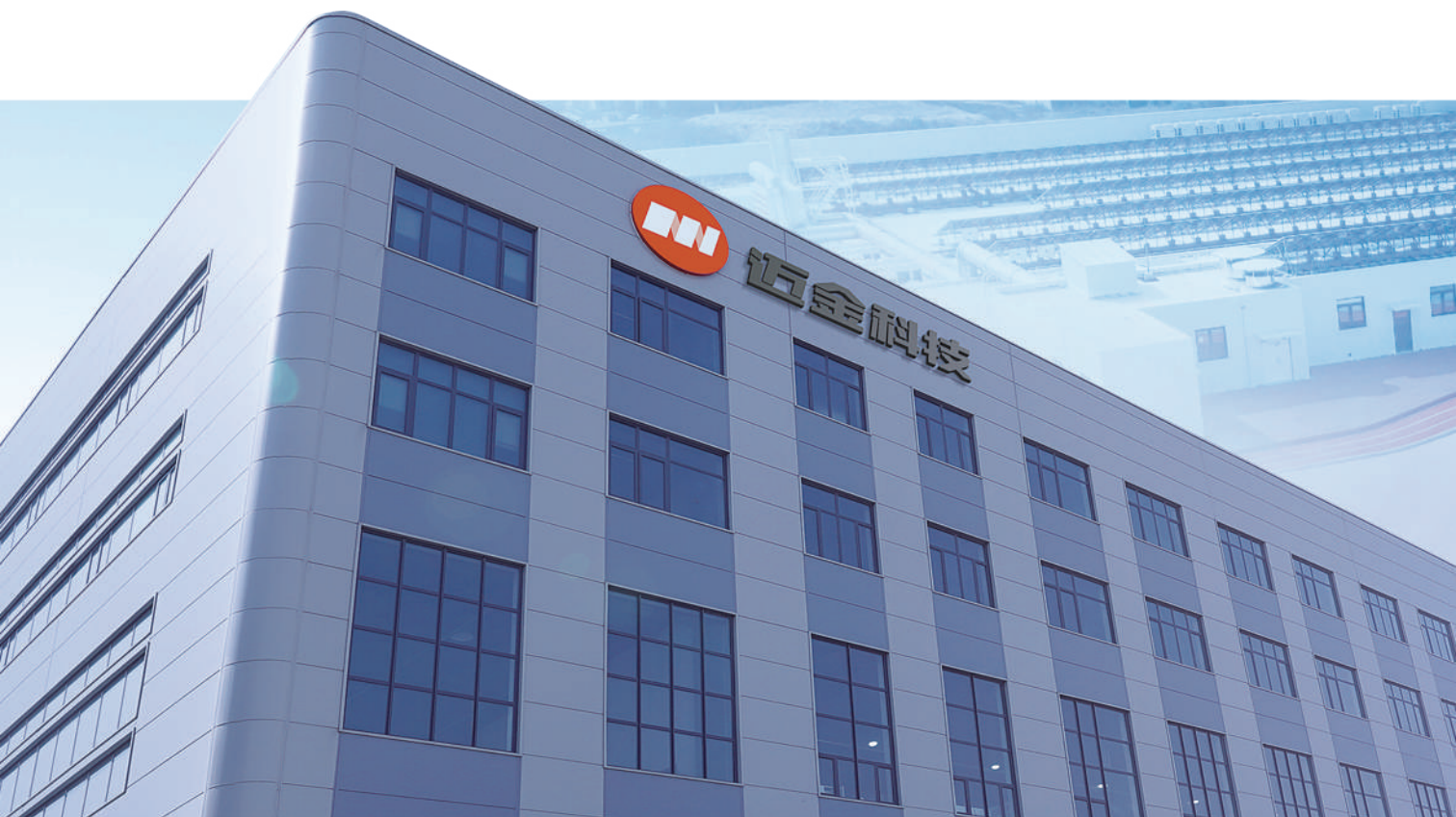# Magene

MAGENE
EBIKE SYSTEM

2025 EDITION

About Magene

Founded in December 2015, Qingdao Magene Intelligence Technology Co., Ltd. has always been committed to the R&D of intelligent, fun, and information-based cycling equipment.

