

Electric robot tractors powered by Nvidia AI chips are here

Monarch Tractor, an electric smart tractor company, says its first AI-powered farming vehicles, dubbed the MK-V, are rolling off the production line. It's the Livermore, California-based startup's first product, and it uses Nvidia's Jetson edge AI platform to perform agricultural tasks with or without a driver behind the wheel.

"The NVIDIA Jetson enables the MK-V to run low-latency, real-time AI applications while at the same time conserving energy for longer battery life and extended run time," said Monarch Tractor CEO Praveen Penmetsa.

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Each MK-V uses six of the Jetson Xavier NX system-on-modules that enable them to navigate fields using only cameras, which Penmetsa says is crucial for safety since agricultural environments may not have GPS signals. The visual environment is taken in by two 3D cameras plus six standard ones.

According to Nvidia and Monarch:

The tractor collects and analyzes crop data daily and can process data from current and next-generation implements equipped with sensors and imaging. This data can be used for real-time implement adjustments, long-term yield estimates,

current growth stages and other plant and crop health metrics.

Many tractors out in farming fields have semiautonomous modes but largely require a driver to be seated. They also mostly run on diesel gas, so the MK-V, with its fully electric design and driver-optional smarts, is claiming it's the first production model of its kind.

The first six "Founder Series" MK-V tractors are going to wine and spirit corporation Constellation Brands.

Monarch Tractor raised \$61 million during a Series B investment round in 2021 and has since raised over \$110 million. It partnered with Foxconn, the company that produces most of Apple's iPhones; together, the companies are building the MK-V at the former GM plant in Lordstown, Ohio.

<https://www.theverge.com/2022/12/1/23487910/nvidia-jetson-mk-v-electric-autonomous-monarch-tractor-delivery>