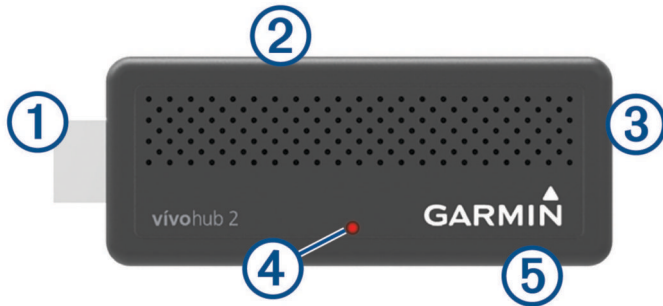


GARMIN® VIVOHUB™ 2 INSTALLATION INSTRUCTIONS

Device Overview

The vivohub device is an ANT® to Wi-Fi® wireless bridge that supports Garmin® wellness products. Using the ANT wireless protocol, the vivohub device detects and connects to compatible activity trackers automatically. User data uploads to Garmin Connected Services over a wireless connection automatically. User data is available for review on Garmin Connect™ or through your wellness partner (if applicable). The vivohub device is installed as a wireless client on an existing wireless network.



① HDMI® connector	Connects the device to a compatible TV or monitor for initial setup and maintenance. Connects the device to a compatible TV or monitor during normal operation to show device synchronization progress and other information (optional).
② microSD™ memory card slot	Accepts a microSD memory card. The memory card can contain image files to customize the status screen (<i>Customizing the Status Screen, page 3</i>).
③ USB port	Connects the device to a mouse for initial setup and maintenance. Connects the device to the ANT wireless adapter for regular use.
④ Power LED	Appears solid when the device has power.
⑤ Micro-USB port	Connects the device to a 5 Vdc power source.

How is the device monitored?

- The administrator can monitor the device using the Garmin Connect account to which the device is registered.
- If the device is connected to a TV or monitor for normal use, status information, including a device-maintenance notification, appear on the TV or monitor (*Status Screen, page 2*).

How is the device configured?

The device is configured by connecting it to a compatible TV or monitor with an HDMI port, and using a USB mouse (*Getting Started, page 1*).

How is the device updated?

The device updates automatically when an update is available through Garmin Connected Services (*Setting Software Update Preferences, page 4*).

Where should the device be installed?

The device placement depends on the number of devices being used, the size of your facility, user movement and location patterns, and the frequency of data collection (*Installation Considerations, page 1*).

Device Support

If the device is purchased as part of a wellness provider partnership, you can contact your wellness provider for support. Otherwise, you can go to www.garmin.com/wellness/vivohub.

You can view a list of supported fitness trackers at www.garmin.com/vivohub2.

Getting Started

When using the device for the first time, you must complete these tasks to set up the device.

- 1 Connect the device to a 5 Vdc USB power source (not included) using the micro-USB port ① and included USB cable (*Connecting the Device to External Power, page 2*).



- 2 Connect a USB mouse ② (not included).
- 3 Connect the device to an HDMI port on a compatible TV or monitor.
If necessary, use the included HDMI extension cable ③ to make the connection.
- 4 If necessary, change the source on your TV or monitor to view the output from the device.
- 5 Follow the on-screen instructions to configure the device (*Configuring the Device, page 2*).
- 6 Remove the mouse from the USB port, and install the included ANT wireless adapter.



- 7 From the status screen, bring an activity tracker within range and test the connection and synchronization.
- 8 Install the device in an appropriate location using the included hook-and-loop wall-mount strip (*Installation Considerations, page 1*).

Installation Considerations

- The devices should be installed in common areas.
TIP: In some facilities, you can install a device in a single common corridor. In other facilities, you should install multiple devices to accommodate foot-traffic patterns.
- Each device should be installed in an open location, typically on a wall.
NOTE: Any material between the device and compatible activity trackers, especially metal, can potentially degrade performance.