Focusing on users' needs and oriented by the development trend of cycling, Magene applies cutting-edge R&D technologies and combines with scientific innovation and sports technology coordinates with production and sales service. Magene aims to improve users' experience by providing high-end indoor&outdoor riding equipment, customized hardware, and software support.

In the field of eBike, based on the experience and R&D strength in the production of indoor and outdoor cycling equipment, Magene can provide complete eBike solutions, including the design, production, and adaptation of all components in the system, providing a safer, more comfortable, and more convenient cycling experience. In order to adapt to different eBike models and riding scenarios, as well as meet the needs of different consumers, Magene eBike system adopts an independently developed intelligent algorithm and one-to-one model adjustment by engineers to ensure different riding feelings for each model.

Magene Factory

- 33,000+m^2 smart manufacturing industrial park
- Mechanical Assembly Workshop
- 100,000-Class Cleanroom
- Anti-Static Workshop

Covering the production and assembly of products such as smart trainers, bike computers, power meters, electronic shifting systems, wheelsets, and e-bike systems.

Precision Metrology Lab

Magene implements stringent production process controls, utilizing multiple precision measurement tools to achieve consistent manufacturing quality.

1. Gear Test Center
2. Coordinate Measuring Machine
3. Optical Axis Measuring Instrument
4. Vision Measuring Machine

Magene Lab

Product test includes speed, accuracy, stability, durability, and more. Based on professional user experience feedback, we independently develop testing equipment to meet higher testing standards.
100% of products are tested, adhering to or exceeding both international and national standards.

Apps

Magene eBikeConnect

It is an app for ebikers that not only provides users with richer cycling interactions but also allows them to customize their vehicles through features like assist settings and gear settings, enhancing the overall riding experience.

Magene Factory

It is a versatile debugging software that significantly improves the efficiency of vehicle manufacturers during the pre-sale, in-sale, and after-sale stages with features of parametric settings, local upgrades, and others.
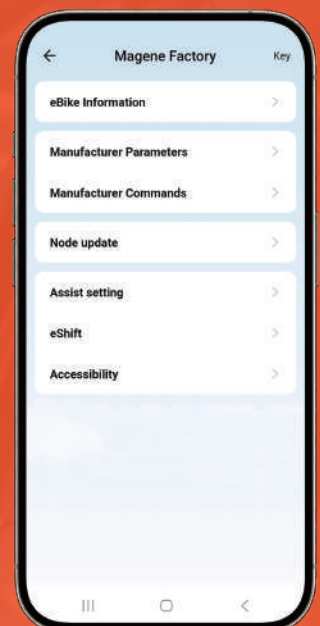
eCity Solution
Auto Shifting & Auto Assistance
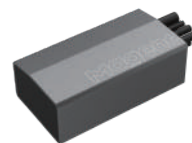
Free your hands and focus on the joy of cycling

① BT10

Wireless Button
Ergonomic design

DY30 Display

2.8" TFT color screen
Support interaction with electronic shifting, radar sensor, etc.

② CR31 Controller

250W/350W
Auto Assist/Smooth Assist
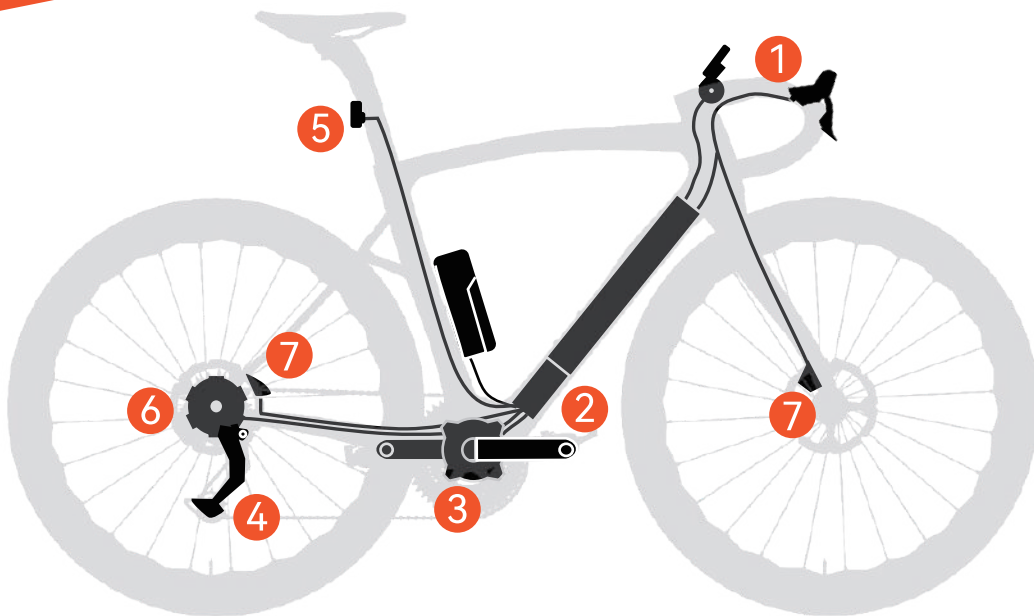
③ SR20 Torque Sensor

