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E-BIKE SYSTEMS

inspiring your ride
In the year of 2009, TranzX changed the face of the global E-bike industry by introducing our first E-bike, the Eagle, and revolutionized the world of urban E-mobility with Eagles’s success. No longer were E-bike made conventionally, E-bikes now inspire teens, adults, men and women worldwide in various forms.

Since the debut of the first TranzX E-bike system in the year of 2007, TranzX has made tremendous progress in building a diverse drive system to supply this fast-changing market. Our passion never ceases in search of greater e-mobility solutions. To this day, inspiration and innovation, our core values, continue to guide us on this journey towards new possibilities.

ABOUT TRANZX

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The new compact R17 hub motor is designed for e-bike cyclists who love adventure, and concern their bike’s weight and wheel changing process during the journey.

The DP33 HMI presents a compact size with 1.3” OLED screen which delivers essential data to read. Besides a single button on the body, an ergonomic remote unit RC33 helps cyclists in operation comfort and intuitive switching experience.

The lightweight (<2kg) 245Wh BL27 battery equipped with a controller that can be fully integrated in the down tube to give e-bikes a neat outlook.

The patented BB06T ISIS bilateral bottom bracket torque sensor measures both cadence and torque at each pedal, supporting seamless on/off pedal assist in every cycling.

A system features an extremely light R17 rear hub motor with a quick-release function, making e-gravel/road bikes wheelset changing more efficiently. Up to 45Nm torque output and a smart BB06T torque sensor provides cyclists strong and smooth pedal assist in various riding scenarios.

R17 system also perfectly integrates an in-tube battery, a frame embedded HMI with remote control panel keep the bike simple yet elegant outlook.
R17 REAR HUB MOTOR

FEATURES
- Voltage: 36V
- Compact size: 119mm
- Featherweight: 1.85kg
- Powerful output: 45N.m
- Standard M12 quick-release thru axle
- Support up to 40 km/h
- Up to 12 speed cassette

R17 is a compact, featherweight rear hub motor, and thanks to the unique design, changing e-bike rear wheel will not be a pain in the neck anymore. Patented two-stage planetary reduction mechanism increases durability of gears by 20% ~ 30%.

R17 PLUS REAR HUB MOTOR WHEEL ASSEMBLY

Connector Type
Patented magnetic mechanism is adopted.

When the magnet appeal to steel plate, fasten thru-axle so the female end is been pushed to connect male end on the motor.

45 N.m TORQUE
40 Kph MAX. SPEED

R17: 1.85 kg
R17 Plus: 2.03 kg
LIGHT WEIGHT

M12 BOOST THRU-AXLE

STEEL PLATE
MAGNET INSIDE

R17 Plus
R17

R17 Plus Thru-Axle and Connector
R17 PLUS REAR HUB MOTOR WHEEL DISASSEMBLY

Connector Type
Patented magnetic mechanism is adopted.

1ST Stage
- The thru-axle is rotated, and female end is detached with thru-axle because of magnetic appealing.
- Now female end detaches about 7.5mm from connecting point in the motor.

2nd Stage
- Keep rotating and pull out thru-axle, and now the connector is clamped by limit devices on the frame so can’t pull out together.
- Now thru-axle detaches from connector’s female end.

3rd Stage
- After thru-axle completely detaches from connector, pull out the axle and take the motor down.
DP33/RC33 FRAME EMBEDDED HMI

FEATURES
- 1.3" OLED screen (64*128 pixels)
- Dimension: L81 x W27 x H26 mm
- Communication: CANBUS
- Motor support level: 0~4
- Information: support level / speed / ODO / battery indicator / error code / walk..etc
- Bluetooth connection available
- Optional RC33 remote control panel
- Ingress level: IP65

DP33, the embedded one button HMI reveals essential information to boost cyclists concentrating on their cycling.
**BL26 IN-TUBE BATTERY**

**FEATURES**
- 36V, 14Ah, 504Wh
- Cells type 18650
- Available for upside or downside mounting
- 2 steps of release for users safety

**DIMENSION**
- 374 * 85 * 93mm
- EN 15194: 2017 COMPLIANCE

BL26 in-tube battery provides 504Wh capacity, and the variant mounting styles fit different frame designs.

**MOUNTING & RELEASE**

**UPSIDE MOUNTING**
- TURN THE KEY TO UNLOCK

**DOWNSIDE MOUNTING**
- PRESS THE RELEASE BUTTON
**BL27 IN-TUBE BATTERY**

**FEATURES**
- 36V, 6.8Ah, 245Wh
- < 2.0kg (controller included)
- Cells type 18650
- BMS and controller integrated

**DIMENSION**
- 467 * 47 * 41.5 mm (controller included)
- CE/UN38.3/ISO13849 COMPLIANCE

The lightweight BL27 battery equipped with the controller that can be fully integrated in the down tube.

