



Nest Pro

Nest Thermostat Family

Nest Pro Guide



[Let's go!](#)



Hey there!

Welcome to the Google Nest Thermostats Pro Guide.

Here you will find everything you need to install **Nest thermostats** so customers can live comfortably and save energy.

Before you start,
flip these slides to 'Present' mode
(tip: make them available offline for faster loading).

[Tap to continue...](#)

Any questions?
Call the Pro line: 855-VIP-NEST or 855-847-6378
Open 6am - 5pm (PST)

[Got Feedback? Tell us what you think here.](#)



Jump straight to it



Technical specs

Nest thermostats are smart and efficient inside and out.



Installation guide

A step-by-step guide to setting up Nest thermostats.



Category expertise

Learn what makes these thermostats so cool.



Smart home solutions

Explore the benefits of using Nest thermostats with other Google Nest products.

Additional information

Here you can find the installation video and additional resources.

[Or simply tap to explore >](#)



Meet the Nest Thermostat family

Nest gives you three smart choices.



- Metal finish
- Farsight that shows the time, temperature, or weather
- High-res color display

Nest Learning Thermostat

The premium Nest Learning Thermostat can adapt to your customer's lifestyle, bringing energy savings and system monitoring alerts.

What's in the box: Thermostat, base, optional trim plate, mounting screws, installation guide.



- Frosted display blends into walls
- Polycarbonate, ceramic-feel finish

Nest Thermostat E

The Nest Thermostat E also learns the customer's temperature preferences and programs itself. It turns itself down when no one's home to save energy. And its frosted display is beautifully designed to blend right in.

What's in the box: Thermostat, base, optional trim plate, mounting screws, installation guide.



- Capacitive touch bar on right side for control
- Made from 49% post-consumer recycled plastic

Nest Thermostat

The Nest Thermostat is the smart affordable choice to control your customer's home climate with energy saving and system monitoring alerts.

What's in the box: Thermostat, base, mounting screws, installation guide, 2 x AAA batteries.

*Trim plate sold separately

[What's the difference?](#)

Compare the Nest Thermostats: Skip to [Page 8](#)



All the specs for Nest Learning Thermostat



Weight

Assembled unit:
8.6 oz (243.7 g)
Display: 7.2 oz (205.4 g)
Base: 1.4 oz (38.3 g)

Color

- Stainless steel- T3008US
- White- T3017US
- Copper- T3021US
- Polished Steel- T3019US
- Brass- T3032US
- Mirror Black- T3018US

Display

- 24-bit color LCD
- 480 x 480 resolution, 229 ppi
- 2.0 in (5.3 cm) diameter

Sensors

- Temperature
- Humidity
- Proximity
- Occupancy
- Ambient light
- Magnetic (for thermostat ring position)

Battery

Built-in rechargeable lithium ion battery

Power consumption

Less than 1 kWh/month

Data consumption

- 50MB/week upload
- 50MB/week download

Wireless

- 802.11 a/b/g/n (2.4GHz/5GHz) Wi-Fi
- 802.15.4 (2.4GHz)
- Bluetooth Low Energy

Warranty

- 2 year limited warranty
- 5 year warranty with Pro ID

Compatibility

- The Nest Learning Thermostat works with 95% of 24V heating and cooling systems, including gas, electric, forced air, heat pump, radiant, oil, hot water, solar, and geothermal

Compatibility (ctd.)

- Compatible with add-a-wire products such as Venstar
- Heating: 1, 2, and 3 stages (W1, W2, W3)
- Cooling: 1 and 2 stages (Y1, Y2)
- Heat pump: with auxiliary and emergency heat (O/B, AUX, E)
- Humidifier or dehumidifier (HUM, DEHUM)
- Fan (G)
- Power (C, RH, RC) compatible with dual transformer system

Compatibility tool
g.co/nest/works



All the specs for Nest Thermostat E



Weight

14.3 oz (408 g)

Color

- White- T4001ES

Display

- 24-bit color LCD
- 320 x 320 resolution at 182 pixels per inch
- 1.7 in (4.5 cm) diameter

Sensors

- Temperature
- Humidity
- Proximity
- Occupancy
- Ambient light
- Magnetic (for thermostat ring position)

