



Technology Drives Everything

Wuhan R&D Center

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Foshan R&D and Manufacturing Center

No. 27 Xingye Road, Beijiao Town, Shunde District, Foshan, Guangdong Province

Shanghai R&D Center

Building 42, East Zone, No. 1387 Zhangdong Road, Pudong District, Shanghai

Vietnam Manufacturing Center

Lot No. 7-2, Street 2A in Protrade International Tech Park,
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MOTINOVA
Midea Industrial Tech.

Technology Drives Everything

2025 PRODUCT CATALOG



MOTINOVA
Midea Industrial Tech.

CORPORATE PROFILE

MOTINOVA, a brand under Midea Industrial Technology.

In 2022, Midea Group (a Fortune Global **500** company) acquired a controlling stake in MOTINOVA.

With the full support and resources of Midea Industrial Technology, MOTINOVA is positioned to drive innovation and redefine the global landscape of electric-assisted mobility solutions.



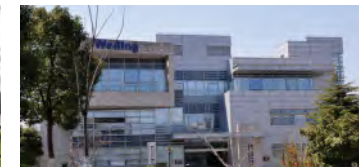
Shunde R&D Center & Factory



Vietnam Factory



Motor Failure Analysis Center in
The Netherlands



Shanghai R&D Center
CNAL Testing and Verification center



The Advanced Research Institute is committed to researching motors that are high in energy efficiency, low in noise, and stable in performance



2 modernized factories with an annual production capacity of 600,000 units



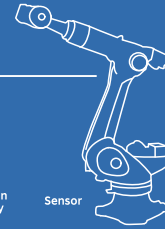
A Failure Analysis Center in The Netherlands

ADVANTAGE

> E-Bike Drive System Innovation Capablility

Sharing Midea's R&D Platform

Solid Mechanics	Hydrodynamics	Material Research	Thermodynamics	Motor Electromagnetism	Electronic Control	Vibration Noise	Transmission Technology	Sensor
deformation, strength, durability	oil circuit, gas circuit, temperature field, fan	refrigerant oil, new structural materials	refrigeration cycle optimization, performance element study	motor structure design, performance, noise optimization	research of driving algorithms, hardware, etc.	mechanical, electromagnetic and fluid noise analysis	product system research in different fields	response speed, accuracy, sensing principle



> Introduced Automotive Motor Standards Technology into MOTINOVA Production

Flat wire motor technology is applied in the MIGIC series motors, achieving motor efficiency of over 85%.

Featuring low-pressure injection molding, the MOTINOVA controller ensures a sleek design, eco-friendliness, and enhanced durability.



> Fully automated production lines and MES (Manufacturing Execution System) ensure quality benchmark

Incoming Material Inspection

Production Processing Inspection

Reliability Test

Warranty: 3-YEAR/40000Km
(Applicable to mid-motor systems)



> Certified for CE/UL, with reliable and stable supply



50s/unit
e-Drive motor



45-60 days
the fastest delivery time in the industry



92%
OEP fool-proof rate



80%
MIGIC automatic rate



98%
One-time pass rate

> With a factory in Vietnam, A Certificate of Origin ensures trade convenience

Vietnam Certificate of Origin

7500m², investment 10M+USD,
2 automatic production line in Vietnam
Self-production rate >50%, comply with
Eur1、Form B、Form D、Form E requirement