**BB06T ISIS DRIVE TORQUE SENSOR**

**FEATURES**
- Torque detect sensitivity 2 N.m
- Cadence resolution up to 10°
- ISIS drive interface
- Customizable shaft length for frame
- Press Fit or Threaded type
- Patented axial clearance adjustment rings
- N.W.: 435g

An innovative BB06T sensor has bilateral torque and cadence detection function. Thanks to patented axial clearance adjustment rings, users are able to eliminate axial clearance and avoid preloading at the same time.
MOUNTAIN
TREKKING
GRAVEL/ROAD
CARGO/CITY

PRODUCT
FINDER
CITY

An e-city drive system is designed for urban cyclers that aims to craft a leisurely and comfortable riding experience in the daily commute.

<table>
<thead>
<tr>
<th>Line</th>
<th>Series</th>
<th>Display</th>
<th>BB Sensor</th>
<th>Battery</th>
<th>Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>R16 Series</td>
<td>DP31</td>
<td>BB05C/BB05T</td>
<td>BL26</td>
<td>R16</td>
</tr>
<tr>
<td></td>
<td>M17L Series</td>
<td>DP32</td>
<td>Built-in</td>
<td>BL26</td>
<td>M17L</td>
</tr>
</tbody>
</table>

CARGO

A robust e-cargo drive system is designed as a good substitute for large, heavy e-cargo systems. Cyclers can load parcels and transport them without worrying the terrain.

<table>
<thead>
<tr>
<th>Line</th>
<th>Series</th>
<th>Display</th>
<th>BB Sensor</th>
<th>Battery</th>
<th>Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo</td>
<td>M18 Series</td>
<td>DP32</td>
<td>Built-in</td>
<td>BL26</td>
<td>M18</td>
</tr>
</tbody>
</table>
ROAD & GRAVEL

An ultralight e-road drive system is meant for creating cyclists a convenient and powerful riding experience. With boost thru-axle design, each ride could become more efficient.

<table>
<thead>
<tr>
<th>Line</th>
<th>Series</th>
<th>Display</th>
<th>BB Sensor</th>
<th>Battery</th>
<th>Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road &amp; Gravel</td>
<td>R17 Series</td>
<td>DP33</td>
<td>BB06T</td>
<td>BL27</td>
<td>R17/R17 plus</td>
</tr>
<tr>
<td></td>
<td>R16 Series</td>
<td>DP33</td>
<td>BB05T</td>
<td>BL27</td>
<td>R16 R16L</td>
</tr>
</tbody>
</table>

TREKKING/ MOUNTAIN

A durable e-mountain drive system features powerful output while crossing challenging terrain. With responsive torque sensor technology, an instant pedal assist allows cyclists focusing on the road.

<table>
<thead>
<tr>
<th>Line</th>
<th>Series</th>
<th>Display</th>
<th>BB Sensor</th>
<th>Battery</th>
<th>Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trekking / Mountain</td>
<td>M17 Series</td>
<td>DP32</td>
<td>BB Sensor</td>
<td>Built-in</td>
<td>BL26 M17</td>
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## MOTOR SPECIFICATION

<table>
<thead>
<tr>
<th></th>
<th>M17</th>
<th>M17L (NEW)</th>
<th>M18 (NEW)</th>
<th>R17 (NEW)</th>
<th>R17 (PLUS)</th>
<th>R16 / R16L</th>
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</thead>
<tbody>
<tr>
<td>Position</td>
<td>Central</td>
<td>Central</td>
<td>Central</td>
<td>Rear</td>
<td>Rear</td>
<td>Rear</td>
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<tr>
<td>Voltage</td>
<td>36V</td>
<td>36V</td>
<td>36V</td>
<td>36V</td>
<td>36V</td>
<td>36V</td>
</tr>
<tr>
<td>Weight</td>
<td>3.20 Kg</td>
<td>2.75 Kg</td>
<td>3.3 Kg</td>
<td>1.85 Kg</td>
<td>2.03 Kg</td>
<td>2.00 kg (R16L: 1.7kg)</td>
</tr>
<tr>
<td>Max. torque</td>
<td>85 Nm</td>
<td>50 Nm</td>
<td>100 Nm</td>
<td>45/38/30 Nm</td>
<td>45/38/30 Nm</td>
<td>45/38 Nm</td>
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<tr>
<td>Nominal output</td>
<td>250W</td>
<td>250W</td>
<td>250W</td>
<td>250W</td>
<td>250W</td>
<td>250W</td>
</tr>
<tr>
<td>Noise Level</td>
<td>69 dB</td>
<td>69 dB</td>
<td>69 dB</td>
<td>65dB</td>
<td>65dB</td>
<td>65dB</td>
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<tr>
<td>Coaster Brake Compatible</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>Disc Brake</td>
<td>Disc Brake</td>
<td>Disc Brake</td>
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<tr>
<td>Ingress Protection</td>
<td>IPX5</td>
<td>IPX5</td>
<td>IPX5</td>
<td>IPX5</td>
<td>IPX5</td>
<td>IPX5</td>
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<tr>
<td>Diameter</td>
<td>119 mm</td>
<td>119 mm</td>
<td>119 mm</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>BB Axle</td>
<td>ISIS</td>
<td>ISIS</td>
<td>ISIS</td>
<td>Thru axle 12mm</td>
<td>Thru axle 12mm</td>
<td>Thru axle 12mm</td>
</tr>
<tr>
<td>Thru-Axle</td>
<td>148 mm</td>
<td>148 mm</td>
<td>142 mm</td>
<td>148 mm</td>
<td>148 mm</td>
<td>142 mm</td>
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<tr>
<td>O.L.D.</td>
<td>12 speed</td>
<td>12 speed</td>
<td>11 speed</td>
<td>12 speed</td>
<td>12 speed</td>
<td>11 speed</td>
</tr>
<tr>
<td>Cassette Max.</td>
<td>9 pins wire</td>
<td>plug in and out</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector Type</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
</tr>
<tr>
<td>Origin</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
</tr>
</tbody>
</table>