Battery

Built-in rechargeable lithium ion battery

Power consumption

Less than 1 kWh/month

Data consumption

- 50MB/week upload
- 50MB/week download

Wireless

- 802.11 a/b/g/n (2.4GHz/5GHz) Wi-Fi
- 802.15.4 (2.4GHz)
- Bluetooth Low Energy

Warranty

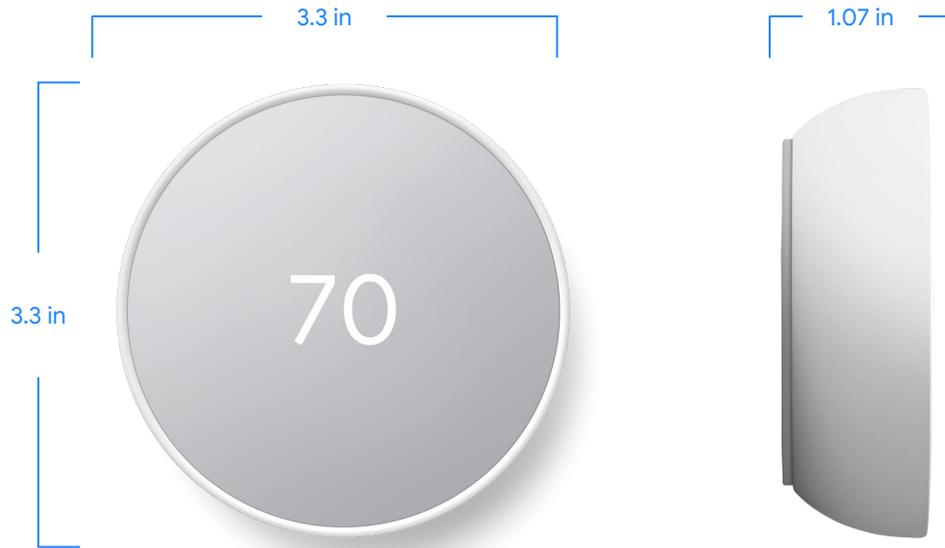
- 1 year limited warranty
- 3 year warranty with Pro ID

Compatibility

- The Nest Thermostat E works with 85% of 24V heating and cooling systems, including gas, electric, forced air, heat pump, radiant, oil, hot water, solar and geothermal.
- Heating and Cooling: 1 stage of heating (W1) and cooling (Y1) and a second stage of either heating (W2) or cooling (Y2).
- Heat pump: with auxiliary and emergency heat (O/B, AUX)
- The Nest Thermostat E is designed to work even if a customer's home doesn't have a common (C) wire, but installing a new C wire may be required.
- Power (C, Rh or Rc)
- Fan (G)



All the specs for Nest Thermostat



Weight

4.9 oz (139 g)

Color

- Snow- GA02180-US
- Charcoal- GA02081-US
- Sand- GA02082-US
- Fog- GA02083-US

Display

- 2.4-inch QVGA IPS liquid crystal display (240 x 320 pixels)
- 3.3 in (8.4 cm) diameter

Sensors

- Motion
- Temperature
- Humidity
- Capacitive touch
- Ambient light

Power

Uses HVAC system wiring
Battery backup
2 AAA 1.5V alkaline batteries

Power consumption

Less than 1 kWh/month

Wireless

- 802.11 a/b/g/n (2.4GHz/5GHz) Wi-Fi
- 802.15.4 (2.4GHz)
- Bluetooth Low Energy

Warranty

- 1 year limited warranty
- 3 year warranty with Pro ID

Optional Trim Kit

Trim plate: 7.09 by 4.41 in (180x112 mm)
thickness: 0.24 in (6.1 mm)
Steel plate: 3.94 by 2.68 in (100x68 mm)
thickness: 0.15in (3.75 mm)
Mounting screws
Installation card

Compatibility

- The Nest Thermostat works with 85% of 24V heating and cooling systems, including gas, electric, forced air, heat pump, radiant, oil, hot water, solar, and geothermal
- Designed to work without a C wire in most homes. But for some systems, including heating-only, cooling-only, zone-controlled, and heat pump systems, you'll need a C wire or other compatible power accessory.
- Heating: 1 and 2 stages (W1, W2)
- Cooling: 1 and 2 stages (Y1, Y2)
- Heat pump: with auxiliary and emergency heat (O/B, AUX, E)
- Fan (G)
- Power (C, RH, RC)

Compatibility tool
g.co/nest/works



There's a Nest thermostat for every home.