BCD104
Delay ≤10ms
±3% Power Accuracy

④ ERD200 Electronic Derailleur

9s-12s (some of 9s)
11T-34T / 11T-46T
Weight≤270g

eRoad/eGravel Solution

Lightweight and intelligent kits for a professional and safe riding experience
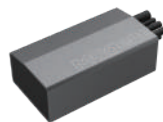

① ST02 Shifters

Wireless design
436g

DY30 Display

2.8" TFT color screen

Support interaction with electronic shifting, radar sensor, etc.

② CR31 Controller

250W/350W

Auto Assist
Smooth Assist

③ SR210 Torque Sensor

BCD110
±1% power accuracy
767g with crank arm

④ ERD200 Electronic Derailleur

9s-12s (some of 9s)
11T-34T / 11T-46T
Weight≤270g

⑤ RL51 Radar Sensor

Max Detection Distance 140m

Detective Speed 10km/h-120km/h

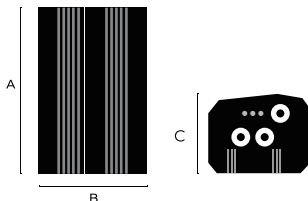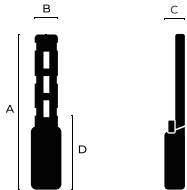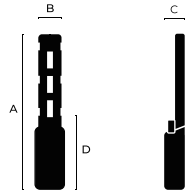**⑥ Hub Motor RM200**

Thru-Axle Motor
250W
Weight≤1500g

⑦ Brakes BR100

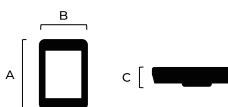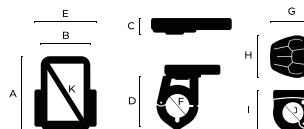Dual-sided oril circuit design, enhanced braking performance

230g for front&rear brakes

CONTROLLERS

Model	CR31	CR30	CR70
Dimension			
A(mm)	85	344.5	344.5
B(mm)	48	66	66
C(mm)	30	23	23
D(mm)		160.8	160.8
Weight (g)	315	616	616
Operation Temperature (℃)	-20~45	-20~45	-20~45
Storage Temperature (℃)	-25~55	-25~55	-25~55
Waterproof	IPX6	IPX6	IPX6
Rated Voltage (DCV)	36/48	36/48	48
Low Voltage Protection (DCV)	31/41	31/41	41
Current Limit (A)	12/15	12/15	20/25
Rated Power (W)	250/350	250/350	500/750
PAS Mode	Speed; Torque	Speed; Torque	Speed; Torque
Type	FOC	FOC	FOC
Communication	CAN	CAN	CAN
Assist Level	Configurable	Configurable	Configurable
Speed Limit	Configurable	Configurable	Configurable
Walk Assistance	Configurable	Configurable	Configurable
Auto Assist	Available	Available	Available
Smooth Assist	Available	Available	Available
Light	Available	Available	Available
Light Drive (DCV)	36/48	36/48	48
Power-Off during Brake	Available	Available	Available
Throttle Function	Available	Available	Available
Upgrading	OTA	OTA	OTA
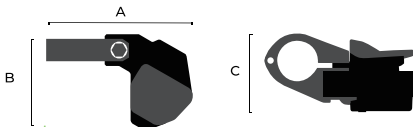
DISPLAYS

