

***ELEVANDI***

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iGearbox: NEXT ERA OF INTELLIGENT AUTO SHIFT FOR E-BIKE



Wechat Official Account



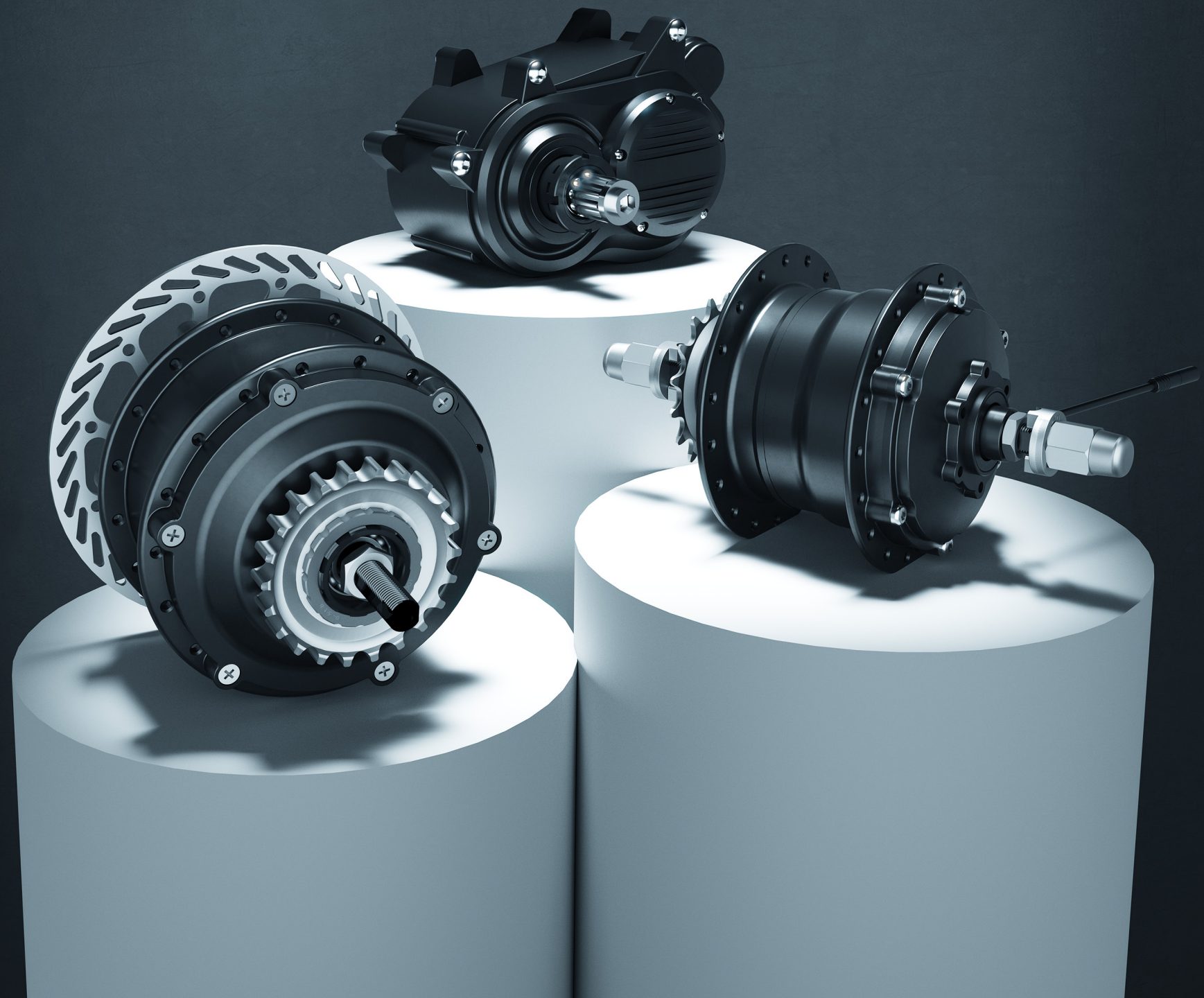
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Smart Inside, Freedom Outside

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# ***ELEVANDI***

Specialized in E-bike transmissions for over a decade, ELEVANDI adheres to the vision of

## **Smart Inside, Freedom Outside**

- **Freedom for** product design with uniqueness by customized solutions.
- **Freedom for** users' carefree experience by intelligent solutions.