Nest Learning Thermostat

Nest Thermostat E

Nest Thermostat

Control from anywhere with your phone ¹	✓	✓	✓
ENERGY STAR [®] -certified	✓	✓	✓
Turns itself up or down when you leave to help save energy	✓	✓	✓
Heating and cooling system alerts ²	✓	✓	✓
Works with the Nest Temperature Sensor (sold separately)	✓	✓	×
Scheduling	Auto-Schedule or manual	Auto-Schedule or manual	Guided setup
Display	High-res color	Frosted	Mirrored
Farsight shows you the time, temperature, or weather	✓	×	×
Design	Available in multiple metal finishes	Available in white	Available in multiple colors
Trim kit	Included	Included	Sold separately
Compatibility with 24V heating and cooling system	Works with 95% of systems	Works with 85% of systems	Works with 85% of systems
Warranty	5-year extended warranty with professional installation	3-year extended warranty with professional installation	3-year extended warranty with professional installation
Exclusively available from a professional installer	×	✓	×

¹Remote control and mobile notifications require working internet and Wi-Fi. ²Alerts can notify you of a potential issue with eligible HVAC systems. They're meant to provide helpful information, not an endorsement, representation, or warranty of any kind about the health of your HVAC system. Alerts aren't intended to replace a diagnosis by a qualified HVAC professional. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.



Installation guide

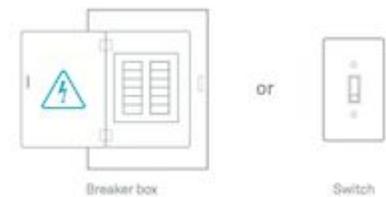
This is your comprehensive guide to setting up and installing **Nest thermostats**.

Don't have time to read through the steps? Jump straight to the [ADDITIONAL RESOURCES](#) to watch the installation video.

If you are pre-drilling holes, use a 3/32" drill bit. If you are drilling into hard materials such as stone, brick, concrete or marble, use a masonry drill bit and drill.

Step 1: Switch off the power

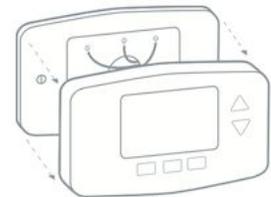
Before exposing any wiring, make sure power to the system is turned off. An HVAC system can have multiple breakers so make sure to turn them all off. To check that it's off, change the temperature on the thermostat appropriately for heating or cooling by 5 degrees and wait 5 minutes to see if the system turns on.



Step 2: Remove the cover of existing thermostat

Once you're sure the power is off, remove the thermostat cover. Some pop off, others need to be unscrewed.

Important: Take this opportunity to also take a picture of the current wiring.



Step 3: Check system and get a wiring diagram

Let's confirm this setup is compatible for a Nest thermostat by visiting the [Compatibility Checker](#). Here you will also get a customized wiring diagram to show where to install the wires.

Incompatible wiring:

High voltage wires

If the thermostat is labeled 120V or 240V or has thick wires with wire nuts, the system is high voltage and isn't compatible with the Nest thermostat. Do not connect the Nest thermostat to high-voltage wires. [Learn more.](#)

Stranded wires

Nest thermostats are not compatible with stranded wires. Do not connect the Nest thermostat to stranded wires. [Learn more.](#)

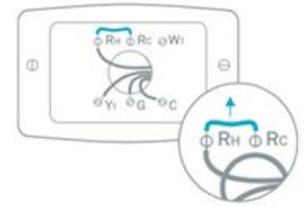




Step 4: Remove jumper wires and save them

Remove the jumper wires and save them. The Nest thermostat doesn't need them.

Have the customer keep the current thermostat, the photo of the wiring, and any jumper wires the current thermostat uses in a safe place. This is in case they move and can reinstall the previous thermostat and take their Nest with them.



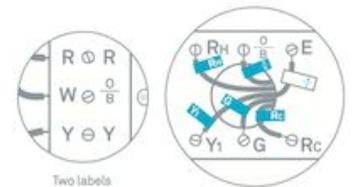
Step 5: Label the wires

If you see two sets of labels on each connector on the old thermostat's backplate, [visit here](#) for assistance.

Peel off the labels from the installation guide and attach them to the matching wires on the thermostat. You can also use the white labels for additional wires if needed.

Troubleshooting wire labels

If you have labels like W, Y, or R, use the wiring diagram that you created earlier to choose which labels to attach to these wires. If you have different wire labels not covered, [visit here](#).

