



LX40 Performance Highlights

- 96V/19.4 kWh LiFePO4 battery
- 72-mile range/22 mph top speed
- 2,000 lb payload & tow capacity
- 27% gradeability
- 14" wheels + 27 x 8.50 R14 tires
- Level 2 charge: 80% in 5 to 6 hours
- Triple-band GNSS integration via GEODNET

Quiet power: the Boson LX40 glides between orchard rows.

Electric Precision at Ground Level

Boson Motors and the RTK-powered future of agricultural EVs.

When the Boson LX40 rolls through an almond orchard, it doesn't roar—it glides. There's no diesel clatter, no gear rattle, and no driver. Just a purpose-built electric vehicle pulling a full payload between rows of trees, its every turn guided with centimeter precision. At its core: lithium-powered propulsion, autonomous software and a live RTK correction feed from GEODNET.

The LX40 isn't a concept vehicle—it's working now, saving labor, fuel and input costs across the U.S. And in many ways, it represents a new chapter in precision agriculture: clean and capable, connected to a global, decentralized RTK network that makes autonomy truly viable for farmers, not just tech labs.

Designed for Dirt, Tuned for Data

Boson Motors, founded in 2017 in San Jose, California, set out to build clean-energy mobility platforms for off-road, off-grid applications. Their flagship, the Boson LX40, is a heavy-duty, all-electric utility vehicle purpose-built for agriculture, ranching and land management.

"We didn't want to convert an existing UTV or modify a golf cart," the engineering team explained. "We built from scratch—for payload, traction and autonomy."

The result is a purpose-built platform with serious specs:

- Dual 27 HP motors (all-wheel drive)
- 2,000 lb payload and 2,000 lb towing capacity
- Up to 72 miles of range per charge

"GEODNET was a game-changer for us. It's cost-effective, reliable and gave us the precision we couldn't get anywhere else."

Boson Motors Team

How GEODNET Powers Autonomy

- 17,000+ base stations globally
- Triple-frequency (L1, L2, L5) support
- Compatible with RTCM 3.2 + NTRIP
- Seamless integration with Boson's GNSS stack
- One configuration for all regions—auto-adjusts datum
- Uniform, PPP-calibrated base station network

- Lithium iron phosphate battery with Level 2 charging in 5 to 6 hours
 - Hydraulic dump bed and task-agnostic frame architecture
- Whether it's hauling feed, spraying rows or towing equipment, the LX40 is built to handle it—silently, efficiently and with zero tailpipe emissions.

Autonomy, Modularized

A defining feature of the LX40 is its dual-mode operation: It can be driven manually, remote-controlled via browser or Android app, or put into autonomous mode for path-following and repeatable tasks. This "smart utility" format gives users full flexibility.

"We call it semi-autonomous by design," the Boson team said. "You can still hop in and drive. But when you need hands-free precision, it's ready."

That precision is made possible by a dual GNSS architecture. One receiver



From orchard to pasture, global RTK makes precision possible.

User Profiles: Who's Buying LX40s?

- Almond orchard operators (CA Central Valley)
- Dairy farms (Midwest, Pacific NW)
- Organic and regenerative growers
- Landscaping and groundskeeping teams
- Research farms and universities

is optimized for open-sky accuracy; the other, designed for canopy environments like orchards and vineyards. Together, they provide full-field resilience.

And here, GEODNET enters the picture. “We needed centimeter-level corrections without installing base stations or managing subscriptions for every region,” the engineering team said. “GEODNET gave us that—and more.”

RTK That Actually Works

GEODNET’s RTK network is massive: more than 17,000 online stations covering 140+ countries. Each station provides triple-band, multi-constellation corrections (RTCM 3.2) delivered via NTRIP—meaning any standard GNSS receiver can use it without special integrations.

“RTK used to mean stress—buying hardware, troubleshooting signals, worrying about drift,” Boson’s deployment team said. “GEODNET eliminated all that. It just works.”