Thanks to decade of dedicated R&D by our professional team from aerospace and automotive industries, ELEVANDI overcame the problems of free shifting under high-torque load and all terrains.





**NEXT ERA OF INTELLIGENT AUTO SHIFT FOR E-BIKE**

### **About iGearbox**

Boosted by DynaSync intelligent auto shift technology, iGearbox makes E-bike transmission an intelligent thinker that accompany you through all riding conditions with adaptive shifting.



i means

***“ iGearbox Knows You Better ”***

**instant**

**intelligent**

**individual**



## Electronic Shift

iGearbox performs shifting by electronic control and motor drive, which makes it automatically, intelligently and precisely match riding conditions.

**0.2s respond, seamless transitions.**

## Intelligent Automatic Shifting

By analyzing torque, speed, terrain data, the system predicts optimal timing to shift. All-terrain adaptive shifting.

## Customized Shifting

Users can personalize shifting strategies by defining parameters such as cadence ranges, torque thresholds, and terrain responsiveness. All under your control.



**> 95%**

**transmission efficiency**

~~counterpart: 75%~~

## Redefining E-bike: Motor-integrated iGearbox

Motor unit and internal gearbox are integrated in ONE, all-in-one control through AI algorithm.

With real-time data sharing and adaptive control, it delivers over 95% transmission efficiency across all operating ranges, for energy-saving and effortless riding.

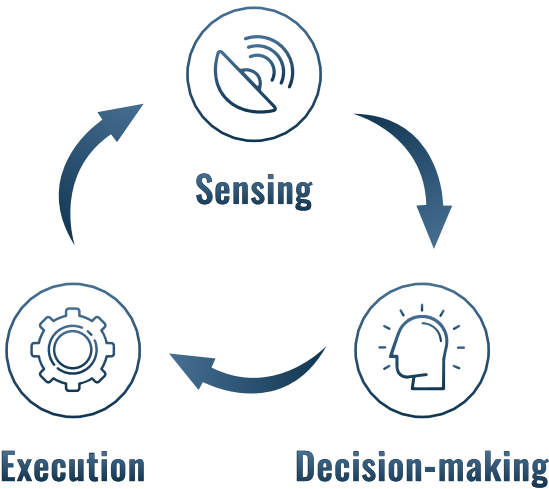
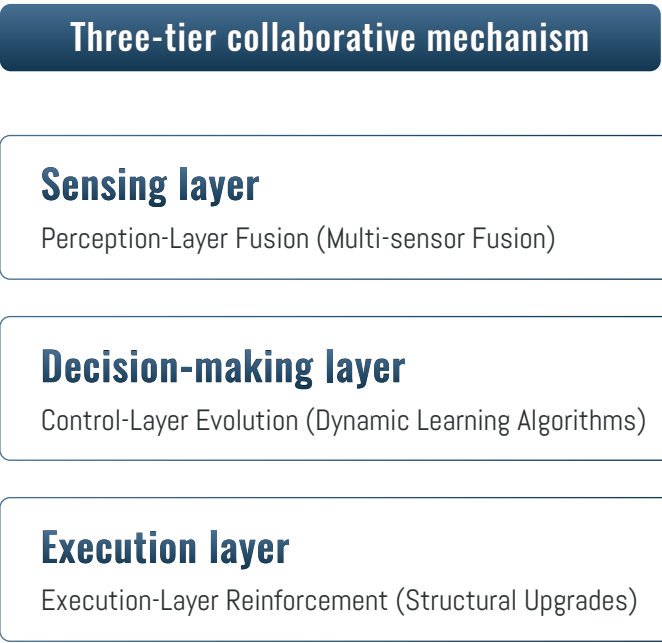
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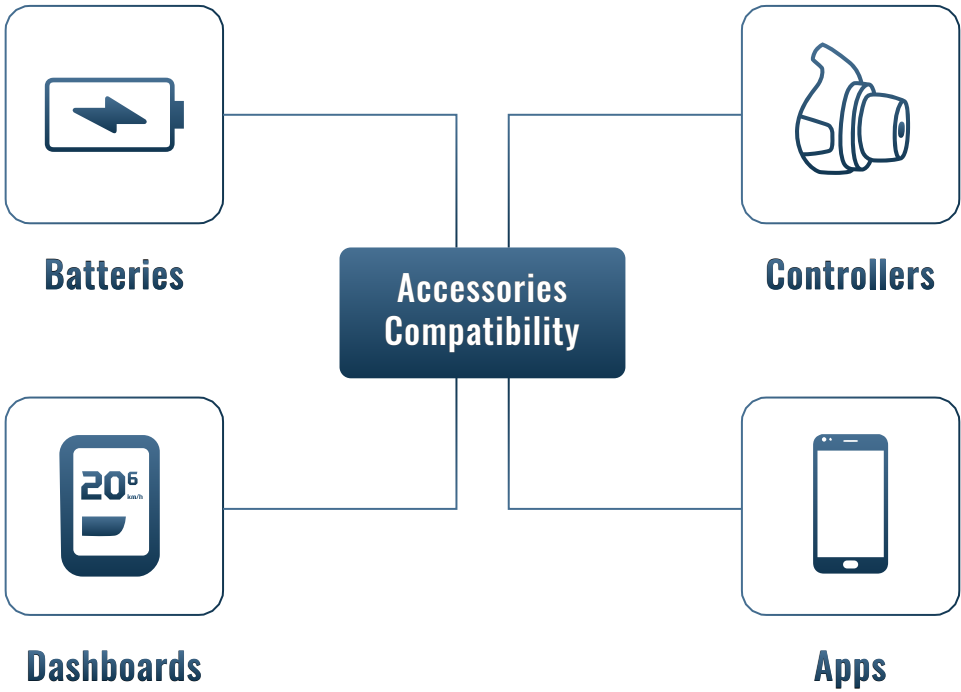
DynaSync Intelligent Auto Shift Technology