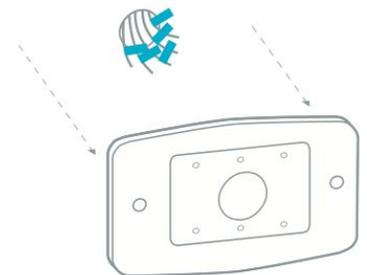


Step 6: Disconnect the wires and remove the base

Important: It's important that the power to the system is off to avoid blowing a fuse in the equipment. If you blow a fuse, the Nest thermostat won't turn on, or may display a power error after installation.

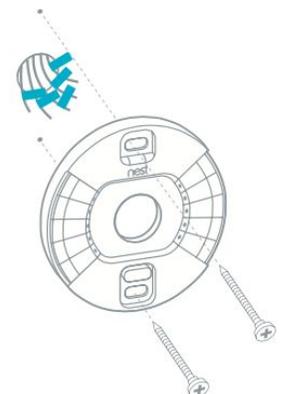
After removing the base, gently wrap the wires around a pen or pencil to ensure they don't fall back into the hole in the wall.

Ask the customer if they'd prefer to patch the wall themselves or if they would rather use the included trim plate (sold separately for the Nest Thermostat) to help hide scratches or screw holes.



Step 7: Mark where screws will go

Use the built-in bubble level to make sure the Nest thermostat is level.





Step 8: Attach the Nest base

If the customer is going to use the optional trim plate, place it on the wall before installing the Nest base.

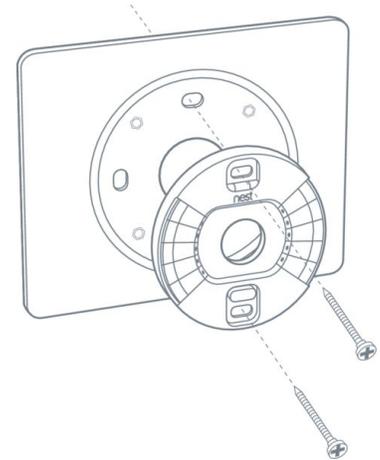
Tip: The Nest trim plate can be painted to match the color of the wall. If the customer wants this, make sure it's painted before installation. This is to avoid getting paint on the wiring, Nest base, or the thermostat display.

Pull the wires through the center of the base, then attach it to the wall with the screws.

Important: Use a screwdriver, not a power drill to drive in screws for the Nest base. Drills can easily over-tighten the screws and crack the base and damage its electronics.

Use the bubble level to make sure the Nest thermostat is leveled.

The Nest screws are self-tapping, so there's no need to drill into soft materials. If you need to drill into harder things like wood, use a 3/32" or 2.5mm drill bit.



Step 9: Connect the wires

Connect the wires to the Nest thermostat base by following the wiring diagram that you got from the Nest Compatibility Checker.

Press down on the connector button and insert the wire as far as it will go in, then release the button.

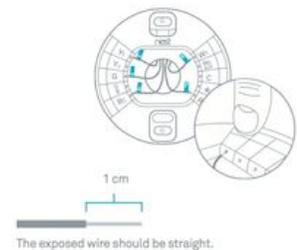
The connector button should stay down. This confirms that the wire is properly seated.

If the button doesn't stay down, take the wire out, straighten it, and put it back in as far as it will go. You may need to strip the end of the wire to make sure enough copper is exposed.

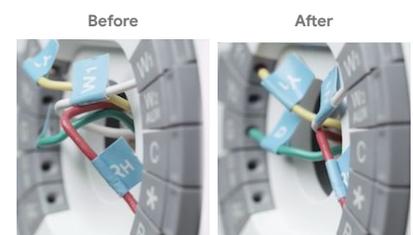
Important: Do not put more than one wire in each connector on the Nest base.

Important: Do not connect any "spare" wires to your Nest thermostat that were not connected to your old thermostat. Only use the wires on your Nest wiring diagram.

After all the wires are securely connected, push them down toward the wall to make sure they're flush with the base. If your wires stick out too far, they can keep your thermostat display from connecting properly.



Terminals with wires should stay pressed down.

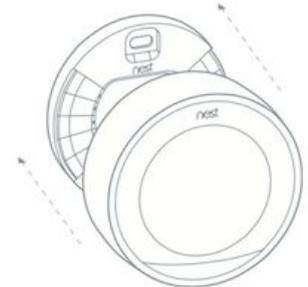




Step 10: Attach the Nest display

Hold the display so the Nest logo is right side up. Line up the pin connector on the back of the display and push it onto the base until it clicks into place.

