

Press Release

Bafang RG E510: 5-Speed Auto & Manual Hub – Rider, eBike and Road, All in One

Shanghai, 5 May 2026 - At the China International Bicycle Fair, Bafang will launch the **RG E510, a 5-speed auto/manual electronic gear hub**. Designed specifically for eBikes, it pairs with mid motors delivering up to 120Nm and integrates closely the M210 (city), M410 (trekking) and M430 (cargo) systems, together, creating an intelligent assistance package that reads rider intention, anticipates the road and feels instinctive from the very first pedal stroke.



Figure 1 - Bafang RG E510 5-speed auto & manual electronic gear hub

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Figure 2 - Manual shift mode



Figure 3 - Automatic shift mode

The core ride experience can be summed up in five key areas.

Seamless shifting and natural assistance

From pulling away to stopping, the motor feel is completely natural. Pedal force, cadence and speed are blended into a single assistance curve, just like a seamless extension of the rider's own leg power – smooth and precise. During gear changes, motor and hub communicate in real time: the motor momentarily reduces torque, the hub shifts, and torque is restored instantly – making the shift almost imperceptible. At traffic lights the hub automatically returns to a preset starting gear, ready to go again at any moment.

Smart gradient response

A 6-axis gyroscope measures gradient in real time. Before the rider even notices the increased load, the motor proactively boosts assistance and the hub downshifts. The rider simply maintains a relaxed cadence to climb efficiently and protect the knees - no manual shifting needed. When coasting downhill the system upshifts automatically according to speed, eliminating any "ghost pedalling" sensation and making re-acceleration smoother.

Automatic and manual control

The electronic 5-speed hub provides fully automatic intelligent shifting, but the rider can override at any time via handlebar buttons. In Auto mode the system continuously selects the optimal gear based on gradient, cadence and speed. In Manual mode every press triggers a shift within milliseconds, and is accompanied by a discreet shift prompt on the display. It's a genuine balance of intelligence and rider command.

Efficiency that extends range

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Close coordination between hub and motor keeps the motor running in its most efficient rpm window, delivering more predictable range from the same battery capacity. On flat terrain the system adopts an eco mode; as soon as it detects a climb or headwind, it actively supplies more power. Every watt is used meaningfully, without compromising a relaxed riding style.

Over-the-air evolution

The combination of multiple sensors and over-the-air update capability unlocks potential for future riding scenarios and personalized experiences. Whether it is refining shift logic or adding new ride modes, the eBike stays fresh over time, offering new enjoyment as the software evolves.

The integration of the **RG E510 electronic gear hub** with Bafang mid motors elevates the eBike from a “bicycle with assistance” to an intelligent riding companion that unites rider, eBike and road. Advanced electronic shifting, multi-source sensing and sophisticated algorithms work unobtrusively in the background; what the rider feels is simply a safe, efficient and completely intuitive shifting and riding experience.



Figure 4 - RG E510 shown with M410 and M210 mid systems

We warmly invite all partners to visit Bafang stand E5-0505 or visit Bafang-e.com to learn more.



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About BAFANG:

BAFANG, a leading suppliers in eBike drive system development and manufacturing, has been dedicated to providing high quality products and services to the electric two-wheeler industry with since 2003. Listed on Shanghai Stock Exchange (603489), the company supports global e-mobility trends, from individual e-bikes to public bike-sharing systems.

Bafang employs over 1000 people across 12 international locations. Its headquarters, R&D, and production sites are based in Suzhou, near Shanghai, China.

Explore a virtual tour of the headquarters: [VR Panorama](#)

Bafang also maintains sales and service centers in the Netherlands, the USA, Germany, Poland, Denmark, France, Italy, and China. And Poland facility additionally produce mid-drive systems for the European market.

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