

MIT Premium Smart e-MTB with 5G IoT Tracker Debuts for U.S. and European Markets

High-torque smart e-MTB platform debuts with a lightweight mid-drive motor, adaptive assist control, and an integrated 5G IoT tracker for fleet-ready mobility.

TAICHUNG, TAIWAN, TAIWAN,
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EINPresswire.com/ -- A next-generation smart e-mountain bike ([e-MTB](#)) platform engineered for the U.S. and European markets has been introduced, featuring a high-torque lightweight mid-drive motor, adaptive assist control, intelligent shift-aware behavior, and an integrated 5G IoT tracker designed for enterprise-scale fleet management. The platform is jointly developed by four Taiwan-based technology leaders: [IDEAL Bike Corporation](#), [REXON Industrial Corp.](#), ATrack Technology Inc., and ACER Mobile Power System Corp. (ACER MPS).



IDEAL, REXON, ATrack, and ACER MPS jointly unveil a next-generation smart e-MTB featuring a high-torque mid-drive motor, adaptive assist control, and integrated 5G IoT tracking.

The system combines mechanical engineering, powertrain design, intelligent battery management, and cloud-based telematics into a unified mobility platform. Built for outdoor recreation, rental fleets, tourist destinations, campus mobility networks, corporate fleets, and performance riders, the smart e-MTB introduces a new benchmark for connected electric mobility.

High-Torque Mid-Drive Motor Optimized for e-MTB Performance

At the core of the platform is a 90 Nm mid-drive motor engineered by REXON Industrial Corp. Known for its precision electromechanical systems, REXON designed the motor to deliver strong low-cadence torque ideal for steep climbing, trail riding, and challenging technical terrain

The motor's torque-to-weight ratio aligns with leading global e-MTB systems, offering responsive acceleration, stable output during slow-speed maneuvers, and improved rider confidence on mixed terrain. These characteristics also reduce drivetrain load, supporting long-term durability for rental fleets and commercial operators.

ACER Mobile Power System Corp. (ACER MPS) provides the platform's smart controller and battery management technology. Its Dual-Channel Hybrid Assist Algorithm integrates power-based assist logic with low-cadence torque compensation, delivering smoother transitions during starts, climbs, accelerations, and shift events.


This adaptive assist behavior improves ride predictability—critical for both experienced mountain riders and first-time rental users. By minimizing abrupt surges and power gaps, the system enhances safety and reduces rider fatigue, making it suitable for high-traffic outdoor resorts and guided tour operations.

The intelligent shift-aware system modulates assist levels in real time to reduce load on the drivetrain. This function helps stabilize the chainline, decrease component wear, and deliver a more natural riding feel on technical trails.

This is especially important for e-MTB and e-cargo applications, where riders frequently shift under load. By protecting mechanical components, operators benefit from reduced maintenance cycles and improved fleet uptime.

Integrated 5G IoT Tracker for Connected Mobility and Fleet Operations


E-MTB Field Test – Sun Moon Lake Bikeway Ride | Taichung, Taiwan



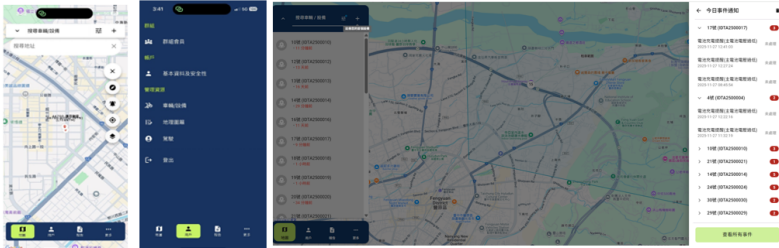
28.6 km
兩段未通(牽引纜道) 月芽灣、大竹湖

• Sleep Climbs
• Forest Trails
• Scenic Lake Route
• Technical Hills

A scenic E-MTB ride through Sun Moon Lake's hills, forests, and lakeside routes.



ATrack 5G IOT Tracker , and e Bike FMS System



ATrack's 5G IoT Tracker integrated with the e-Bike Fleet Management System, featuring real-time location tracking, alerts, and device monitoring.



The smart e-MTB platform shows how intelligent power systems and connected mobility can redefine rider experience and fleet efficiency across global markets.”

*Sampin Yu, Manager of
TSEBA*

The platform incorporates an embedded 5G/LTE IoT tracker developed by ATrack Technology Inc., a U.S. carrier-certified telematics provider. The tracker captures real-time GPS data, motion and torque metrics, battery status, event detection, and supports over-the-air configuration updates.

Through integration with ATrack’s Fleet Management System (FMS), operators gain:

Live GPS location and route history visualization

Predictive maintenance alerts, including thermal and battery-health indicators

Crash, tamper, and abnormal-event notifications

Multi-site fleet dashboards for rental, tourism, university, or municipal mobility programs

This connected approach supports higher operational efficiency, improves service safety, and lowers maintenance overhead.

Extensive Field Testing Validates Market Readiness

To validate rider experience and system durability, the smart e-MTB completed field tests totaling 338 ride sessions and 205 structured rider surveys. Test riders evaluated riding stability, climbing torque, suspension performance, battery endurance, and overall comfort.

Average satisfaction ratings exceeded 4.5 out of 5.0, reflecting strong acceptance among recreational cyclists, experienced e-MTB riders, and rental users. The testing included paved surfaces, varied gradient routes, mixed-terrain trails, and stop-and-go riding conditions similar to U.S. national park and resort destinations.

Insights gained from testing were applied to fine-tune assist sensitivity, thermal management, output smoothing, and IoT-based predictive maintenance functions.

Designed for U.S. and European Mobility Markets

The platform addresses growing demand for connected electric mobility solutions, especially in segments requiring reliable fleet operations and real-time visibility. Key application areas include:

Outdoor resorts and national park e-MTB rental fleets

Campus mobility and university transportation systems

Tourism operators and guided trail ride services

Corporate and municipal shared mobility networks

e-Cargo and last-mile logistics fleets

Commercial operators requiring telematics-enabled e-bike solutions

The combination of torque performance, adaptive assist control, connected IoT capability, and fleet-ready architecture positions the system for broad adoption in North America and Europe.

About IDEAL Bike Corporation (理想行)

IDEAL is a global OEM/ODM bicycle manufacturer specializing in mountain bike frames, system integration, and high-volume production for international brands. The company supports performance cycling engineering for e-MTB and commuter platforms worldwide.

About REXON Industrial Corp. (睿申)

REXON is an engineering and manufacturing company recognized for precision electromechanical systems, including high-efficiency mid-drive motors for electric mobility. Its lightweight, high-output motor technologies serve e-MTB, e-cargo, and commercial fleet applications.

About ATrack Technology Inc. (艾特拉克)

ATrack is a U.S. carrier-certified telematics provider offering GPS tracking devices, 5G/LTE IoT modules, and cloud-based fleet management platforms used across North America, Europe, and Asia. The company specializes in connected mobility and IoT-driven fleet visibility.

About ACER Mobile Power System Corp. (宏碁)

ACER MPS, a subsidiary of Acer Group, develops smart battery systems, BMS technologies, and adaptive assist controllers for electric mobility. Its integrated power solutions support high-performance e-MTB systems and fleet-scale mobility deployments.

Sampin Yu

Taiwan Smart EBike Association (TSEBA)

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