Dynamic synchronizes with riding state, achieving interactive shifting, continuous power output, and adaptive shifting in various terrains.

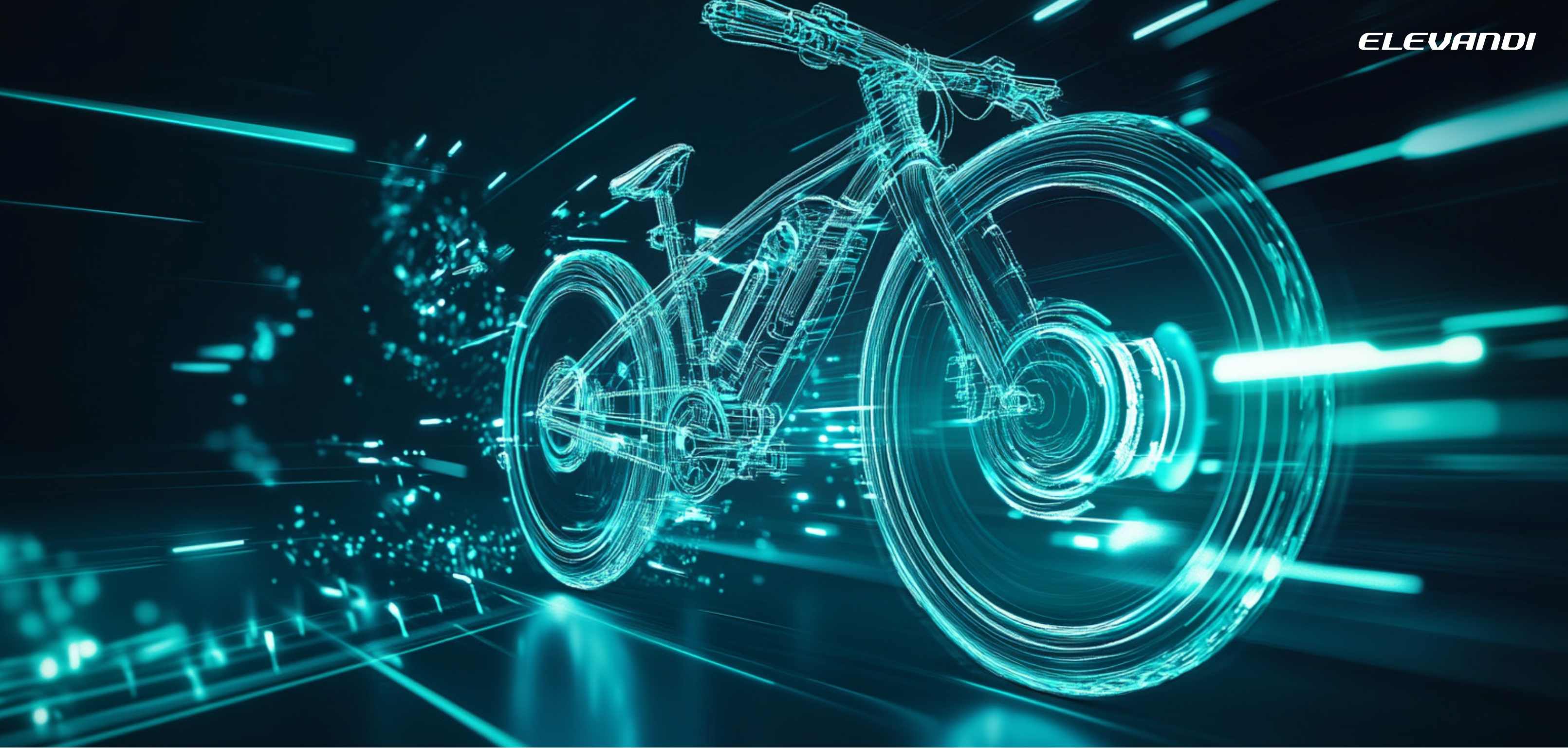


Accessories Compatibility

It supports flexible configuration of components (e.g., batteries, controllers, dashboards, and apps), seamless cross-device collaboration.







# DynaSync

## DynaSync Intelligent Auto Shift Technology

DynaSync Technology is based on a three-tier collaborative mechanism of sensing, decision-making, and execution, achieving adaptive shifting in various conditions.

### Shifting Under Load

Easy shifting under heavy loads with no power lag, max. torque 200N·m.

### Automatic Uphill Downshifting

In hill-climbing scene, the transmission system automatically downshifts when sensing increased load to boost torque output and maintain climbing stability.

### Start Preselection

Automatically switches to starting gear when stationary, enhancing smoothness and reducing rider effort during initial pedaling.



Perception-Layer Fusion (Multi-sensor Fusion)

instant



Control-Layer Evolution (Dynamic Learning Algorithms)

Based on the data collected from the perception layer, the AI algorithm dynamically predicts shifting, sends shifting commands to the execution layer, and triggers the gear preload for synchronized respond. The AI algorithm can also actively learn from your riding style, and predicts your personalized requirements through accumulative riding data. All are designed for you.