- If a device must be installed in an enclosed location, you should test and monitor the synchronization performance with a compatible activity tracker.
- Each device should be installed in a location where the wireless network connection is reliable.

Number of Devices Required

The number of devices required depends on your building layout and how often users expect to synchronize activity data. Garmin recommends installing 1 device for every 50 to 100 users.

Multiple vivohub devices can join the same wireless network, although the devices should be installed in different areas to increase range and effectiveness.

User Expectations

Users who want immediate feedback may need to know where the vivohub devices are installed to allow for intentional synchronization.

If the installed device is connected to a TV or monitor for normal use, users can view their activity tracker synchronization progress on the status screen.

Building Layout and User Traffic

Devices should be installed in heavily trafficked locations that most users pass by at least once per day. Garmin recommends obtaining a layout drawing of your building and marking potential installation locations based on regular user foot traffic.

If users are frequently away from the workplace for extended periods of time or use activity trackers that gather additional data such as recorded heart rate, the synchronization data is larger and requires more download time. In these situations, devices should be installed in areas such as break rooms where users typically remain for more than 20 seconds at a time.

Synchronization Range

In a location with no obstacles between the device and the user, the synchronization range is at least 10 m (30 ft.). Because data synchronization typically takes from 2 to 5 seconds, the devices should be installed in locations where users walk toward them.

TIP: For best results, you should install the devices where user traffic passes from multiple directions. For example, you can install a device at a hallway intersection so it can synchronize data as users approach from all directions.

Synchronization Times

Synchronization times vary based on the distance of the user from the device, the type of data to synchronize, and the amount of time that has passed since the user last synchronized with the device.

Synchronizing a day of data typically takes from 2 to 5 seconds. This increases as more time passes between synchronization and when larger amounts of data, such as recorded heart rates, are included in the synchronization.

Connecting the Device to External Power

- 1 Plug the micro-USB connector on the included USB cable into the micro-USB port on the device.
- 2 Plug the USB connector on the USB cable into an AC adapter, a USB hub, or a suitable USB port on a TV.
NOTE: See the device specifications for power requirements ([Specifications, page 5](#)).
- 3 If you are using an AC adapter, plug the AC adapter into a standard wall outlet.

The device turns on automatically. The LED is lit when the device is on.

Turning Off the Device

Select an option:

- Disconnect the micro-USB connector from the device.

- Disconnect the USB connector from the AC adapter or USB port on the TV.
- Unplug the AC adapter from the wall.

Configuring the Device

Depending on your local network, you may need to create firewall or proxy exemptions ([Firewall Exceptions, page 5](#)) for this device. If necessary, consult your network administrator about your network settings.

- 1 Prepare the device for configuration ([Getting Started, page 1](#)).

NOTE: Use the connected USB mouse to complete the configuration process.

- 2 Select ►.
- 3 Select a language.
- 4 Select **Configure Wireless Networks**.

- 5 Select an option:

- To connect to a standard wireless network, select the SSID, and enter the password if necessary.
- To add a wireless network manually by specifying advanced networking settings, select ⊕.
- To connect to a wireless network using WPS, select ⋮ and either scan for a WPS-enabled network or enter a WPS PIN.

NOTE: This device uses the default Android™ 4.2 network application to connect to and configure your wireless network settings.

The status of the selected network changes to Connected.

