when prompted on the Trimble CU and office computer.
8. To make the trusted device active, double-tap the device and then select [Active].
9. To disable authentication, double-tap the device and then clear the [Authenticate] option. This step is optional.

10. To close the Bluetooth manager, tap [OK].
11. To connect the controller to the office computer, tap [Start / Programs / Utilities / ActiveSync].

If the [No Partnerships] error appears, create a partnership using USB to connect the controller and the office computer. Then repeat from step 1 after disconnecting the USB cable.

12. Set the connection method to the office computer to [Bluetooth]. Make sure that [Connect to] is set to the name of your office computer.
13. Tap [Connect]. The controller starts communicating with the office computer.

Once you successfully connect the controller to the office computer, you can use Trimble Data Transfer or the Microsoft ActiveSync technology to transfer files.

Configuring the Trimble CU and connecting with Mobile Device Center using Bluetooth.

The Bluetooth connection between the controller and the office computer is initiated on the controller:

1. Create a Partnership with the office computer using a USB cable ActiveSync connection.
2. Set up for Bluetooth on the office computer. To do this, see Installing and Configuring the Bluetooth software and Configuring Windows Mobile Device Center to use Bluetooth.
3. To prepare for a scan:
    ♦ On the controller, tap [Start / Settings / Control Panel / Bluetooth Device Properties].
    ♦ To enable Bluetooth, if it is not already enabled, select the [Enable Bluetooth] check box.
    ♦ Tap the [Configuration] tab and then select the [Perform SDP On Scan] check box.

Note - A normal scan finds all devices that are in the neighborhood. With an SDP service discovery, when the controller finds a Bluetooth device, the controller interrogates the device to find out what services that device supports.

4. Tap the [Scan Device] tab.
5. To Scan for all available Bluetooth devices, tap [Scan Device].

Once the controller completes the scan, the Bluetooth services that were found appear in the [Untrusted] list on the left of the screen.

6. Highlight the Bluetooth device with the blue ActiveSync logo and the name of your office computer. To make the computer a trusted device, tap the --> button in the center of the screen.
7. When the authentication message appears, tap [Yes]. When prompted on the controller, enter an appropriate PIN. When prompted on the office computer, enter the same passkey and then click OK.
8. To make the trusted device active, double-tap the device and then select [Active].
9. To disable authentication, double-tap the device and then clear the [Authenticate] option. This step is optional.
10. To close the Bluetooth manager, tap [OK].
11. To connect the controller to the office computer, tap [Start / Programs / Utilities / ActiveSync].

If the [No Partnerships] error appears, create a partnership using USB to connect the controller and the office computer. Then repeat from step 1 after disconnecting the USB cable.

12. Set the connection method to the office computer to [Bluetooth]. Make sure that [Connect to] is set to the name of your office computer.
13. Tap [Connect]. The controller starts communicating with the office computer.

Once you successfully connect the controller to the office computer, you can use Trimble Data Transfer or the Windows Mobile Device Center technology to transfer files.

Configuring the TSC3/TSC2/Geo7X/GeoXR/Slate and connecting with ActiveSync using Bluetooth technology.

Warning - You must pair with your office computer **before** pairing with any Trimble GNSS receiver. If you have already paired with a Trimble GNSS receiver, you must perform a factory reset on the TSC2 before the ActiveSync service will appear as an available connection. After a factory reset you will need to reinstall all software onto the controller.

The Bluetooth connection between the controller and the office computer is initiated on the controller:

1. Set up and assign the ActiveSync COM port for Bluetooth correctly on the office computer. To do this, see Installing and Configuring the Bluetooth software and Configuring Microsoft ActiveSync to use Bluetooth.
2. To perform a scan:
    - ♦ On a Trimble Slate Controller/TSC3 controller:
        - a. Press the Windows button to access the [Start] menu and tap [Setting [Settings / Bluetooth].
        - b. In the [Mode] tab, select the [Turn on Bluetooth] check box.
        - c. To Scan for all available Bluetooth devices, select the [Devices] tab, and then tap [Add new device].