individual

Execution-Layer Reinforcement (Structural Upgrades)

Compact design seamlessly integrates motor and gearbox, with synergistic electronic control enabling rapid, precise shifts under heavy loads for a smooth, maintenance-free E-bike experience.

intelligent







# Product Series

## ER-Shift

Shifting Mode: **Auto& Manual**

Mounting Position: **Rear Hub**

With/Without Integrated Motor: **Without**

Products: **ER-S05**

## ER-Drive

Shifting Mode: **Auto**

Mounting Position: **Rear Hub**

With/Without Integrated Motor: **With**

Products: **R900**

## EM-Shift

Shifting Mode: **Auto& Manual**

Mounting Position: **Mid Gearbox**

With/Without Integrated Motor: **Without**

Products: **EM-S07**

## EM-Drive

Shifting Mode: **/**

Mounting Position: **Mid Motor**

With/Without Integrated Motor: **With**

Products: **EM-D04**

## Auto-Shift

Shifting Mode: **Auto**

Mounting Position: **Rear Hub**

With/Without Integrated Motor: **Without**

Products: **A02、A03**

## Manual-Shift

Shifting Mode: **Manual**

Mounting Position: **Rear Hub**

With/Without Integrated Motor: **Without**

Products: **M03**



# ER-Drive

## R900 DYNASYNC

Integrated Electronic 3-Speed Gear Hub Motor System

The R900 brings a new level of intelligence to e-drive systems by integrating a electronic 3-speed gear shifting mechanism and hub motor into a single compact unit.