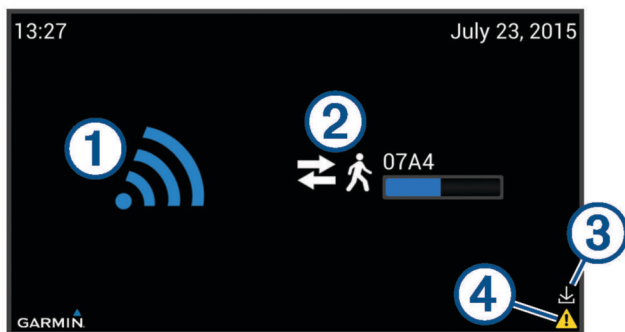
- 6 Select **Next**.
- 7 Select ➡.
- 8 Select a time server, and select ➡ ([Specifying a Custom Time Server, page 4](#)).
- 9 Select **Select Time Zone**, and select your local time zone.
- 10 If necessary, select **Configure Daylight Saving Settings** to change your local daylight saving time preferences ([Daylight Saving Time Settings, page 4](#)).
- 11 Select ➡.
- 12 Select a software update preference, and select ➡ ([Setting Software Update Preferences, page 4](#)).
- 13 Enter the device lock password, and select **Save**.
The device is password protected so only authorized administrators can change the configuration.
- 14 Select ➡.
- 15 Register the device to one or more Garmin Connect accounts ([Managing Garmin Connect Registrations, page 4](#)).

The device is configured and is ready for use.

Status Screen

When the device is connected to a TV or monitor for normal operation, the status of the device appears on the screen.

NOTE: The status screen can be customized to show webpages or images ([Customizing the Status Screen, page 3](#)).



① Scanning status	Indicates that the device is actively searching for compatible activity trackers.
② Synchronization status	Indicates the progress of synchronization with a connected, compatible activity tracker. Includes the identification number of the activity tracker (Data Transfers , page 3).
③ Software update is available	Indicates that a software update is available (Setting Software Update Preferences , page 4).
④ Alert	Indicates that the device needs administrator attention (Using the Diagnostics for Troubleshooting , page 5).

Customizing the Status Screen

You can customize the status screen to show the default status screen information, custom images and webpages, or both.

- 1 Unlock the device ([Unlocking the Device](#), page 4).
- 2 Select **Settings > Display Layout and Content**.
- 3 Select an option:
 - To show the status screen information alongside custom content, select **Sidebar**.
 - To fill the screen with custom content, select **Full Screen**.
 - To show the status screen information with no custom content, select **No Custom Content**.
- 4 Select the custom content ([Adding Custom Content](#), page 3).

Adding Custom Content

You can customize the status screen to show custom webpages, images, or both.

If you want to include more than one webpage or image, you can set the time that each webpage or image appears before switching to the next webpage or image.

- 1 Unlock the device ([Unlocking the Device](#), page 4).
- 2 Select **Settings > Display Layout and Content > Manage Custom Content**.
- 3 Add a custom webpage ([Adding a Custom Webpage](#), page 3) or custom image ([Adding a Custom Image](#), page 3).
- 4 Repeat step 4 to add additional webpages or images.
- 5 Select **Finish**.

Adding a Custom Webpage

- 1 Unlock the device ([Unlocking the Device](#), page 4).
- 2 Select **Settings > Display Layout and Content > Manage Custom Content > Add Web Page**.
- 3 Enter a nickname for the webpage (optional).
- 4 If you are adding multiple webpages, enter the time in seconds to show the webpage on the status screen.
NOTE: If only one custom webpage is added, this value does not apply.
- 5 Enter the URL for the webpage.


A preview of the webpage appears in the window. You can use this preview to confirm the accessibility of the webpage.

6 Select **Finish**.

Adding a Custom Image





Before you can show custom images on the status screen, you must load images onto a microSD memory card (not included), or transfer them to the internal storage of the device using the Android system ([Transferring Files from a microSD Memory Card to the Device](#), page 5).

The device supports images in the PNG, JPG, JPEG, GIF, WEBP, and BMP file formats.

- 1 Unlock the device ([Unlocking the Device](#), page 4).
- 2 Select **Settings > Display Layout and Content > Manage Custom Content > Add Picture**.
- 3 If you are adding multiple images, enter the time in seconds to show the image on the status screen.
NOTE: If only one custom image is added, this value does not apply.
- 4 Select **Select Location**.
- 5 Select an option:
 - To locate an image on the memory card, select **external_storage > sdcard1** to view the root of the memory card.
 - To locate an image on the internal storage, select , if necessary, to view the root of the internal storage.
- 6 Select **Select** next to the filename for a custom image.
A preview of the image appears in the window. You can use this preview to confirm the image.
- 7 Select **Finish**.

