

html

carboncalcpcf.com

# Product Carbon Footprint Dashboard

hdjkudnrex (Smart Home Hub)

Total PCF: **45.000 kg CO2e**

TOTAL FOOTPRINT

**45.000 kg CO2e**

CARBON INTENSITY

**45.000 kg CO2e/unit**

PRIMARY EMISSION SCOPE

**Scope 3 (95.00%)**

TOP MATERIAL HOTSPOT

**Aluminum Heat Sink**

## Lifecycle Stage Breakdown

Use Phase	35.631 kg CO2e (79.18%)
Materials	6.695 kg CO2e (14.88%)
Production Energy (Scope 2)	2.250 kg CO2e (5.00%)
Downstream Transport	0.163 kg CO2e (0.36%)
End-of-Life	0.159 kg CO2e (0.35%)
Upstream Transport	0.102 kg CO2e (0.23%)

## Top Material Carbon Impacts

Aluminum Heat Sink	2.250 kg CO2e
Power Adapter	1.400 kg CO2e
Printed Circuit Board	1.000 kg CO2e
ABS Plastic Casing	0.900 kg CO2e

## Highlights

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- The **Use Phase accounts for 79.18%** of the total carbon footprint, making it the most significant hotspot.
- **Material Production contributes 14.88%** of emissions, with aluminum and electronics being key contributors.
- The report adheres to the **GHG Protocol including the 2026 LSR Update**, ensuring 95.00% Scope 3 coverage.

## How to Reduce the Footprint

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- ✓ **Enhance Energy Efficiency:** Optimize product design for lower energy consumption during its 5-year operational lifespan.
- ✓ **Promote Renewable Energy Adoption:** Encourage end-users to utilize renewable energy sources or explore carbon-neutral energy options for product usage.
- ✓ **Sustainable Material Sourcing:** Investigate and integrate lower-carbon and recycled alternatives for high-impact materials like aluminum and plastics.
- ✓ **Circular Economy Integration:** Further develop and promote take-back programs and increase recyclability beyond the current 60% for end-of-life products.