



Nest Learning Thermostat 4th Gen Technical Specifications

May 2024

Note: marketing to our consumer audience and our Pro audience requires slightly different technical specs documentation (more technical, detailed for Pro). This document contains both tech spec tables. We should publish as two separate documents to Pantry.

Tech specs for marketing (retail/consumer)

Spec Category		PM notes
Dimensions and Weight ¹	Diameter: 3.9 in (98 mm) Depth: 1.1 in (29 mm) Weight: 5.7 oz (161.8 g)	
Colors	Polished Silver Polished Gold Polished Obsidian	
Display	2.7 inch (68 mm) diameter circular liquid crystal display (600 x 600 pixels)	<i>Z1 for reference: 2.4-inch QVGA IPS liquid crystal display (240 x 320 pixels) with digital brightness enhancement film and mirrored glass lens</i> Display Spec Display Drawing
Sensors	Soli sensor for Motion Sense (learn more at g.co/nest/sensors) Temperature Humidity Ambient light	PMM note: copied what we used for Zirconium, removed capacitive

		touch (no touch bar)
Power	<p>Power consumption Less than 1 kWh/month</p> <p>Power source HVAC system wiring</p> <p>Battery Built-in rechargeable lithium battery</p>	
Connectivity	Wi-Fi 802.11n (2.4 GHz / 5 GHz)	
HVAC System Compatibility	<p>The Nest Learning Thermostat (4th gen) works with most 24V systems, including gas, electric, oil, forced air, heat pump, and radiant.</p> <p>It can control: 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); Fan (G, G2, G3); Power (C, RH, RC); Humidifier and dehumidifier (HUM, DEHUM); Ventilation (VENT).</p> <p>The Nest Learning Thermostat's * connector can accept one of these wires: W3, E, HUM, or DEHUM. The AQ+ and AQ- connectors can accept 1-wire or 2-wire VENT, HUM, or DEHUM.</p> <p>Use the compatibility checker (g.co/nest/works) to see if your system is compatible.</p>	

<p>Power Compatibility</p>	<p>Patented Power Sharing technology</p> <p>The Nest Learning Thermostat (4th gen) is designed to work whether or not your home has a common (“C”) wire.</p> <p>In limited cases (<1%), a C wire or Nest Power Connector may be necessary to ensure that your HVAC system can provide sufficient power to the thermostat in all conditions. See g.co/nest/cwire for details.</p> <p>Use the compatibility checker (g.co/nest/works) to see if you may need a Nest Power Connector or C wire.</p>	
<p>Smart Home and Voice Assistant Compatibility</p>	<p>Works with Google Home and Matter</p> <p>Installation and setup requires the Google Home app.</p> <p>Control the Nest Learning Thermostat with Google Home and other Matter-enabled apps and voice assistants.²</p>	
<p>Accessories</p>	<p>Trim plate to cover paint and drywall imperfections (included)</p> <p>Steel plate for installation on electrical box (included)</p>	
<p>Warranty</p>	<p>2-year standard warranty for retail</p> <p>5-year standard warranty for HVAC Pros</p>	
<p>What’s in the Box</p>	<p>Thermostat display</p> <p>Thermostat base</p> <p>Trim plate</p> <p>Steel plate</p> <p>Mounting screws and wiring labels</p>	

	Nest Temperature Sensor (2nd gen)	
Sustainability	<p>Battery contains 100% recycled cobalt³</p> <p>The Nest Learning Thermostat (4th gen) and Nest Temperature Sensor (2nd gen) bundle is made with at least 33% recycled materials.⁴</p> <p>Packaging uses 100% plastic-free materials.⁵</p>	
Certifications	ENERGY STAR [®] certified thermostat	
Languages	<p>English</p> <p>French</p> <p>Spanish</p>	

1 Measurement based on thermostat display only.

2 Check csa-iot.org/members for more information on Matter-certified smart home platforms. To control Matter-enabled Google devices with a 3rd party platform or app, you may need a device that works as a Matter hub from the 3rd party manufacturer.

3 Cobalt is 15% of the battery weight.

4 Based on product weight.

5 Based on retail packaging (excluding adhesive materials and required plastic stickers) as shipped by Google. To meet the request of some retail partners, stickers and/or security tags are applied to some packaging variations and may contain plastic. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.