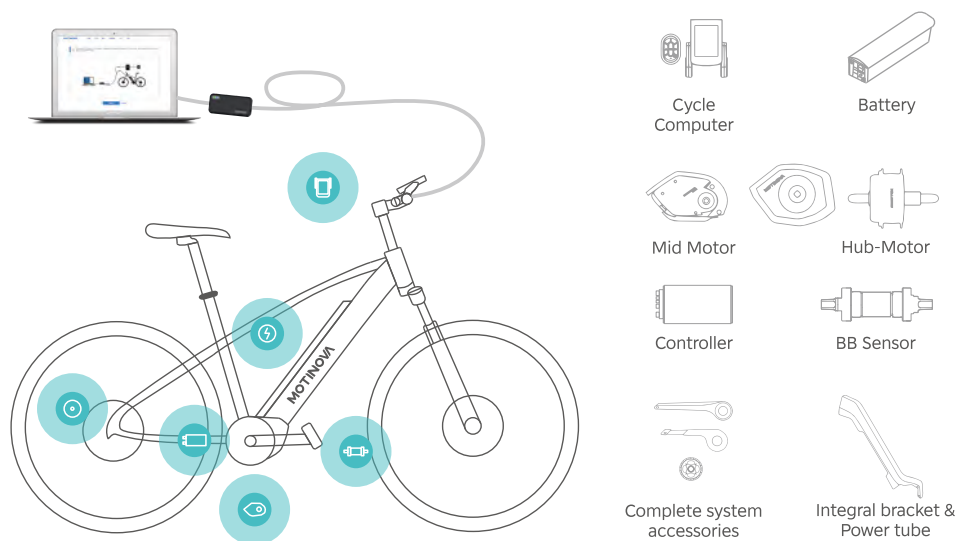


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E-BIKE DRIVE SYSTEM TOTAL SOLUTION



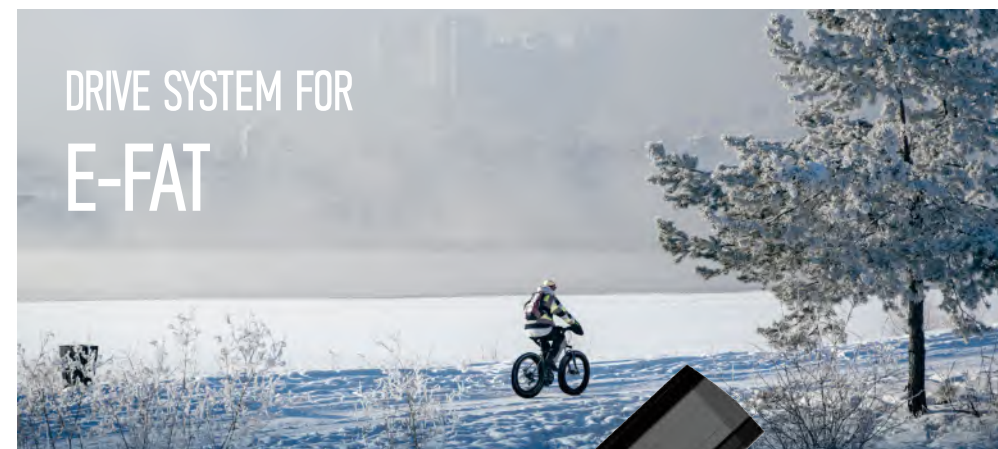
- MIGIC T1**
 Rated power 250W
 Rated Voltage 36V/48V
 Max Torque 90N·m
 Weight 3.4kg
- DS8020**
 Color screen
 Bluetooth
- BN21-L**
 Rated Voltage 36V
 Battery Capacity 17.5Ah



MIGIC C1
 Rated power 250W
 Rated Voltage 36V/48V
 Max Torque 75N·m
 Weight 3.1kg

DS5050
 Color screen
 Segment code screen

BN21-L
 Rated Voltage 36V
 Battery Capacity 17.5Ah



MN040
 Rated power 500W/750W/1000W
 Rated Voltage 36V/48V
 Max Torque 80N·m
 Weight 3.5kg

BN21-L
 Rated Voltage 36V
 Battery Capacity 17.5Ah

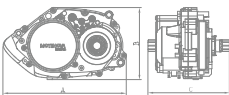
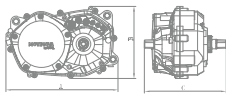
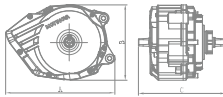
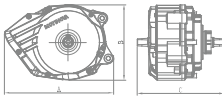
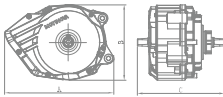
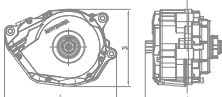
DS8020
 Color screen
 Bluetooth

TS101
 Cadence&Torque Signals(P/rpm) 38
 Measuring range 0-80/0-100

SC201-U01-Q12
 Maximum Phase Current 75A
 Communication UART/CAN
 Brake Light & Horn Short-circuit protection