Model	DY30	DY21	DY12
Dimension			
A(mm)	80.7	83.4	82.03
B(mm)	54.4	58.3	54.47
C(mm)	16	20.5	42.75
D(mm)	/	64.4	/
E(mm)	/	73.4	/
F(mm)	/	22.2Φ	/
G(mm)	/	43.7	/
H(mm)	/	41.9	/
I(mm)	/	45.7	/
J(mm)	/	31.8Φ	/
K(mm)	/	3"	/
Weight (g)	57	105	51（Left/Right)
Operation Temperature (℃)	-20~45	-20~45	-20~45
Storage Temperature (℃)	-25~55	-25~55	-25~55
Waterproof	IPX6	IPX6	IPX6
Display Type	TFT	LCD	4 LED Left/Right
Rated Voltage (DCV)	20-60	36/48	12-60
Communication	CAN, BLE	CAN, BLE	CAN, BLE
Number of Keys	1	5	3（Left/Right)
Assist Level(Cycling Mode)	4 (including AUTO)	6 (including AUTO)	4 (including AUTO)
Walk Assist Function	Available	Available	Available
Light On/Off Function	Available	Available	Available
Button/Function Tone	Available	Available	/
Backlight	/	Manual	/
Charging	/	Type-C	/
Light-Sensing	Available	/	Available
APP	Available	Available	Available
Special Interaction	Electronic Shifting, radar, Turn Signal Light	Electronic Shifting Interaction	/
Upgrading	OTA	OTA	OTA

BUTTONS

Model	**BT10**	**ST02**
Dimension		
A(mm)	82.03	123.78
B(mm)	54.47	42.58
C(mm)	42.75	174.41
D(mm)	/	/
E(mm)	/	/
F(mm)	/	/
G(mm)	/	/
H(mm)	/	/
I(mm)	/	/
J(mm)	/	/
K(mm)	/	/
Weight (g)	52.5（Left/Right)	436（Left&Right)
Operation Temperature (℃)	-20~45	-20~45
Storage Temperature (℃)	-25~55	-25~55
Waterproof	IPX6	IPX7
Display Type	1 LED Left/Right	/
Battery	CR2032	LR44
Communication	BLE, 2.4G	BLE, 2.4G
Number Of Keys	3（Left/Right)	3（Left/Right)
Upgrading	OTA	OTA

TORQUE SENSOR

Model	**SR20**

Dimension
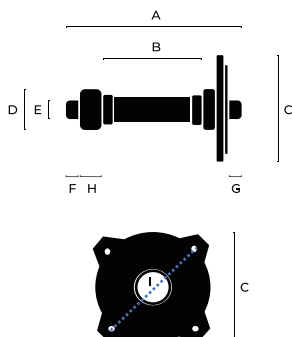
A(mm)	149.5/154.5/165.5/18
B(mm)	68/73/84/100
C(mm)	96
D(mm)	44
E(mm)	24
F(mm)	18.75
G(mm)	18.5
H(mm)	22
I(mm)	104
BB Width (mm)	460/485/520/650
Weight (g)	460/485/520/650
Operation Temperature (℃)	-20 ~ 45
Storage Temperature (℃)	-25 ~ 55
Waterproof	IPX6
Input Voltage (DCV)	4.5-5.5
Signals (Pulse/Cycle)	32
Power Consumption(W)	0.25
Torque Range (N.m)	0-100
Data Transmission	Digital
Precision/Delay	±3%/≤10ms
Communication	UART
Upgrading	OTA

MOTOR

Model	**RM200**

Dimension
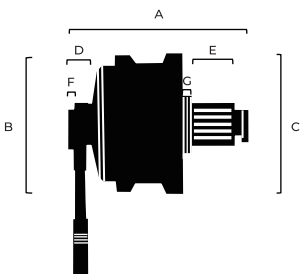
A(mm)	142
B(mm)	110Φ
C(mm)	112Φ
D(mm)	18.5
E(mm)	45.4
F(mm)	3.5
G(mm)	6.1
Operation Temperature (℃)	-20~45
Rated Voltage (DCV)	36
Rated Power (W)	250
Max Speed (km/h)	25、32
Max Torque (N.m)	40
Efficiency (%)	≥80
Noise Level (dB)	＜55
Wheel Size	700C
Spoke Hole	28H-13G
Speed Magnet	6PCS
Color	Black
Reduction Ratio	17.7
Weight (g)	≤1500
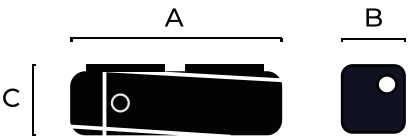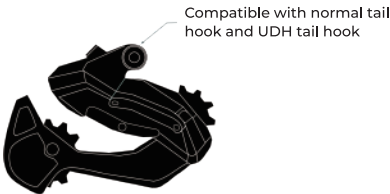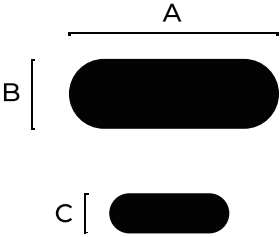
ELECTRONIC SHIFTING