Tech specs for marketing (Pro)

Spec Category		PM notes
Dimensions and Weight	<p>Thermostat display</p> <p>Diameter: 3.9 in (98 mm)</p> <p>Depth: 1.1 in (29 mm)</p> <p>Weight: 5.7 oz (161.8 g)</p>	

	<p>Thermostat display + base Diameter: 3.9 in (98 mm) Depth: 1.2 in (30 mm) Weight: 6.9 oz (195 g)</p> <p>Trim plate Length: 6.6 in (168 mm) Width: 5.4 in (138 mm) Height: 0.2 in (5.5 mm) Weight: 2.3 in (66.5 g)</p>	
Colors	Polished Silver (Nest Pro Edition available) Polished Gold Polished Obsidian	
Display	2.68 inch (68 mm) diameter circular liquid crystal display (600 x 600 pixels)	<i>Z1 for reference: 2.4-inch QVGA IPS liquid crystal display (240 x 320 pixels) with digital brightness enhancement film and mirrored glass lens</i>
Sensors	Soli sensor for Motion Sense (learn more at g.co/nest/sensors) Temperature Humidity Ambient light	PMM note: copied what we used for Zirconium, removed capacitive touch (no touch bar)
Power	<p>Voltage 20-30VAC</p> <p>Startup current 4VA</p> <p>Standby current 2VA</p>	

	<p>Power source HVAC system wiring</p> <p>Battery Built-in rechargeable lithium battery</p>	
Connectivity	Wi-Fi 802.11n (2.4 GHz / 5 GHz)	
HVAC System Compatibility	<p>The Nest Learning Thermostat (4th gen) works with most 24V systems, including gas, electric, oil, forced air, heat pump, and radiant.</p> <p>It can control: 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); Fan (G, G2, G3); Power (C, RH, RC); Humidifier and dehumidifier (HUM, DEHUM); Ventilation (VENT). The Nest Learning Thermostat's * connector can accept one of these wires: W3, E, HUM, or DEHUM. The AQ+ and AQ- connectors can accept 1-wire or 2-wire VENT, HUM, or DEHUM.</p>	
Power Compatibility	<p>Patented Power Sharing technology</p> <p>Nest thermostats have a patented Power Sharing technology, which means that unlike other smart thermostats, they can be installed without needing a C wire in the vast majority of homes.</p> <p>The Nest Learning Thermostat has a Power and System test that will let you know if more power is needed. If so, you can install a C wire or Nest Power Connector to ensure the thermostat always has enough power.</p> <p>A C wire or Nest Power Connector can always be installed for added certainty and reliability if you feel like</p>	

	<p>there's a risk of power loss or accidental system activation.</p> <p>The types of systems that will require a C wire or Nest Power Connector can be found here.</p>	
Smart Home and Voice Assistant Compatibility	<p>Works with Google Home and Matter</p> <p>Installation and setup require the Google Home app.</p> <p>Control the Nest Learning Thermostat with Google Home and other Matter-enabled apps and voice assistants.¹</p>	
Accessories	<p>Trim plate to cover paint and drywall imperfections (included)</p> <p>Steel plate for installation on electrical box (included)</p> <p>Nest Temperature Sensor (2nd gen)</p>	
Warranty	<p>5-year standard warranty for HVAC Pros</p>	
Sustainability	<p>Battery contains 100% recycled cobalt²</p> <p>The Nest Learning Thermostat (4th gen) and Nest Temperature Sensor (2nd gen) bundle is made with at least 33% recycled materials.³</p> <p>Packaging uses 100% plastic-free materials⁴</p>	
Certifications	<p>ENERGY STAR® certified thermostat</p>	

Languages	English French Spanish	
Operating Temperature	32°F to 104°F (0°C to 40°C)	
Operating Humidity	10% to 90%	
Minimum and Maximum Temperature Ranges	<p>Max cooling temperature 90°F (32°C)</p> <p>Min heating temperature 50°F (9°C)</p> <p>Dual fuel break point 10°F to 50°F (-12°C to 10°C) but “Always” and “Never” are also options</p> <p>Aux lockout temperature 0°F to 70°F (-18°C to 21°C)</p>	
Eco Temperature Range	<p>Eco Temperatures default range Heating: 56°F (13.5°C) Cooling: 82°F (28°C)</p> <p>Eco heating temperature range Minimum: 40°F (4.5°C) Maximum: 70°F (21°C)</p> <p>Eco cooling temperature range Minimum: 76°F (24.5°C) Maximum: 95°F (35°C)</p>	

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