For autonomy to work, that matters. Boson bundles GEODNET RTK with every LX40 system, ensuring customers get one-click activation and immediate accuracy—sub-20 cm straight-line and less than 25 cm in curves.

“It’s the first time we’ve been able to offer field-ready autonomy at this price point,” the sales team said. “And the feedback from early customers is incredible.”

From Theory to Tractor

The appeal of the LX40 isn’t theoretical. In field deployments with almond orchard operators and dairy farms, the vehicle is already replacing manual transport runs, feed deliveries and spray passes.

“In a 40-acre field, even experienced drivers tend to overlap,” the Boson team said. “RTK guidance lets us minimize that—cutting fertilizer waste and fuel usage by 5 to 10% right away.” (see page XXX on Klinefelter 5% rule)

Boson’s customers report faster workflows, improved repeatability and reduced operator fatigue—especially on multi-hour jobs like weed suppression or feed hauling.

“We had one customer use it to make three trips a day with 2,000 lb loads,” a field tech recalled. “He used to use a diesel UTV and two workers. Now it’s one guy on a laptop and the LX40.”

Total Cost of Ownership That Changes the Game

Perhaps most transformative is the LX40’s total cost of ownership (TCO). Compared to combustion-based UTVs or tractor platforms with autonomy retrofits, Boson offers a lower entry point, lower operating costs, and fewer maintenance requirements.

- **FUEL SAVINGS:** Lithium power costs <20% of diesel fuel per acre.
- **MAINTENANCE:** No oil, no filters, fewer moving parts.
- **LABOR:** Driver-optional. Set the route and let it run.

“We’ve seen farms get full payback in less than a season,” the Boson team said. “Not just from fuel and labor, but from being able to do more work with fewer resources.”

That’s especially relevant in a labor-tight market where operators are difficult to find—and increasingly expensive.

“We’re not replacing jobs—we’re increasing capacity,” the team clarified. “The people are still there. But now they’re doing higher-value work while the LX40 handles the repetitive stuff.”

What’s Next: Attachments, Analytics and Autonomy 2.0

Looking forward, Boson is expanding its accessory ecosystem. Implements for spraying, tillage, soil sensing, and mowing are in active development—each RTK-guided for optimal precision. Software integrations are also underway.

“We’re building data tools into the EV stack,” the product manager said. “Route logs, runtime metrics tied to spatial precision.”

There’s also interest in swarming: multiple LX40s operating as a coordinated fleet. With GEODNET providing unified RTK feeds and future vehicle-to-vehicle protocols on the roadmap, it’s a natural next step.

“The autonomy curve is getting steeper,” the Boson team said. “We’re just getting started.”

A Model for Modern Farming Infrastructure

The Boson LX40 isn’t just a great, purpose-built electric UTV. It’s a blueprint for how decentralized infrastructure

Bundled RTK, Zero Setup

- Annual RTK via GEODNET: Included
- Region-agnostic NTRIP config
- No local base station needed
- Supports all modern GNSS receivers
- Calibrated for sub-inch consistency

“This is what autonomy should look like.”

Mike Horton
founder and CEO, GEODNET

like GEODNET can support scalable autonomy—from small farms to large enterprises.

“GEODNET proved that you don’t need to build your own base stations anymore,” the Boson team said. “We just plug in, and it works globally.”

That shift—away from proprietary corrections and toward open, global RTK access—lowers the barrier for startups, agtech developers, and farmers alike.

“This is what autonomy should look like,” GEODNET CEO Mike Horton said. “It’s not just for research parks. It’s for real people, doing real work, with tools they can afford.”

In a world racing toward high-end robotics and AI farming systems, the Boson LX40 offers a different vision: accessible, functional and grounded. It delivers the future not in five years, but now—in orchards, pastures and feed lanes across the country.

Through thoughtful design and a critical partnership with GEODNET, Boson Motors has shown what’s possible when infrastructure and intention align. ●



Diverse users prove autonomy scales.

Hardware & Software Architecture

