Hyundai is getting serious about building a ‘walking car’ with four legs

Who needs an Apple car when you’ve got one with four legs? Hyundai, which recently acquired a controlling stake in robot maker Boston Dynamics, rolled out a new version of its four-legged “walking car” concept that it first unveiled in 2019.

Hyundai is calling it TIGER, which stands for “Transforming Intelligent Ground Excursion Robot.” It’s the second vehicle to come out of the automaker’s Ultimate Mobility Vehicles studio in Silicon Valley, and the first designed to be fully autonomous, with no space for drivers or passengers. It’s like a real-life Transformer, but without the “bent on world domination” vibe.

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In fact, Hyundai actually thinks its four-legged vehicles have the potential to make the world a better place. The vehicles are designed specifically to access remote locations for missions related to scientific exploration, or to deliver food or medical supplies during a natural disaster or other emergency.

Grid View



But how does it work? TIGER has four “legs,” each with a series of joints, enabling the vehicle to mimic both mammalian and reptilian walking gaits. According to Hyundai:

> *Based on a modular platform architecture, its features include a sophisticated leg and wheel locomotion system, 360-degree directional control, and a range of sensors for remote observation. It is also intended to connect to unmanned aerial vehicles (UAVs), which can fully charge and deliver TIGER to inaccessible locations…*
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> *With its legs retracted, TIGER drives like an all-wheel drive*

> *vehicle and is in its most efficient mode because it moves by rolling traction. But when the vehicle gets stuck or needs to travel over terrain that is difficult or impassable for wheels alone, it uses its walking ability to get unstuck or more easily travel over that terrain.*

If you're getting a strong Mars Rover vibe off this thing, that's on purpose: Hyundai thinks the technology underpinning this vehicle could make it ripe for an interplanetary mission. The walking car can traverse uneven terrain, climb a wall, step over a gap, and spread its legs to a 15-foot-wide track width — all while keeping its main cabin (and cargo) level. When not in the field, the vehicle's legs are stowed underneath and can be driven like a normal off-roading vehicle.

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But TIGER is just a proof of concept, and there's no guarantee that Hyundai will put it into production. That said, the South Korean automaker expects "this new class of vehicles to grow rapidly over the coming years," and is also working on other UMV concept cars for other use cases, a spokesperson said.

The first four-legged concept, called Elevate, was designed to carry passengers, while TIGER is meant to be completely uncrewed — no driver and no passengers. And while they may share some characteristics with Boston Dynamics' robot dog, Spot, neither concept was designed with any input from the robotics firm that Hyundai recently acquired.

Hyundai was in consideration as a manufacturing partner for Apple, which is planning on launching its own electric and autonomous vehicle. However, those talks broke down recently and Hyundai and its subsidiary Kia have sought to downplay rumors it was working with the tech giant.

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