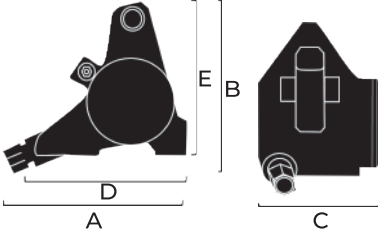| Model	ED20	ERD200
Dimension		Compatible with normal tail hook and UDH tail hook
A(mm)	85.5	/
B(mm)	29	/
C(mm)	28.3	/
Weight (g)	100	≤270g
Operation Temperature (℃)	-20~45	-20~45
Storage Temperature (℃)	-25~55	-25~55
Waterproof	IPX6	IPX7
Input Voltage (DCV)	20-60	20-60
Max (mA)	36V 1000mA / 48V 810mA	36V 1200mA / 48V 915mA
Speed Range	Below 12s	9s-12s(Some of 9s)
Teeth Range	/	11T-34T / 11T -46T
Adaptation Tail Hook	/	Normal Tail Hook UDH Tail Hook
Indication Light	/	Three color(Red、Green、Blue)
Fixing Method	Screw/Tire	/
Fixing Position	Chain Stay/Seat Stay	/
Communication Protocol	CAN	CAN, Bluetooth, 2.4G
Debugging	eBikeConnect / Magene Factory	eBikeConnect / Magene Factory
Auto Shifting	Available	Available
Upgrading	OTA	OTA

Radar Sensor

Model	**RL510**

Dimension

A(mm)	65
B(mm)	27
C(mm)	13.5
Weight (g)	24
Waterproof	IPX6
Functions	Target Distinguish, Speed Distinguish
Input Voltage (DCV)	10-60
RadarGHz	24
Max Detection Distance (m)	140
Min Detection Distance (m)	1
Relative Speed of Detectable Targets (km/h)	10-120
Distance Precision (m)	0.5
Horizontal Detection Angle Range	40°
Vertical Detection Angle Range	-10°~10°
Detectable Targets	Motor Vehicle, Non-Motorized Vehicle, Pedestrian
Max Detectable Targets Quantity	8
Fixing Position	Below of Seat Tube, Outside of Rear Rack
Communication Protocol	CAN、Bluetooth、ANT+
Upgrading	OTA

Brakes

Model	**BR100**

Dimension

A(mm)	69.08
B(mm)	62.51
C(mm)	41.44
D(mm)	59.73
E(mm)	52.51
Weight (g)	230 （一对）
Oil Pipe Length	Fornt Brake 800mm Fornt Brake 850mm Fornt Brake 900mm Fornt Brake 950mm Rear Brake 1450mm Rear Brake 1500mm Rear Brake 1550mm Rear Brake 1600mm
Converter length	Fornt Brake 140mm Converter Fornt Brake 160mm Converter Rear Brake 160mm Converter

Magene

Magene eBike system is designed to provide riders with a comprehensive solution that not only enhances their safety but also allows them to focus on enjoying their cycling.

One of the most important features of this eBike system is its advanced safety features. The system connects to other smart devices, to provide riders with real-time information about their surroundings, route, and traffic conditions. The connected sensors that can detect potential hazards, such as obstacles or vehicles, and alert riders in real-time, helping to prevent accidents.

Magene eBike system also paid more attention on its easy-operation and convenience, which enhance riders' overall riding experience. The system can be easily adjusted before/during/after the cycling ensuring a smooth and comfortable ride.

For more information, contact us via **sales-bd@magene.com**