Managing Custom Content

You can adjust the order and length of time each webpage or image appears on the status screen.

- 1 Unlock the device ([Unlocking the Device](#), page 4).
- 2 Select **Settings > Display Layout and Content > Manage Custom Content**.
A list of all custom webpages and images appears, in the default order.
- 3 Select an option:
 - To reorder the items, select  or  next to the webpage or image you want to move.
 - To change the time shown or other information about the webpage or image, select , and adjust the value you want to change.
 - To remove a webpage or image from the list, select .
- 4 Select **Finish**.

Data Transfers

The device receives data from compatible activity trackers using ANT low power wireless technology. The device scans for the periodic beacons of nearby compatible activity trackers.

When a compatible activity tracker is detected, the device establishes a connection and sends updated time and settings data to the activity tracker. The device downloads activity files from the activity tracker and transfers the files to Garmin Connected Services over a wireless network. The device disconnects from the activity tracker automatically after the data transfer is complete, and it resumes scanning for other compatible activity trackers. If the device is connected to a TV or monitor for normal use, the status screen displays the synchronization progress.

NOTE: When the device is connected to a TV or monitor, for confidentiality purposes, a connected activity tracker appears on the screen using an automatically assigned code. If a user

wants to identify the code associated with their activity tracker, the user should initiate a connection when no other activity trackers are in the area, and observe the status screen.

Advanced Configuration

After the initial device setup is complete, it is locked and can be accessed only by an administrator using the device lock password.

Unlocking the Device

Before you can unlock the device, you must connect the device to a TV or monitor.

- 1 Remove the ANT wireless adapter from the USB port, and connect a mouse.
- 2 Click anywhere on the screen.
- 3 Enter the device lock password.

NOTE: If you forget the device lock password, you can reset it ([Resetting the Device Lock Password, page 5](#)).

Device Unlocked appears at the top of the screen.

Changing the Wireless Network Connection

You can change the wireless network connection on the device.

NOTE: This device uses the default Android 4.2 network application to connect to and configure your wireless network settings.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings > Wireless Network > Configure Wireless Networks**.

The Android wireless network settings window opens.

- 3 Select **Configure Wireless Networks**.

- 4 Select an option:

- To disconnect from a connected network, select the network, and select **Forget**.
- To connect to a standard wireless network, select the SSID, and enter the password if necessary.
- To add a wireless network manually by specifying advanced networking settings, select **⊕**.
- To connect to a wireless network using WPS, select **⋮**, and either scan for a WPS-enabled network or enter a WPS PIN.

The status of the selected network changes to **Connected**.

- 5 Select **Next**.

Setting Software Update Preferences

A device software update downloads automatically when the device is connected to Garmin Connected Services and an update is available. You can specify when the update is installed.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings > Software Updates**.
- 3 Select an option:
 - To install updates the same day they are downloaded, select **Whenever available (Default)**. The update occurs late in the evening, not during typical business hours.
 - To postpone the installation of downloaded updates so they can be implemented on a single device before a wider deployment, select **30 days after available date**. The administrator is notified of downloaded updates in the Garmin Connect application, and **⬇** appears on the status screen. The updates can be installed manually on each device, or automatically after 30 days ([Manually Installing a Software Update, page 4](#)).

Manually Installing a Software Update

If you select the 30 days after available date option during the initial setup, a downloaded software update is not installed automatically ([Setting Software Update Preferences, page 4](#)). You can install the update manually after you have implemented it on another device.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings > Software Updates > Check for Update Now**.

If a downloaded software update is ready to install, a window opens.