PRODUCT SPECIFICATION

Mid Motor

						
Model No.	MIGIC T1	MIGIC C1	VOLANS	VOLANS PLUS	PEGASI	PEGASI PLUS
Position	Mid Motor	Mid Motor	Mid Motor	Mid Motor	Mid Motor	Mid Motor
Dimensions						
Size: A	213	198.3	191.8	191.8	196	196
Size: B	133.1	126.5	132	132	135	135
Size: C	144.5	145.2	152	152	147	147
Weight (kg)	< 3.4	< 3.1	< 3.2	< 3.2	< 3.6	< 3.7
Construction	Gear Drive	Gear Drive	Gear Drive	Gear Drive	Gear Drive	Gear Drive
Rated Voltage (DC)	36V/48V	36V/48V	36V/48V	36V/48V	36V/48V	36V/48V
Rated Power (W)	250/350/500	250/350	250	250	250	250/500
RPM	120	110	100	100	110	120
Max Torque (N·m)	90	75	65	75	80	100
Max Efficiency (%)	> 80%	> 80%	> 80%	> 80%	> 80%	> 80%
Communication	CAN	CAN	CAN	CAN	CAN	CAN
Shaft Standard	ISIS	J.I.S	J.I.S	J.I.S	ISIS	ISIS
Color	Black	Black	Black	Black	Black	Black
Operation Temperature(°C)	-20~55	-20~55	-20~55	-20~55	-20~55	-20~55
e-Brake	●	●	●	●	●	●
Gear Sensor	●	●	●	●	●	●
Light Drive Capacity	6V 3W/12V 6W	6V 3W/12V 6W	6V 3W/12V 6W	6V 3W/12V 6W	6V 3W/12V 6W	6V 3W/12V 6W
Sensor	Cadence&Torque	Cadence&Torque	Cadence&Torque	Cadence&Torque	Cadence&Torque	Cadence&Torque
Certifications	CE/EN ISO13849/ EN15194/UL/RoHS/REACH	CE/EN ISO13849/ EN15194/UL/RoHS/REACH	CE/EN ISO13849/ EN15194/UL/RoHS/REACH	CE/EN ISO13849/ EN15194/UL/RoHS/REACH	CE/EN ISO13849/ EN15194/UL/RoHS/REACH	CE/EN ISO13849/ EN15194/UL/RoHS/REACH
Waterproof	IP55	IP55	IP55	IP55	IP55	IP55

Support: ● Do not support: —

PRODUCT SPECIFICATION

Hub-Motor



MN010



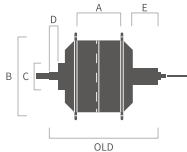
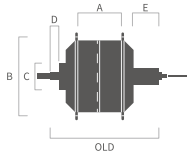
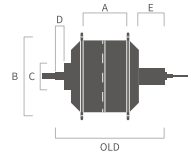
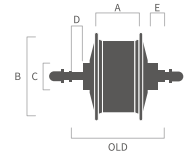
MN020



MN040



MN050

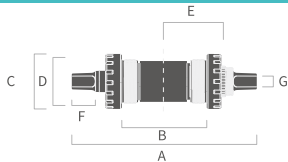
Model No.	MN010	MN020	MN040	MN050
Position	Rear	Rear	Rear	Rear
Dimensions				
Size:A	40	40	76	66.5
B	124	126.5	124	145
C	44	44	44	44
D	15.25	15.25	15.25	15.25
E	38/40.75	38/40.75	38/40.75	39.6/40.75
O.L.D	135/138	135/138	175/190	175/190
Construction				
Rated Power(W)	250	250/350	750/1000	750/1000
Rated Voltage(DC)	36V	36V/48V	36V/48V	36V/48V
Max Torque(N·m)	35	50	80	85
Max Efficiency(%)	≥80%	≥80%	≥80%	≥80%
Weight(kg)	2.6	2.3	3.5	4.6
Color	Black	Black	Black	Black
Noise Grade(dB)	≤55db	≤55db	≤60db	≤60db
Operation Temperature(°C)	-20-45°C	-20-45°C	-20-45°C	-20-45°C
Mounting Parameters				
Brake Type	Disc-Brake	Disc-Brake	Disc-Brake	Disc-Brake
Cable Routing	Shaft Side_Left	Shaft Side_Left	Shaft Side_Left	Shaft Side_Left
Cable Length(mm)	250mm	250mm	250mm	250mm
Connection Type	HIGO Lernew Z910AG	HIGO Lernew 1012BG	HIGO Lernew Z1115AG	HIGO Lernew Z1115AG
Spoke Specifaciton	36H*12G/13G	36H*12G/13G	36H*12G/13G	36H*12G/13G
Free Wheel	7-9/8-10	7-9/8-10	7-9/8-10	7-9/8-10
Certifications	ROHS/CE	ROHS/CE	ROHS/CE	ROHS/CE
Waterproof	IP65	IP65	IP65	IP65