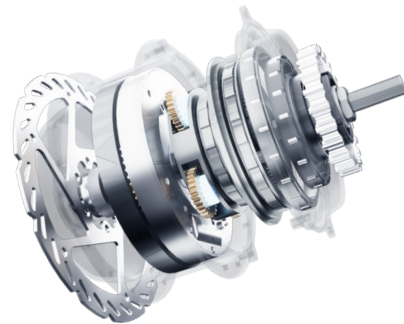


### PedalFlow™ Technology

- PedalFlow™ Shifting While Pedaling
- Maintains full power even when climbing or accelerating
- No pause in pedaling - just smooth transitions

### Intelligent Shifting Algorithm

Its intelligent algorithm enables auto adaptive shifting based on speed, torque, cadence and gradient. Customizable shifting logic via CANbus for different bike styles.



### 3-Speed Automatic Electronic Shifting

Unlike mechanical systems, the R900's electronic shifting responds instantly, delivering intuitive, natural gear changes with smooth transitions. Seamless 0.2s shifts ensure uninterrupted power during climbs/acceleration. Electronic precision, no lag, no missed shifts.

### Maintenance-Free Durability

Precise engineering combining motor and automatic shifting in one unit boosts efficiency and reduces maintenance. Optimized layout for flexible bike design.



Standard Model is designed for regular tires on urban pavement, delivering high drivetrain efficiency with low-maintenance sealed planetary gears.

Gear Ratio:	162%
O.L.D:	148mm
Construction:	Gear Drive
Rated Voltage (DC):	36V/48V
Rated Power(W):	250/350
Wheel Type:	Spoke Wheel
Motor Max Torque (N·m):	50
Motor Max Efficiency (%):	≥78%



Custom Model is optimized for fat tires used on mud / snow / sand conditions.

Gear Ratio:	162%
O.L.D:	175mm
Construction:	Gear Drive
Rated Voltage (DC):	36V/48V
Rated Power(W):	250/350
Wheel Type:	Spoke Wheel
Motor Max Torque (N·m):	50
Motor Max Efficiency (%):	≥78%



# ER-Shift

## ER-S05

DYNASYNC

5-speed Hub iGearbox

DynaSync Technology make gear shifting automatically adapt to riding state under all conditions.



### Dual-mode Intelligent Shifting

**Automatic Smart Shifting Mode:** let the system handle all gear shifting. Just enjoy your riding freely.

**Manual Bluetooth Shifting Mode:** you have everything under control in various scenarios, more specific precise and individual.

### DynaSync Intelligent Auto Shift Technology

- Shifting Under Load
- Automatic Uphill Downshifting
- Automatically switches to starting gear when stationary



Variable Speed Level:	5
Gear Ratio:	249%
Brake Type:	6-bolt Disc Brake
O.L.D:	142mm
Average Weight:	2.15kg

### Electronic Shift

iGearbox performs shifting by electronic control and motor drive, which makes it automatically, intelligently and precisely match riding conditions. **Instant respond , seamless transitions.**

### 5-Speed Full-Range Coverage

249% wide gear ratio enables torque boost on gradients while maintaining efficiency increase on flat roads.