    - ♦ On a TSC2 controller:
        - a. On the controller tap [Start / Settings / Connections / Bluetooth].
        - b. In the [Mode] tab, select the [Turn on Bluetooth] check box.
        - c. To Scan for all available Bluetooth devices, select the [Devices] tab, and then tap [New Partnership].

    - ♦ On a Geo7X/GeoXR controller:
        - a. Tap the Trimble button, tap the *Start Menu* and then select [Settings / Bluetooth].
        - b. In the [Mode] tab, select the [Turn on Bluetooth] check box.
        - c. To Scan for all available Bluetooth devices, select the [Devices] tab, and then tap [Add new device].

Once the controller completes the scan, the Bluetooth services that were found appear.

3. Highlight the Bluetooth device with the name of your office computer, and then tap [Next].
4. When the authentication message appears, enter a passkey to establish a secure connection with the office computer. Tap [Next]. When prompted on the office computer enter the same passkey and click OK.
5. Ensure the [Activesync] service check box is selected and then tap [Finish].
6. To close the Bluetooth manager, tap [OK].

![Trimble logo]

7. To connect the controller to the office computer, tap [Start / Programs / ActiveSync].
8. Tap [Menu], and then tap [Connect via Bluetooth].
9. The Microsoft ActiveSync technology starts and prompts you to set up a new partnership, unless one already exists. Follow the wizard to create a partnership.

   Once you successfully connect the controller to the office computer, you can use Trimble Data Transfer or the Microsoft ActiveSync technology to transfer files.

Configuring the TSC3/TSC2/Geo7X/GeoXR/Slate and connecting with Windows Mobile Device Center using Bluetooth.

The Bluetooth connection between the controller and the office computer is initiated on the controller:

1. Set up for Bluetooth on the office computer. To do this, see Installing and Configuring the Bluetooth software and Configuring Windows Mobile Device Center to use Bluetooth.
2. To perform a scan:
   ◆ On a Trimble Slate Controller/TSC3 controller:
      a. Press the Windows button to access the [Start] menu and tap [Setting [Settings / Bluetooth].
      b. In the [Mode] tab, select the [Turn on Bluetooth] check box.
      c. To Scan for all available Bluetooth devices, select the [Devices] tab, and then tap [Add new device].

   ◆ On a TSC2 controller:
      a. On the controller tap [Start / Settings / Connections / Bluetooth].
      b. In the [Mode] tab, select the [Turn on Bluetooth] check box.
      c. To Scan for all available Bluetooth devices, select the [Devices] tab, and then tap [New Partnership].

   ◆ On a Geo7X/GeoXR controller:
      a. Tap the Trimble button, tap the *Start Menu* and then select [Settings / Bluetooth].
      b. In the [Mode] tab, select the [Turn on Bluetooth] check box.
      c. To Scan for all available Bluetooth devices, select the [Devices] tab, and then tap [Add new device].

   Once the controller completes the scan, the Bluetooth services that were found appear.

3. Highlight the Bluetooth device with the name of your office computer, and then tap [Next].
4. When the authentication message appears, enter a passkey to establish a secure connection with the office computer. Tap [Next]. When prompted on the office computer enter the same passkey and click OK.
5. Tap and hold on the office computer name and then select [Connect].
6. To close the Bluetooth manager, tap [OK].
7. The Windows Mobile Device Center technology starts. Select [Connect without setting up a device].

   Once you successfully connect the controller to the office computer, you can use Trimble Data Transfer or the Mobile Device Center technology to transfer files.

Tip - Alternatively, to connect the controller to the office computer, tap [Start / Programs / ActiveSync]. Tap [Menu], and then tap [Connect via Bluetooth].

Configuring Wi-Fi for a TSC3/TSC2/Geo7X/GeoXR/Slate controller

These instructions assume that you already have a Wi-Fi/wireless network set up in your office.
You may need to contact your network administrator for information such as Wireless Encryption Protocol (WEP) network keys.

