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Carbon Footprint Dashboard

Product: tdmotnsudz - Factory Gate - China

90.02 kg CO₂e

Total Net PCF per unit

System Boundary

Cradle-to-Gate

GHG Protocol Compliance

76.6% Scope 3 Coverage

(Target: 95% for 2026)

Primary Emission Hotspot

Use Phase

(63.5 kg CO₂e)

Avoided Emissions (EoL)

54.25 kg CO₂e

Lifecycle Stage Breakdown (Gross Emissions)

Gross Emissions

154.27
kg CO2e

■ Materials (34.3%) ■ Production (20.1%) ■ Transport (4.4%) ■ Use Phase (41.2%)

Material Carbon Impact (Upstream)

Steel
Component

33.0 kg CO2e

Circuit Board

15.0 kg CO2e

Plastic Casing

4.5 kg
CO2e

Packaging
Material

0.4
kg
CO2e

Total Material Emissions: 52.9 kg CO2e

Key Insights & Hotspots

- **Use Phase Dominates:** The product's Use Phase accounts for the largest portion of gross emissions (41.2%), primarily due to ongoing energy consumption over its 5-year lifespan.
- **Material Impact:** Material acquisition contributes significantly (34.3% of gross emissions), with Steel Components (33.0 kg CO₂e) and Circuit Boards (15.0 kg CO₂e) being the most carbon-intensive inputs.
- **Compliance Gap:** Current Scope 3 coverage stands at 76.6%, falling short of the 95% target mandated by the 2026 GHG Protocol requirements, indicating a need for more extensive data collection.

Recommendations for Emission Reduction

- ✓ **Optimize Use Phase Energy:** Implement design changes for lower power draw, integrate smart energy management features, and promote energy-efficient usage practices to drastically cut operational emissions.
- ✓ **Source Sustainable Materials:** Explore alternative, lower-carbon materials for high-impact components and engage suppliers for verified lower embodied carbon.
- ✓ **Boost Renewable Energy in Production:** Increase the percentage of renewable energy in manufacturing facilities beyond the current 50%, especially in China, through PPAs or on-site generation.
- ✓ **Enhance Circularity:** Leverage existing circular programs to maximize product lifespan, facilitate repair, refurbishment, and high-quality recycling, improving material recovery rates.
- ✓ **Refine Logistics:** Further optimize transport routes, prioritize lower-emission modes (e.g., rail over road), and consolidate shipments to improve load factors.
- ✓ **Expand Scope 3 Data:** Implement robust systems for collecting primary data across all upstream and downstream Scope 3 categories to meet compliance targets and identify further reduction opportunities.