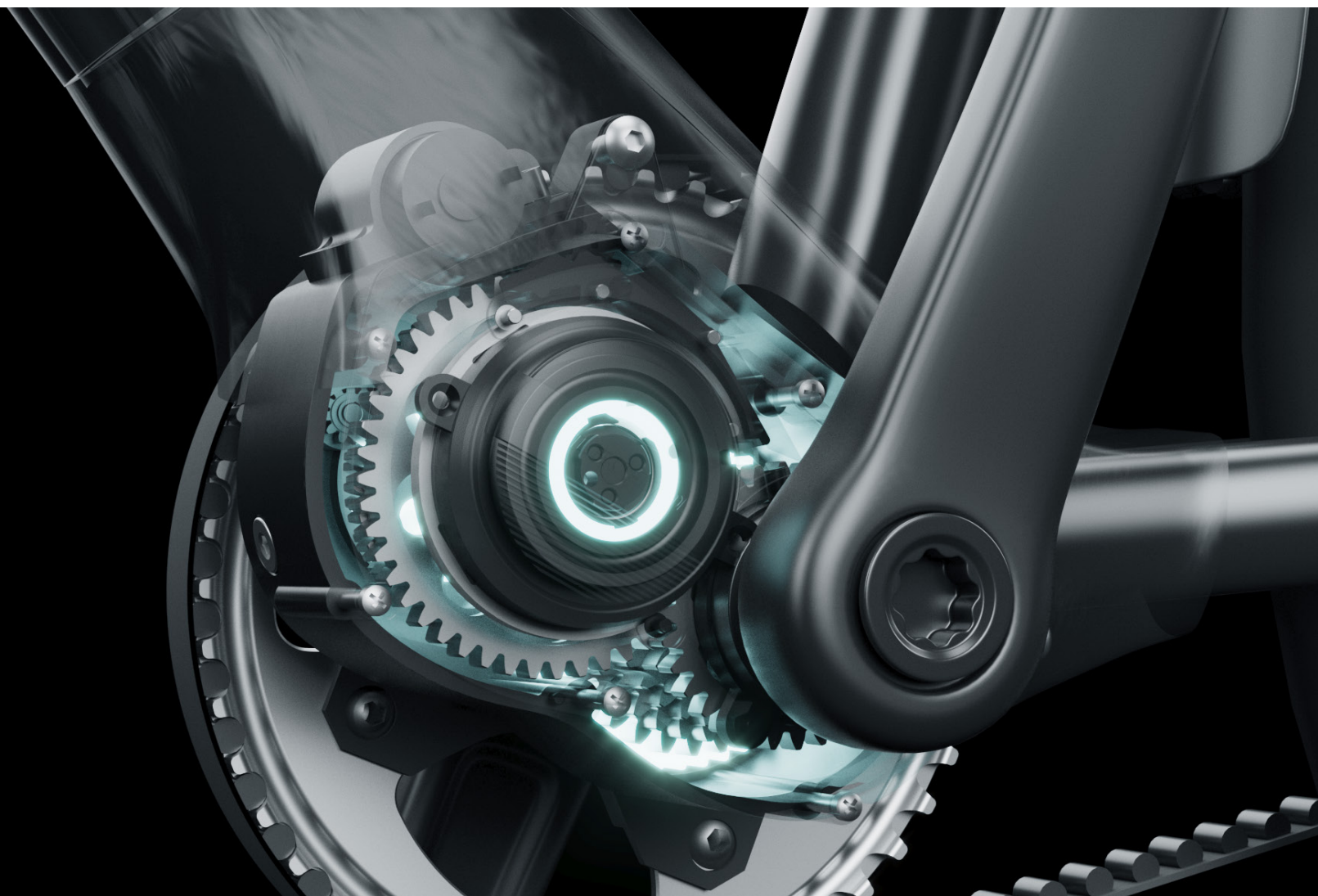
# EM-Shift

## EM-S07

DYNASYNC

7-speed Mid iGearbox

As a mid-mounted gearbox, 7-speed Mid iGearbox features electronic control, multi-sensor fusion and fully sealed structure, offering mid-mounted automatic transmission solution.



### Dual-mode Intelligent Shifting

Manual/Auto dual-mode shifting, DynaSync technology enables adaptive matching of optimal gear, enhancing shifting efficiency on complex terrains.

### Electronic Shift

iGearbox performs shifting by electronic control and motor drive, which makes it automatically, intelligently and precisely match riding conditions.

**Instant respond, seamless transitions.**

### 7-Speed Wide-Range Coverage

Planetary gearset and wide gear ratio of 435% adapt to virtually all conditions, ensuring precise shifting and efficiency boost.



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# Auto-Shift

## A03

Automatic 3-speed Internal Gear Hub

Designed for urban commuting, the product is centered on zero-maintenance, adaptive shifting to meet the demands of climbing and high load scenarios in daily riding.



