

Four configurations. Which comparisons hold?

Unitree G1 standard, original basic H1, Booster T1 with 23 DoFs, and Tesla Optimus Gen 2.

Export captured 2026-10-18T21:18:49.094Z. Original source and decision dates remain attached; this is not a simultaneous retest or refresh of all four robots.

What do the published heights tell us?

Three scoped records describe body height. They do not establish a clearance or reach requirement.

G1 standard, original H1 and the T1 23-DoF configuration have height claims. H1 is approximate and lacks a measured posture protocol; Optimus Gen 2 has no approved height here.

Which robot is lighter?

This record cannot establish a lighter robot.

Whole-robot mass and a mass reduction measure different things. A reduction cannot become a total mass without a compatible baseline.

Which robot walks faster?

There are no comparable absolute walking speeds in this edition.

A relative speed increase does not give an absolute speed. None of these four records establishes a comparable absolute walking-speed measurement.

Do more degrees of freedom mean better manipulation?

These counts do not establish a dexterity ranking.

G1, basic H1 and T1 describe total joint degrees of freedom for different mechanical configurations; Optimus describes one hand. Even equal whole-body totals do not establish equal dexterity.

Seventeen selected manufacturer claims. No independent robot test, performance ranking or purchasing recommendation. Missing evidence is not a missing feature.

[Inspect the full source-linked comparison](#)

Shared fields, qualified meanings.

Height helps describe broad body size. A DoF total describes a scoped mechanical configuration. Neither establishes workspace clearance, reach or task performance.

Unitree G1 - Standing height

Standing height: 1.32 m. Standard configuration; hardware revision unspecified.

Source [1] · Unitree G1 Parameter → Height, Width and Thickness (Stand) · Captured 2026-09-06; editorial decision 2026-09-12.

Unitree G1 - Total joint degrees of freedom

23 total joint degrees of freedom. Standard configuration only.

Source [1] · Unitree G1 Parameter → Total Degrees of Freedom (Joint Freedom) · Captured 2026-09-06; editorial decision 2026-09-12.

Unitree H1 - Standing height

Unitree states an approximate body height of 1.8 m for the original H1. Upright body dimensions, not a measured posture protocol. Keep the approximation; do not replace it with a falsely exact sum from the separate dimensions row. Excludes H1-2.

Source [4] · Unitree H1 → Body Size Value → Height; original H1 panel, before the separately labeled H1-2 panel. See also Unitree H1 Parameter → H1 → Key Dimensions. · Captured 2026-10-18; editorial decision 2026-10-18.

Unitree H1 - Total joint degrees of freedom

The manufacturer basic H1 model without dexterous hands has 19 joint degrees of freedom: the README joint count is supported by 19 non-fixed single-axis revolute joints in the same pinned model. This is a model/configuration specification, not a performance result or every shipped H1.

Source [5] · Overview → basic H1 joint count and complete joint tree; linked urdf/h1.urdf, same pinned commit, corroborates the single-axis joint type. · Captured 2026-10-18; editorial decision 2026-10-18.

Booster T1 - Standing height

Booster states an upright height of 1.18 m for the T1 manual's 23-DoF configuration with four-DoF arms. Hardware revision and measurement protocol are unspecified; exclude expanded-arm variants.

Source [6] · T1 Product Manual → Specifications → Product Specifications → Basic Parameters → Height (when standing upright). · Captured 2026-10-18; editorial decision 2026-10-18.

Booster T1 - Total joint degrees of freedom

Booster states 23 total joint degrees of freedom for T1 with four per arm, six per leg, one waist and two head DoFs. Excludes expanded-arm configurations and the separately mentioned 7-DoF version; a larger count is not evidence of better task performance.

Source [6] · T1 Product Manual → Specifications → Product Specifications → DoFs → Total DoFs; Joint ID and limits lists IDs 0 through 22. · Captured 2026-10-18; editorial decision 2026-10-18.