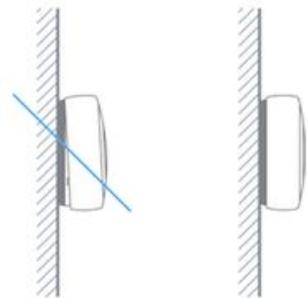
Tip: If you don't hear the display click, use your thumb to push the wires further into the wall. This will make sure the wires aren't stopping the display from connecting to the base.



Step 11: Switch power back on

After turning the power back on, the Nest thermostat should power on automatically. If it doesn't turn on, you might see a blinking red light to indicate that the battery is charging.

Wait for the battery to charge or [check this article](#) for troubleshooting steps.



Step 12: Set up the Nest thermostat

After it's finished starting up, the Nest thermostat will guide the customer through setup. With the Nest Learning Thermostat and Nest Thermostat E, setup is completed through the Nest app, while the Nest Thermostat uses the Google Home app.

Customers use the app to tell the thermostat a few basics about their home and their heating and cooling system so it can start working efficiently for them immediately.

For more on setting up [visit here](#) for the Nest Learning Thermostat and Nest Thermostat E or [visit here](#) for the Nest Thermostat.

Entering your Nest Pro ID

Adding your Nest Pro ID to the customers' thermostats gives them easy access to you if they ever need help.

When installing a Nest thermostat, the Pro Setup section will ask you if you'd like to enter your Nest Pro ID. Select PRO when asked if you are a PRO or HOMEOWNER, and follow the onscreen or in-app instructions.

*If you're not already signed up as a Nest Pro, go to g.co/nestpro to sign up.

If the thermostat is already installed, on the Nest Learning Thermostat and the Nest Thermostat E, press the ring to access the main menu, turn to SETTINGS and press the ring again to select. Then turn the ring to NEST PRO and press to select. The thermostat will ask if you want to add your information.





Category expertise: Nest Thermostat Family



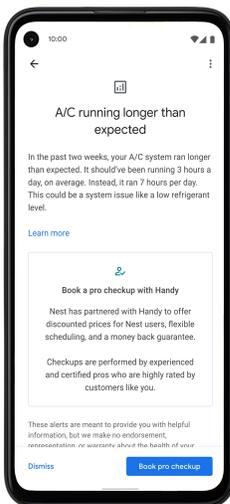
Home/Away Assist

Home/Away Assist tells the thermostat when everyone is out of the house. The thermostat will switch itself to Eco Temperatures to help save energy when no one is home. When the thermostat notices activity, it will switch to Home mode and continue with your scheduled temperatures. Manually toggle between Home and Away in the Nest app.



Voice Control

Google Assistant enabled devices can change the temperature on your Nest Thermostat with a simple voice command. Just say, “Hey Google, turn up the heat.”¹



HVAC monitoring

HVAC monitoring is a feature on all Nest thermostats that monitors customers’ heating and cooling system.² It alerts them if something doesn’t look right, such as furnace inconsistencies, cooling degradation and other issues that need addressing.³ And, they can book an HVAC check up with participating Nest Pros through the alert.⁴

¹Voice control with Google Assistant requires a compatible smart device.

²List of eligible HVAC systems is available g.co/nest/hvac-monitoring.

³Alerts can notify you of a potential issue with an eligible HVAC system. They’re meant to provide helpful information, not an endorsement, representation, or warranty of any kind about the health of your HVAC system. Alerts aren’t intended to replace a diagnosis by a qualified HVAC professional.

⁴Pro assistance is only available in eligible areas and is provided by Handy, an independent third-party platform that connects individuals to home services, including heating and cooling maintenance services.



Category expertise: Nest Learning Thermostat and Nest Thermostat E

This is how a thermostat becomes intelligent.



Control from anywhere

The Nest app allows your customer to control the Nest Learning Thermostat or Nest Thermostat E from anywhere. Change the temperature or mode, turn on the fan, change temperature schedules, turn on Eco Temperatures, and even review their Energy History, all from a mobile device.