- 3 Select **Install Updates**.

Managing Garmin Connect Registrations

After you successfully register a vívohub 2 device with your Garmin Connect account, you can access a vívohub remote monitoring widget through the Garmin Connect dashboard. The widget shows the current status of every registered vívohub 2 device.

You can register the vívohub 2 device to more than one Garmin Connect account.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings > Garmin Connect Registration**.
- 3 Select an option:
 - To register the device with a Garmin Connect account, select **Register New Account > ⊕**, and enter the account information.

TIP: If you intend to monitor the device from other Garmin Connect accounts, you can repeat this process to register the device with each of the other accounts.
 - To remove the device from a registered Garmin Connect account, select **⊖** next to the name of the account, and select **Continue**.
- 4 Select **Back**.

Changing Time Settings

You can change the local time settings, including the time zone and daylight saving time adjustments.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings > Local Time**.
- 3 Select an option:
 - To change the time zone, select **Select Time Zone**, and select a different time zone.
 - To change the daylight saving time settings, select **Configure Daylight Saving Settings** ([Daylight Saving Time Settings, page 4](#)).

Daylight Saving Time Settings

You can customize specific daylight saving time (DST) start and end date settings for your time zone.

Select **Custom > Local Time > Configure Daylight Saving Settings > Custom**.

By Pattern: > Set Start: Sets a day of the month to start DST.

By Pattern: > Set End: Sets a day of the month to end DST.

By Pattern: > Set Offset: Sets the time offset when DST is active.

By Date: > Set Start: Sets an exact date to start DST.

By Date: > Set End: Sets an exact date to end DST.

By Date: > Set Offset: Sets the time offset when DST is active.

Specifying a Custom Time Server

The time server periodically checks the Internet to keep accurate time on the device. You can specify a custom time server instead of the default time server used by the Android operating system.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings** > **Time Server** > **Custom** > **Set Server URL**.
- 3 Enter the URL of the custom time server, and select **Save**.

Changing the Device Lock Password

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings** > **Change device lock password**.
- 3 Enter the current device lock password and new device lock password.

Resetting the Device Lock Password

If you do not know the device lock password, you can reset the device to factory defaults. This erases all custom images on the device and restores all settings to the factory defaults, but retains the Garmin Connect registration information.

- 1 Remove the ANT wireless adapter from the USB port, and connect a mouse.
- 2 Click anywhere on the screen.
- 3 Select **Reset device lock password**.
All custom images on the device are erased, and the device is reset to factory defaults.
- 4 Configure the device ([Configuring the Device, page 2](#)).

Changing the Device Language

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings** > **Locale**.
- 3 Select a language.

Accessing the Android Operating System

This device uses the Android operating system, and you can adjust the Android system settings and other Android features. You can also install Android applications to help connect to your network or perform other tasks.



- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings** > **Android System**.
- 3 From the Android application drawer, select **Garmin vivohub 2** to return to normal device operation.



Transferring Files from a microSD Memory Card to the Device

Before you can transfer files from a microSD memory card (not included) to the device, you must transfer the files to the memory card using a computer with an appropriate card reader, and insert the memory card into the device.

You can use the Android system to transfer files, such as image files, from an inserted microSD memory card to the internal storage of the device. This allows you to show custom images on the status screen without leaving the memory card in the device.

TIP: To organize multiple images, it is best to copy a folder of images from your computer to the memory card, and then copy the entire folder from the memory card onto the internal storage of the device.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings** > **Android System**.
- 3 In the Android application drawer, select **FileBrowser**.
- 4 In the **FileBrowser** application, select **External Storage Card** to view the contents of the memory card.
- 5 Select .
The icon turns yellow.
- 6 Select each image and folder to copy to the internal storage of the device.
A check mark appears next to each file or folder.
- 7 Select  > **Copy**.