## BATTERY SPECIFICATION

<table>
<thead>
<tr>
<th></th>
<th>BL26</th>
<th>BL27</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>In-Tube Type</td>
<td>Fully In-Tube Type</td>
</tr>
<tr>
<td>Voltage</td>
<td>36V</td>
<td>36V</td>
</tr>
<tr>
<td>Capacity</td>
<td>14Ah</td>
<td>6.8Ah</td>
</tr>
<tr>
<td>Wh</td>
<td>504Wh</td>
<td>245Wh</td>
</tr>
<tr>
<td>Weight</td>
<td>2.80 Kg</td>
<td>&lt;2.0 Kg</td>
</tr>
<tr>
<td>Origin</td>
<td>TW</td>
<td>TW</td>
</tr>
</tbody>
</table>
### DISPLAY SPECIFICATION

<table>
<thead>
<tr>
<th>Position</th>
<th>DP31/RC31</th>
<th>DP32/RC31</th>
<th>DP33/RC33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen Type</td>
<td>2.0&quot; color IPS</td>
<td>2.8&quot; color IPS</td>
<td>1.3&quot; OLED</td>
</tr>
<tr>
<td>Support Modes</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>System</td>
<td>CAN BUS</td>
<td>CAN BUS</td>
<td>CAN BUS</td>
</tr>
<tr>
<td>Walking</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Light Sensor</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Bluetooth</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

### SENSOR SPECIFICATION

<table>
<thead>
<tr>
<th>Input Voltage (Vcc)</th>
<th>BB06T TORQUE &amp; CADENCE (Threaded / Press Fit)</th>
<th>BB05T/BB05L TORQUE &amp; CADENCE</th>
<th>BB05C CADENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.5~5.5 V</td>
<td>4.5~5.5 V</td>
<td>4.5~5.5 V</td>
</tr>
<tr>
<td>Torque Sensitivity</td>
<td>16 mV/N.m</td>
<td>16 mV/N.m</td>
<td>0.5~80 N.m</td>
</tr>
<tr>
<td>Torque Range</td>
<td>0.5~80 N.m</td>
<td>0.5~80 N.m</td>
<td>36 (Pulse/Cycle)</td>
</tr>
<tr>
<td>Cadence Signals</td>
<td>36 (Pulse/Cycle)</td>
<td>36 (Pulse/Cycle)</td>
<td>36 (Pulse/Cycle)</td>
</tr>
<tr>
<td>Function</td>
<td>Rotational direction</td>
<td>Rotational direction</td>
<td>Rotational direction</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IPX5</td>
<td>IPX5</td>
<td>IPX5</td>
</tr>
<tr>
<td>BB Width (Threaded)</td>
<td>M47xP1.0</td>
<td>68/73 mm</td>
<td>68 mm</td>
</tr>
<tr>
<td>BB Width (Press Fit)</td>
<td>86/92mm / ID41mm</td>
<td>86.5mm / ID41mm</td>
<td></td>
</tr>
<tr>
<td>Shaft Standard</td>
<td>ISIS</td>
<td>Square</td>
<td>Square</td>
</tr>
<tr>
<td>Length of Shaft</td>
<td>Customizable for frame standard</td>
<td>146 mm/151 mm</td>
<td>122 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>435g (T47) / 381g (PF86/92)</td>
<td>410g/ 425g</td>
<td>275g</td>
</tr>
<tr>
<td>Origin</td>
<td>TW</td>
<td>TW</td>
<td>TW</td>
</tr>
</tbody>
</table>
The LogiX Line marks the newest generation of TranzX products, raising e-mobility system to the highest threshold in diagnostics, power and performance. Superior motor performance is monitored steadily and automatically through a variety of checking mechanisms-supported by continuous system read-outs and immediate error detection. Based on leading CANbus technology, LogiX uses fewer cables, provides a higher data transmission speed than the standard I2C bus. E-bike service and assembly are easier, and parameter such as assistance ratio can simply be adjusted.

- LogiX diagnostic tool
- Instant response
- Accurate readings
- Automatic detection
- All-in-one diagnostic tool

- PC based tool
- Required only USB cable to access system
- Simple user interface for automatic error detection

SMART E-BIKE DIAGNOSTIC TOOL