Learning

With Auto-Schedule, Nest Learning Thermostat or Nest Thermostat E learns what temperatures your customer likes at different times of the day. After a few days of learning, the thermostat will prepare a schedule for the customer. This applies to each temperature mode. So it will prepare a schedule for Heat, Cool, and Heat-Cool.



Lock

The Nest Learning Thermostat and Nest Thermostat E have the ability to be locked by the owner so guests or curious children won't be able to change temperature settings. Lock it from the Settings menu or via the Nest app. Even if locked, the thermostat will continue with heating/cooling schedules. Use the four digit PIN to unlock.

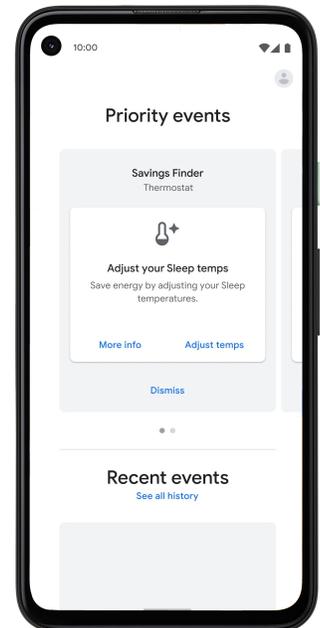
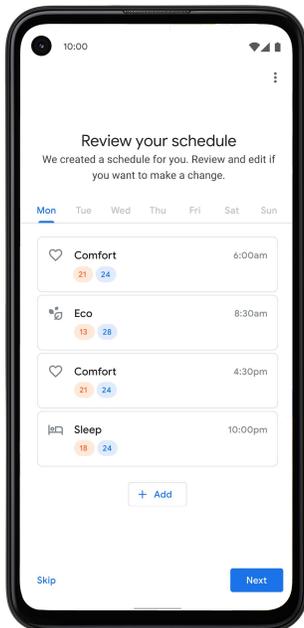
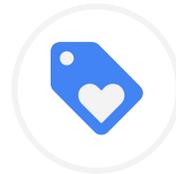


Faces

The Nest Learning Thermostat and Nest Thermostat E show much more than just the temperature. Toggle between the easy Quick View menus to change settings like target temperature and WiFi. See notifications that pop up to help save energy, as well as error messages. The Nest Learning Thermostat also has Farsight, so you can see the time, temperature, or weather from across the room.



Category expertise: Nest Thermostat



Control from anywhere

With Quick Schedule, the Google Home app guides your customer through creating a schedule and makes adjusting it easy from anywhere.¹

Save at home and away

It can turn itself down when everyone leaves the house, so they don't waste energy on an empty home.

Savings Finder

Savings Finder looks for more ways to save and suggests tweaks to the heating and cooling schedule in the Google Home app. Simply tap to apply the changes.

¹ Remote control and mobile notifications require working Internet and Wi-Fi.

² We provide alerts to notify you of a potential issue with your HVAC system. Our goal is to provide helpful information, but we make no endorsement, representation, or warranty of any kind about the health of your HVAC system. Alerts aren't intended to replace a diagnosis by a qualified HVAC professional.



Category expertise: Nest Temperature Sensor

Making Nest Thermostats even smarter.



Nest Temperature Sensors control comfort from room to room. When placed, it alerts Nest Thermostats what temperature certain rooms should be and their priority. Just mount or place on a shelf.

Dimensions & Weight

- Diameter: 1.9 in (50 mm)
- Height: 0.8 in (22.5 mm)
- Weight: 1.6 oz (45 g)

Power

- One CR2 3V lithium battery (included)
- Up to 2-year battery life

Color

White

Operating Temperature

32° to 104°F (0° to 40°C)
Indoor use only

Other

- RoHS compliant
- REACH compliant
- CA Proposition 65
- Recyclable packaging

Sensors

Temperature

Wireless

Bluetooth Low Energy

Warranty

Comes with a 1 year limited warranty (details in box). To learn more, visit the [Google Nest Help center](#).

Compatibility

Requires an installed Nest Learning Thermostat (3rd generation) or Nest Thermostat E. Not compatible with Nest Thermostat. Identify your thermostat at [nest.com/whichthermostat](#). Up to 6 Nest Temperature Sensors supported per connected thermostat and up to 18 Nest Temperature Sensors supported per home.



Smart home solutions

Powered by the Google Assistant, Google Nest products come together to help customers even more throughout their day.

How does it work together?

Ask the Google Assistant



Nest thermostats work with **Nest displays and speakers** gives you control of your temperature anywhere.