    1. Check that the Wi-Fi radio is enabled:
        ♦ On a Trimble Slate Controller/TSC3 controller:
            1. Press the Windows button to access the [Start] menu and then tap [Settings / Connections / Wi-Fi - Menu].
            b. To enable the radio, tap [Turn On Wi-Fi].
            If the radio is already enabled, the option is [Turn Off Wi-Fi].

        ♦ On a TSC2 controller:
            1. Tap [Start / Settings] and then tap [Wireless Manager] on the [Connections] tab.
            b. To enable the radio, tap the [Wi-Fi] button to show [Available].
            If the radio is already enabled, the button shows [Off].

        ♦ On a Geo7X/GeoXR controller:
            1. Tap the Trimble button, tap *Start Menu* and then select [Settings / Connections / Wireless Manager].
            b. To enable the radio, tap the [Wi-Fi] button to show [Available].
            If the radio is already enabled, the button shows [Off].

    2. If your wireless network has WEP enabled, you are prompted to enter a [Network Key].
       You may need to contact your network administrator for details of this key.
    3. Once you are connected to the wireless network, you may be prompted for your network login information, for example, username, password, and domain. Enter this information as you do when connecting to your network.
    4. If you can connect to the wireless network, but cannot access Network resources, select [Advanced / Network TroubleShooting] for general information about your connection. For advanced information, select [More Info].

The controller is now connected to your network.

Note – Trimble non-Tablet controllers do not support file transfer using Wi-Fi and the Microsoft ActiveSync/Windows Mobile Device Center Technology.

Using the Trimble Data Transfer Utility

Use the Trimble Data Transfer utility to transfer files between General Survey and the office computer.

To transfer files using Trimble Data Transfer:

1. To transfer files to General Survey, you must first connect the controller to the office computer using the Microsoft ActiveSync/Windows Mobile Device Center technology. For more information, see Connecting the controller to the office computer using Microsoft ActiveSync technology or Connecting the controller to the office computer using Windows Mobile Device Center technology.
2. On the office computer, start the Data Transfer utility.
3. Ensure that the Device setting in Data Transfer is set correctly, for example, **General Survey on ActiveSync** and select the **Connect** button to connect.
   When the default device is set correctly, this connection process is automatic.
4. Select the *Receive* or *Send* tab as appropriate.
5. Select *Add.*
6. In the *Open* dialog, set the appropriate options for the file type, and select the file to transfer.
7. Select *Transfer All* to start the file transfer.

For more information on using Data Transfer, refer to the Data Transfer Help.

Using Microsoft Explorer with the Microsoft ActiveSync/Windows Mobile Device Center Technology Enabled

You can use the Microsoft Explorer and ActiveSync/Windows Mobile Device Center technology to move or copy files to or from the Trimble controller. Use the software to transfer files that do not require conversion by Data Transfer (for example, comma delimited (.csv) files). See the table below.

To transfer files to General Survey, you must first connect the controller to the office computer using the Microsoft ActiveSync or Windows Mobile Device Center technology. For more information, see Connecting the controller to the office computer using Microsoft ActiveSync technology or Connecting the controller to the office computer using Windows Mobile Device Center technology.

Connected using Microsoft ActiveSync technology

When connected, from the Microsoft ActiveSync window:

1. Click **Explore** to move or copy files between the office computer and the Trimble controller for sharing information. Alternatively, use Windows Explorer to move or copy files.
2. Click **Tools** to backup and restore files.

For more information on using Microsoft ActiveSync technology to transfer files, refer to the Microsoft ActiveSync Help.

Connected using Windows Mobile Device Center technology

When connected, from the Windows Mobile Device Center window:

1. Click **Connect without setting up your device** to move or copy files between the office computer and the Trimble controller for sharing information. Alternatively, use Windows Explorer to move or copy files.
2. Click **Setup your device** to set up a partnership to sync content.

For more information on using Windows Mobile Device Center technology to transfer files, refer to the Windows Mobile Device Center Help.

File Conversion

When data is transferred to and from the General Survey software, some files are converted for use in the Trimble software.