PRODUCT SPECIFICATION

Controller & Bottom Bracket Integrated Torque sensor

Parameter	SC201-U01-Q6 SC201-T01-Q6	SC201-U01-Q12 SC201-T01-Q12
Product Image		
Rated power(W)	250-500	500-1000
Rated voltage (V)	36/48	36/48
Undervoltage Protection(V)	30/39	30/39
Overvoltage Protection(V)	46/59	46/59
Maximum Phase Current (A)	40	75
Maximum Battery Current (A)	20	30
Communication	UART/CAN	UART/CAN
Electronic Brake	Low level	Low level
Torque Sensor	●	●
Cadence Sensor	●	●
Throttle	●	●
Walk	6km/h	6km/h
Light Voltage	6V/12V/36V/48V	6V/12V/36V/48V
Light Power	3W/6W/10W Short-circuit protection	3W/6W/10W Short-circuit protection
Brake Lights	● Short-circuit protection	● Short-circuit protection
Turn Signal	—	● Short-circuit protection
Horn	● Short-circuit protection	● Short-circuit protection
Diagnostic Upgrade	●	●
Color	Black	Black
Length (mm)	74	101
Width (mm)	45	56
Height (mm)	29	33
Weight (kg)	< 0.5	< 0.5
Certification	ISO13849/UL	ISO13849/UL

Support: ● Do not support: —

Model	TS101-68 TS101-73 TS101-84 TS101-100 TS101-120
Product Image	
Dimensions	
A	148/148/164/180/200
B	68/73/84/100/120
C	2-44
D	2-BC1.37"*24T
E	45/47.5/53/61/71 Base EP01A-KBV01-DG
F	2-17
G	2-M8*P1*1.25
Claw External Spline ISO4156 Flat Root	EXT 24z*1m*30R*7h ISO4156
Core Data	
Cadence & Torque Support	Cadence&Torque
Operating Voltage(DC)	4.5~5.5V
Output voltage(DC)	0.5~3.0V
Signals(P/rpm)	38
Measuring range	0-80/0-100
Operating Temperature	-20~45°C
Axis Type	J.I.S.
Bottom Bracket Width (mm)	68/73/84/100/120
Cable Length (mm)	150/200/250/300/350
Connector Type	HIGO Lernew 609BG
Cap Material	Aluminum
Waterproof Rating	IP65
Certification	EN15194