- Change temperature with your voice.
- Enabled with the Google Assistant.

“Hey Google, turn up the heat.”



In an emergency, **Nest Protect** and Nest thermostats work together to stop bad situations from getting worse.

- The number one contributing factor to a CO event is the heating-cooling system. Nest Protect will disable the system if CO is detected.



Nest Temperature Sensors control comfort from room to room.

- Keeps a certain room at a temperature you want it. Choose which room to prioritize and when.

“Hey Google, what’s the temperature in the living room?”



With **Google Nest cameras**, you can check to see if anyone is in the house and adjust Nest thermostats accordingly.

- See inside your home from anywhere and adjust the temperature with a voice command.

“Hey Google, show me the kitchen.”

Here are other handy devices that help create the smart home. All accessible from the Nest app.



[Nest x Yale Lock](#)



[Nest Hello](#)



Additional resources

Prefer watching videos? Take a look at our [Nest Learning Thermostat](#) and [Nest Thermostat E](#) installation videos:

Nest Learning Thermostat



Nest Thermostat E



Nest Thermostat



Note: Localized video content for installation videos are not available everywhere.

[< Head back to the step-by-step guide](#)



Additional resources

Here are some useful Nest thermostat links if you need more information:

- GRT: <https://googleretailtraining.exceedlms.com/student/path/11799-nest-thermostats>
- Google Support: <https://support.google.com/googlenest/answer/9248184>

Visit the website for a complete overview: <https://store.google.com/>

Help online: Pro Support at <https://nest.google.com/pro/support> or general support, <https://support.google.com/googlenest>

Installation guides

Energy products

- Nest Learning Thermostat: [Link](#)
- Nest Thermostat E: [Link](#)
- Nest Thermostat: [Link](#)

Google Nest Temperature Sensor:

- Overview: https://store.google.com/us/product/nest_temperature_sensor
- Google Support: <https://support.google.com/googlenest/answer/9248154>

Other products

Google Nest Hub:

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Hub Max:

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Mini:

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Audio

- [Overview](#) | [GRT](#) | [Support](#)

Chromecast with Google TV

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Protect:

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Wifi:

- [Overview](#) | [GRT](#) | [Support](#)

Google Wifi:

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest x Yale lock:

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Cameras.

- [Overview](#) | [GRT](#) | [Support](#)

Google Nest Hello.

- [Overview](#) | [GRT](#) | [Support](#)

[Tell us what you thought about this training here.](#)



Nest Pro



Additional resources

Want to know more about:

Google Nest Hub? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/14351-google-nest-hub>
- https://store.google.com/us/product/google_nest_hub
- <https://support.google.com/googlenest/topic/7029677>

Google Nest Hub Max? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/13747-google-nest-hub-max>
- https://store.google.com/us/product/google_nest_hub_max
- <https://support.google.com/googlenest/answer/9334359>

Google Nest Mini? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/16317-google-nest-mini>
- https://store.google.com/us/product/google_nest_mini
- <https://support.google.com/googlenest/topic/7029677>

Google Nest Audio? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/28720-nest-audio>
- https://store.google.com/us/product/nest_audio
- <https://support.google.com/googlenest#topic=7029097>

Google Chromecast with Google TV? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/63624-chromecast-with-google-tv>
- https://store.google.com/us/product/chromecast_google_tv
- <https://support.google.com/chromecast/chromecast/?hl=en#topic=3058948>

○ Google Nest Wifi? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/16365-google-nest-wifi>
- https://store.google.com/us/product/nest_wifi
- <https://support.google.com/wifi>

○ Google Nest Hello? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/11784-nest-hello>
- https://store.google.com/us/product/nest_hello_doorbell
- <https://support.google.com/googlenest/topic/9360528>

○ Google Nest x Yale lock? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/11856-nest-yale-lock>
- https://store.google.com/us/product/nest_x_yale_lock
- <https://support.google.com/googlenest/answer/9251009>

○ Google Nest Protect? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/11697-nest-protect>
- https://store.google.com/us/product/nest_protect_2nd_gen
- <https://support.google.com/googlenest/topic/9361754>

○ Google Nest cameras? Go to

- GRT: <https://googleretailtraining.exceedlms.com/student/path/11806-nest-cam-family>
- https://store.google.com/us/magazine/compare_cameras
- <https://support.google.com/googlenest/topic/9360528>

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