The following table lists the files that are used in the General Survey software and the file types they are converted to when transferred to and from Trimble office software.

PC	Controller	Description	Data Transfer	MS Explorer / ActiveSync MS Explorer / Mobile Device Center
.dc	.job	General Survey job files	Y	N
.csv	.csv	Comma Delimited (CSV) files	Y	Y
.txt	.txt	Comma Delimited (TXT) files	Y	Y
.dtx	.dtm	Digital Terrain Model files	Y	N
.ttm	.ttm	Triangulated Terrain Model files	Y	Y
.fcl	.fal	Feature Library files (TGO)	Y	N
.fxl	.fxl	Feature Library files (TBC)	Y	Y
.ddf	.fal	Data Dictionary files	Y	N
.ggf	.ggf	Geoid Grid files	Y	Y
.cdg	.cdg	Combined Datum Grid files	Y	Y
.pjg	.pjg	Projection grid files	Y	N
.sgf	.sgf	Shift grid files	Y	N
.pgf	.pgf	UK National Grid files	Y	Y
.dxf	.dxf	Map files	Y	Y
.shp	.shp	ESRI map shape files	Y	Y
.ini	.dat	Antenna files	Y	N
.lng	.lng	Language files	Y	Y
.wav	.wav	Sound files	Y	Y
.sty	.sty	Survey Style files	N	Y
.xml	.xml	GNSS Contacts and Service Provider files	Y	Y
.dat	.dat	GNSS data files	Y	Y
.t02 .dat	.t02	GNSS data files	Y (.dat for TGO)	Y (.t02 for TBC)
.crd .inp .mos	.crd .inp .mos	GENIO road files	Y	Y
.xml	.xml	LandXML road files or XML Documents	Y	Y

.jxl	.jxl	JobXML files	Y	Y
.ixl	.ixl	Custom ASCII Import file definitions	N	Y
.xsl	.xsl	XSLT Custom ASCII Export Stylesheet files	Y	Y
.sss	.sss	XLST Custom Stakeout Stylesheet files	Y	Y
.mcd	.mcd	Measure Codes Database files	N	Y
.dc	.rxl	Trimble road file	Y	N
.rxl	.rxl	Alignment files	Y	Y
.txl	.txl	Tunnel files	Y	Y
.csd .csw	.csd	Coordinate System Database files	Y	N
.jpg	.jpg	Image files	Y	Y
.tsf	.tsf	Scan files	Y	Y

N = No. Use Data Transfer to convert the file.

When a .dc file is transferred to the Trimble Business Center software, any GNSS data files associated with that file are also transferred. Information about the .dc file format is available from the Trimble website (www.trimble.com). For more information, contact your local Trimble dealer.

Note - If a Trimble Business Center project uses a geoid model, remember to also transfer the geoid file (or the subgridded part of it) when transferring the job into the General Survey software.

Transferring a Geodimeter (GDM) job file

To create a GDM Job on the controller, or on a computer using ASCII File Generator, see Creating Custom ASCII Files. Custom ASCII File uses XSLT style sheets that you can modify as required to generate new formats.

To transfer a GDM .job file from a Trimble controller to an office computer, use the Data Transfer utility, as described above.
When the *Open* dialog appears, select GDM Job files from the *Files of type* list.

The GDM job files transferred using this option contain the terrestrial observation data collected on the Trimble controller.

Note - When you transfer a Geodimeter job file, for example test.job, from a Trimble controller, the software generates two files:

- test.job (the backup of the General Survey job file)
- testGDM.job (the actual GDM .job file)

Special functionality when creating GDM job files

So that you can collect several user data items for a point in General Survey and then output the point attributes through a GDM job file as standard user label items, the following function is supported.

While the GDM job file is being created from General Survey data, the point attributes are processed as follows. If you have assigned point attributes named 90 through 99 (GDM labels that can you can define), and assigned values to the attributes, then these attributes will automatically be output as labels 90= through 99=. Similarly, if a point attribute is named 4, and it has a value assigned to it, then the attribute will be output as the point code (label 4=) instead of the original code assigned to the point.