PRODUCT SPECIFICATION

Cycle Computer



ECO



NORM



SPORT



TURBO



SMART

Model	3010 Series	5010 Series	5040 Series	5050 Series	8010 Series	8020 Series
						
Display Technology	—	LCD segment code screen	LCD Segment screen	LCD Segment screen	TFT Color	TFT Color
Rated Voltage (DC)	24V/36V/48V	24V/36V/48V	24V/36V/48V	24V/36V/48V	24V/36V/48V	24V/36V/48V
Support Level	OFF/ECO/NORM/ SPORT/TURBO/SMART	OFF/ECO/NORM/ SPORT/TURBO/SMART	OFF/ECO/NORM/ SPORT/TURBO/SMART	OFF/ECO/NORM/ SPORT/TURBO/SMART	OFF/ECO/NORM/ SPORT/TURBO/SMART	OFF/ECO/NORM/ SPORT/TURBO/SMART
Communication	CAN	CAN	CAN	CAN	CAN	CAN
Color	Black	Black	Black	Black	Black	Black
Mounting Parameters						
Screen Size (Inch)	—	1.3'	3.5'	3.5'	2.0'	2.8'
Holder (mm)	φ 22.2	φ 22.2	Keystroke: φ 22.2 Display screen: φ 22.2/φ 25.4/φ 31.8	Keystroke: φ 22.2 Display screen: φ 22.2/φ 25.4/φ 31.8	Keystroke: φ 22.2 Display screen: φ 22.2/φ 25.4/φ 31.8	Keystroke: φ 22.2 Display screen: φ 22.2/φ 25.4/φ 31.8
Cable Length (mm)	300	300	150	150	150	150
Indication Information						
Current Speed (km/h)	—	●	●	●	●	●
Maximum Speed (km/h)	—	●	●	●	●	●
Average Speed (km/h)	—	●	●	●	●	●
Single Trip Distance	—	—	—	—	●	●
Total Distance	—	●	●	●	●	●
Battery Capacity	●	●	●	●	●	●
Error Code	●	●	●	●	●	●
Walk-assist	●	●	●	●	●	●
Backlight	—	●	●	●	●	●
Light Sensor	—	—	—	—	—	—
Further Specifications						
Bluetooth	Optional	—	—	Optional	—	Optional
USB Charge	—	—	●	●	—	●
Remote Control	—	—	●	●	●	●
Certifications	CE/EN15194/RoHS/REACH	CE/EN15194/RoHS/REACH	CE/EN15194/RoHS/REACH	CE/EN15194/RoHS/REACH	CE/EN15194/RoHS/REACH	CE/EN15194/RoHS/REACH
Waterproof	IP55	IP55	IP55	IP55	IP55	IP55

Support: ● Do not support: —



PRODUCT SPECIFICATION

Battery & Power tube

Model	BN21-L
Installation Location	Tube-Embedded
Weight (kg)	3.2
Rated Voltage (V)	36
Nominal Voltage (V)	36
Battery Capacity (Ah)	17.5
Energy (Wh)	630
Communication	CAN
BMS Support	Support
Charging Current (A)	3
Size (mm)	412*84*63
Pack	10S5P
Cell type	Samsung 3.5Ah
Cell Specifications	18650
Certification	IEC62133、ISO13849、UN 38.3、EN50604
Protection Class	IPX7

Power Tube



Applicable To MIGIC T1

Applicable To MIGIC C1

BN21-L



Safe



Efficient



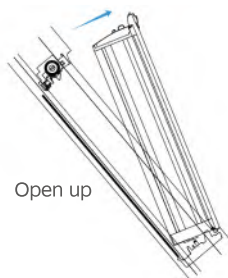
Green



Economical



Open down



Open up

Integrated gravity casting powertube
One piece without welding

PRODUCT SPECIFICATION

Accessory	Name	MIGIC T1			MIGIC C1
Motor Bracket	Model	MM12T N1	MM13T N1	MM40U N001	MM11C N1
	Picture				
	Material	Al6061	Al6061	A356.2	Al6061
Protective Cover	Model	MPV10			MPV11
	Picture				
	Material	PBT			PBT
Skid Plate	Model	MBP03			MBP04
	Picture				
	Material	PBT			PBT
Chain Guard	Model	SP-38-1			
	Picture				
	Material Specifications	PC/PP/ABS Maximum fit:38T RC:400-460mm			
Lock Nut	Model	MBS10N			MBS09N
	Picture				
Chainwheel	Picture				
	Model	MGT01-DG			MGC01-DG
	Material	CL:47/50/53/56 T: 32-48 / Optional Narrow-Wide / Optional guard cover Compatible up to 12-speed			CL:45/47/50/53/56 T: 32-48 / Optional Narrow-Wide / Optional guard cover Compatible up to 12-speed
Speed Sensor	Model	MS1K			
	Picture				
	Specifications	M5*12/IP67			
Magnet Assembly	Model	MA01B			MA02A
	Picture				
	Specifications	Spoke-mounted / Sensing range 5-20mm			Disc brake mounted / Sensing range 5-15mm
Crank Bolt	Model	TBS05G			TBS04G
	Picture				
Crankset	Model	MIA3			MJA3
	Picture				
	Specifications	Aluminum//170//ISIS//10°			Aluminum//170//JIS//10°
Hanger Bolt	Model	MBS04G			MBS03G
	Picture				