### CentriGear Shifting Technology

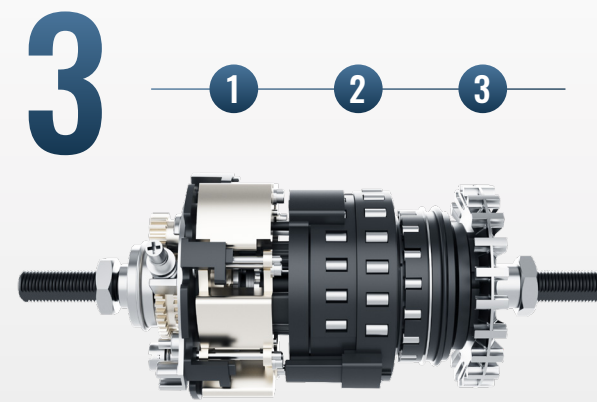
**Centri: Centrifugal Force**

**Gear: Planetary Gear**

The system is working based on planetary gears and centrifugal force-triggered to achieve seamless 3-speed transitions. It is suitable for most of city scenarios.

### Maintenance-free Design

Fully seal structure effectively blocking dust and water corrosion while ensuring long-term stability and long lifespan.



Variable  
Speed Level

### 6-bolt Disc Brake

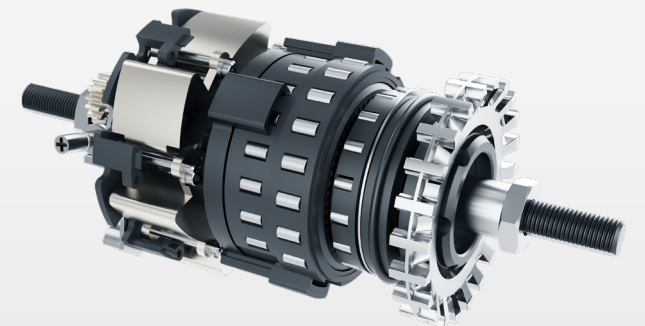


135mm



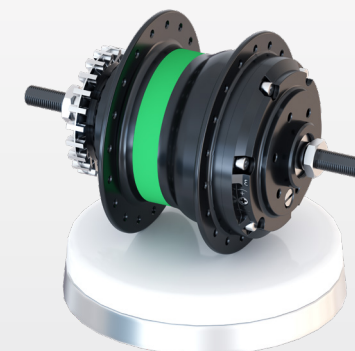
O.L.D

166%



Gear Ratio

1.64 kg



Average Weight

### Belt Drive



### Chain Drive

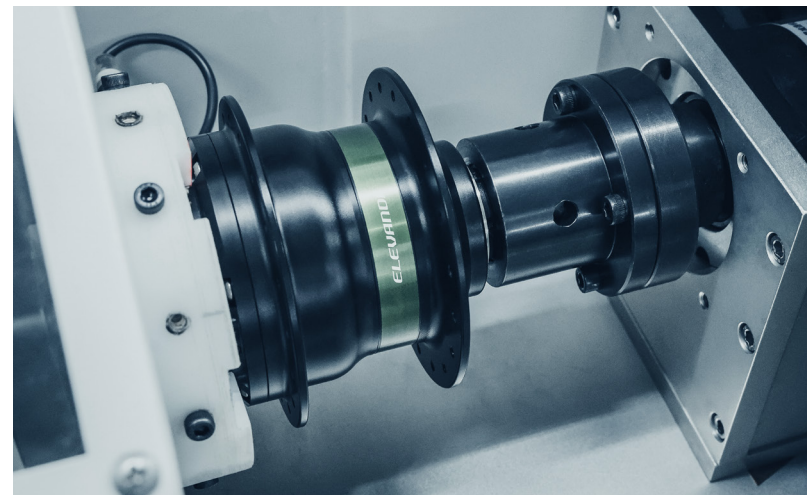




## Quality Assurance

ELEVANDI has over 50 large-scale processing equipment to create high-quality and sustainable products. ELEVANDI products are certified by many quality management system worldwide, including EU REACH and RoHS 2.0.

Certified laboratory conducts rigorous, full-cycle tests on all products, validating strict compliance with global quality and safety standards.



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