Note - Before you can use this function, you must create a feature library that defines features with appropriately named attributes (for example, 4, and 90 through 99). You must also transfer this feature library to the General Survey and assign it to the General Survey job. A sample feature library is available on www.trimble.com.

Transferring a Zeiss M5 file

To create a Zeiss M5 file on the controller, or on a computer using ASCII File Generator, see Export custom format files. The M5 coordinates file that was created using Export custom format files lets you create files using the 3300 or the 3600 default markings. Export custom format files uses XSLT style sheets that you can modify as required to generate new formats.

To transfer a Zeiss M5 file from a Trimble controller to an office computer, use the Data Transfer utility, as described above.
When the *Open* dialog appears, select M5 Files from the *Files of type* list.

The M5 files transferred using this option contain the terrestrial observation data collected on the controller. The M5 file also includes coordinates for observed points.

Transferring ESRI Shapefiles with the Data Transfer utility

To create ESRI Shapefiles on the controller, see Exporting ESRI Shapefiles.

To create and transfer ESRI Shapefiles from a Trimble controller to an office computer, use the Data Transfer utility, as described above.
When the *Open* dialog appears, select *ESRI Shapefiles* from the *Files of type* list, specify whether you require *Grid coordinates* (northing/easting/elevation) or *Lat/Long coordinates* (local latitude/longitude/height) and then select a destination folder.

The shapefiles, and all files linked using the file name attributes, are transferred to the specified folder. For every feature code in that job that contains attribute information, .shp, .shx, and .dbf files are created. The files are named '<job name>space<feature code name>'. Any points that do not have feature codes are saved in the <job name>.shp, <job name>.shx and <job name>.dbf files.

Maintaining file links in ESRI Shapefiles

In General Survey, you can use the file attribute field to link images and other file types to a point. You can enter this information with a path to the file, enabling you to review the image from within General Survey. In addition, this path enables the Data Transfer utility to transfer any linked files to the specified folder.

When the General Survey job file is converted to ESRI Shapefiles, the path is removed from the field, leaving only the file name. You can access file attributes in the ESRI ArcMap software using the [Hyperlink] tool:

- Save the [ArcMap document (*.mxd)] in the same location as the files referenced in the attribute field. Use the [Identify tool] to select a point with attributes. Select the file attribute field to activate the hyperlink and open the file.
- Alternatively, in the ESRI ArcMap software, right-click on a [Layer] with file attributes and then select [Properties]. In the [Display] tab, make sure that the [Support Hyperlinks using field] check box is selected and then select the appropriate field in the drop-down dialog. In the [File] menu, select [Document Properties] and then enter the path into the [Hyperlink Base] field. Click on the [Hyperlink tool] and then select a point with file attributes to activate the hyperlink and open the file.

Creating ESRI GeoDatabase XML files with the Data Transfer utility

To create and transfer ESRI Geodatabase XML files from a Trimble controller to an office computer, use the Data Transfer utility, as described above.
When the *Open* dialog appears, select *ESRI GeoDatabase XML files* from the *Files of type* list and then select a *Destination* folder.

The GeoDatabase XML file (*.xml), and all files linked using the file name attributes, are transferred to the specified folder. A layer is created for each feature code within the General Survey job.

Maintaining file links in ESRI GeoDatabase XML files

In General Survey, you can use the file attribute field to link images and other file types to a point. You can enter this information with a path to the file, enabling you to review the image from within General Survey. In addition, this path enables the Data Transfer utility to transfer any linked files to the specified folder.

When the General Survey job file is converted to an ESRI GeoDatabase XML file, the *Destination* path is retained in the XML file. When the XML file is imported into a GeoDatabase, the [Hyperlink] tool uses this path to link to the attribute files. If the files are moved, the linking tools within ArcGIS will not work.

AutoCAD Civil 3D and Land Desktop software

Use the Trimble Link software to transfer data between the General Survey software and AutoCAD Civil 3D and the earlier Land Desktop software.