Accessory	Name	Volans Series			PEGASI Series		
Motor Bracket	Model	MM10V N1	MM11V N1		MM10P N1		
	Picture						
	Material	Al6061	Al6061		Al6061		
Protective Cover	Model	MPV01	MPV03	MPV05	MPV02	MPV04	MPV05
	Picture						
	Material	PA+GF	PA+GF	PA+GF	PA+GF	PA+GF	PA+GF
Skid Plate	Model					MBP01	
	Picture						
	Material					PA+GF	
Chain Guard	Model						
	Picture						
	Material Specifications	ABS Maximum fit:20T RC:210-320mm	PC+ABS Maximum fit:20T RC:327-440mm	PC+ABS Maximum fit: Former20T After22T RC:456-466mm			
Lock Nut	Model	MBS01N	MBS02N	MBS03N	MBS04N	MBS05N	
	Picture						
Chainwheel	Model	MCW16C	MCW16D	MCW18C	MCW18D	MCW20C	MCW20D
	Picture						
	Material	16T, Up to 12-speed	16T, Up to 10-speed	18T, Up to 12-speed	18T, Up to 10-speed	18T, Up to 12-speed	20T, Up to 10-speed
Washer	Model	MWM01A	MWM02A	MWM03A			
	Picture						
	Specifications	CL:46MM	CL:49/52MM	CL:55MM			
Speed Sensor	Model				MS1F		
	Picture						
	Specifications				M5*12/IP67		
Magnet Assembly	Model				MA01B	MA02A	
	Picture						
	Specifications				Spoke-mounted / Sensing range 5-20mm	Disc brake mounted / Sensing range 5-15mm	
Crank Bolt	Model				TBS04G	TBS05G	
	Picture						
Crankset	Model				MJA3	MIA3	
	Picture						
	Specifications				Aluminum//170//JIS//10°	Aluminum//170//ISIS//10°	
Hanger Bolt	Model				MBS02G	MBS01G	
	Picture						



Diagnostic Box

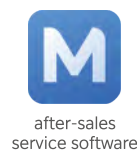
Connect the Motinova power-assisted assembly with the after-sales software through Motinova Linkage Device to perform operations such as fault diagnosis, firmware upgrade or custom configuration.



Model	MLD4
Dimensions (mm) Length x Width x Height	110x28x55
USB Interface	DC5V 500mA
Communication Interface	CAN2.0A 250Kbps
Color	Black

After-sales Service Software

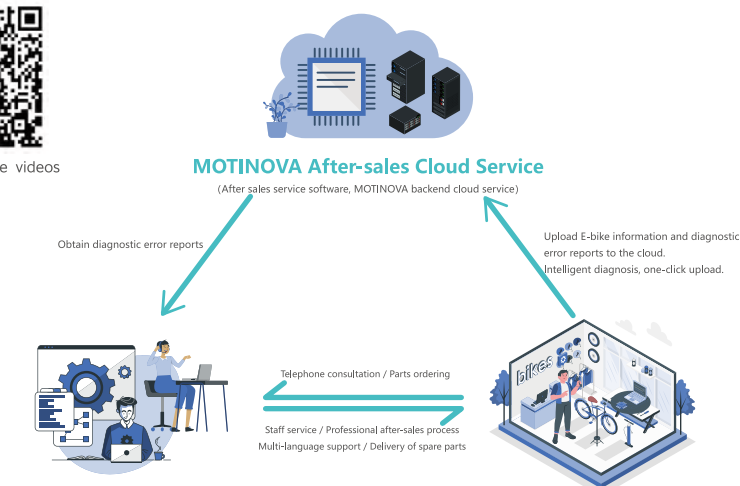
The Motinova after-sales service system allows to specify custom configuration of the power assist system and customize your riding style; keep the firmware of every unit up-to-date through firmware update; Thanks to the Motinova after-sales service system, you can check operation faults, upload the after-sales service image, and obtain the logs of each assembly, making it easier for the maintenance personnel to perform maintenance quickly.



*If necessary, please contact Motinova team to obtain the after-sales service system software and tools.



After-sales service videos



MOTINOVA Professional Third-party Service Agency

- After sales guidance
- Multi-language support
- Professional after-sales process
- Online parts store
- Convenient replacement of spare parts

E-mail: Motinova@twindis.com
Telephone: +31 88 088 66 86

In-store Service

- MOTINOVA after-sales software diagnostic services
- Ebike error message uploaded to MOTINOVA cloud
- Ebike after-sales software upgrade service
- Ebike spare parts replacement service

After-sales Service Map

Serving global customers.