Do not turn a gap into a number.

Only G1 has a selected battery-inclusive mass. H1 and T1 weight leads do not establish that battery scope. Optimus has a relative reduction, without an absolute baseline.

Unitree G1 - Mass with battery

Mass with battery: approximately 35 kg.

Source [1] · Unitree G1 Parameter → Weight (With Battery) · Captured 2026-09-06; editorial decision 2026-09-12.

Tesla Optimus Gen 2 - Claimed mass reduction

Claimed reduction of 10 kg. The comparator, baseline mass and battery scope are unspecified; this is not the robot's total mass.

Source [3] · 00:55, overlay in the full-body presentation segment. · Captured 2026-09-13; editorial decision 2026-09-13.

Tesla Optimus Gen 2 - Claimed walking speed increase

Claimed walking speed increase of 30%. The comparator, baseline speed and test conditions are unspecified; this is not an absolute speed or independent test result.

Source [3] · 00:45, overlay in the walking segment. · Captured 2026-09-13; editorial decision 2026-09-13.

Ask for the missing evidence

For mass: exact hardware and battery inclusion. For speed: absolute values, baseline, terrain, load and repeatable test conditions. For manipulation: a defined task and observed results, not a whole-body or hand DoF count.

Reuse the accompanying CSV

All 17 claims retain definition, unit, qualifier, original expression, conditions, source location and dates. Blank numeric cells are not zero. The G1 starting price is historical. The CSV records actual source-review type separately from decision authority.

[Download the CSV and read its field guide](#)

Sources and editorial scope.

[1] Unitree G1 - manufacturer parameter table

[Unitree Robotics - original source](#)

Captured 2026-09-06T13:32:35.000Z. Publication: Unknown: the product page provides no publication/update date. Footer copyright is not publication time.

[2] Tesla Q4 2023 Update

[Tesla, Inc. - original source](#)

Captured 2026-09-13T20:33:11.870Z. Publication: 2024-01-24, day precision from <https://ir.tesla.com/ Documents and Events, 2023 Q4 earnings date>. Exact publication instant unavailable.

[3] Optimus - Gen 2 | Tesla

[Tesla \(verified YouTube channel\) - original source](#)

Captured 2026-09-13T20:33:11.870Z. Publication: 2023-12-13, day precision confirmed in the Tesla YouTube page UI. Exact publication instant unavailable.

[4] Unitree H1 / H1-2 - manufacturer product page and parameter table

[Unitree Robotics - original source](#)

Captured 2026-10-18T20:45:56.455Z. Publication: Unknown: no publication or update date is displayed for this source. Footer copyright is not a publication date.

[5] Unitree H1 Description (URDF & MJCF) - pinned manufacturer README

[Unitree Robotics \(unitreerobotics GitHub organization\) - original source](#)

Captured 2026-10-18T20:45:29.375Z. Publication: Publication time unknown. GitHub commit 18f4921e5934117c8cd2560db64228baa189f163 records author and committer time 2024-10-09T12:51:51Z. That repository timestamp identifies the pinned version; it is not treated as the first publication time of the claim or world-valid time.

[6] Booster T1 Product Manual - Specifications

[Booster Robotics - original source](#)

Captured 2026-10-18T20:45:57.389Z. Publication: Unknown: no publication or update date is displayed for this source. Footer copyright is not a publication date.

Review is not empirical verification

The retained G1 and Optimus selections had human source review. H1 and T1 had agent source review with an independent agent challenge; the owner authorized the exact four qualified claims. No personal source inspection by the owner is claimed for that new set. All claims remain manufacturer-origin and empirically unverified.

Configuration boundaries exclude G1 EDU, H1-2 and optional H1 hands, expanded-arm T1 variants, and earlier/later Optimus generations. The source pages may change. Original source text and third-party models retain their own rights; this sample grants no rights to those assets.

[Methodology and corrections](#)