- 8 Select  to return to the home screen of the **FileBrowser** application.
- 9 Select **Local Disk** to view the contents of the internal storage.
- 10 Select  **Paste**.
The selected files and folders from the memory card are copied to the local storage of the device.
- 11 Repeat steps 5 through 11 for additional files you want to copy.
- 12 Right-click to return to the Android application drawer.
- 13 Select **Garmin vivohub 2** to return to normal device operation.

Restoring Factory Default Values

If the device is not performing optimally due to incorrect configuration or settings changes, you can reset it to factory default values. This erases all custom images on the device and restores all settings to the factory defaults, but retains the Garmin Connect registration information.

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Settings** > **Factory Reset**.
- 3 Configure the device ([Configuring the Device, page 2](#)).

Troubleshooting

Using the Diagnostics for Troubleshooting

- 1 Unlock the device ([Unlocking the Device, page 4](#)).
- 2 Select **Run Diagnostics**.
- 3 Follow the on-screen instructions.

NOTE: You can restart the diagnostics by removing the ANT wireless adapter and installing it again.

Resetting the Device

Some problems with the device can be corrected by turning it off and back on again.

- 1 Disconnect the micro-USB connector from the device.
The device turns off.
- 2 Reconnect the micro-USB connector to the device.
The device turns on automatically. The LED is on.

Firewall Exceptions

This device sends data to and requests data from Garmin servers to synchronize activity trackers and update software. The Garmin servers do not initiate any communication with this device. Depending on the local network, you may need to create exceptions for this device to send data over the Internet.

- The local IP address of each vivohub must be allowed access to the Internet.
- If needed, firewall, captive portal, or Internet proxy exceptions must be created to allow each vivohub to access these sites:
 - *.garmin.com
 - The time server URL (2.android.pool.ntp.org is the default time server)

Specifications

CPU	ARM Cortex A9 Dual Core, 1.5 GHz
RAM	DDR3 1 GB
Storage	NAND 4 GB
Operating system	Google™ Android v. 4.2.2
Dimensions	W × H × D: 91 x 34 x 12 mm (3.6 x 1.3 x 0.5 in.)
Weight	34 g (1.2 oz.)
Shock resistance	Withstands a 75 cm (29.5 in.) drop onto a wood floor

USB power source	From 4.5 to 5.5 Vdc From 500 mA to 2 A
Power consumption	2 W
USB connector types	USB 1: Type A, USB 2.0 host USB 2: Micro-B USB for power only
HDMI connector type	HDMI 1.4a, male connector
HDMI extension cable	HDMI male to female, 30.5 cm (12 in.)
Wi-Fi radio protocol	Internal IEEE 802.11 b/g/n
Security	WPA-PSK, WPA2-PSK (TKIP/AES), and WPA/WPA2-Enterprise
ANT radio frequency band	2.4 GHz ISM (from 2.40000 to 2.4835 GHz) ANT wireless communications protocol (with the ANT wireless adapter connected to the USB port)
Maximum ANT radio data rate	20 Kbps (with the ANT wireless adapter connected to the USB port)
microSD	Up to 32 GB
Operating temperature range	From -10° to 50°C (from 14° to 122°F) (indoor use only)
Storage temperature range	From -20° to 60°C (from -4° to 140°F)

© 2016 Garmin Ltd. or its subsidiaries

Garmin®, the Garmin logo, and ANT® are trademarks of Garmin Ltd. or its subsidiaries, registered in the USA and other countries. Garmin Connect™ and vivohub™ are trademarks of Garmin Ltd. or its subsidiaries. These trademarks may not be used without the express permission of Garmin.

Android™ and Google™ are trademarks of Google Inc. HDMI® is a registered trademark of HDMI Licensing, LLC. microSD™ and the microSD logo are trademarks of SD-3C, LLC. Wi-Fi® is a registered mark of Wi-Fi Alliance Corporation. Other trademarks and trade names are those of their respective owners.