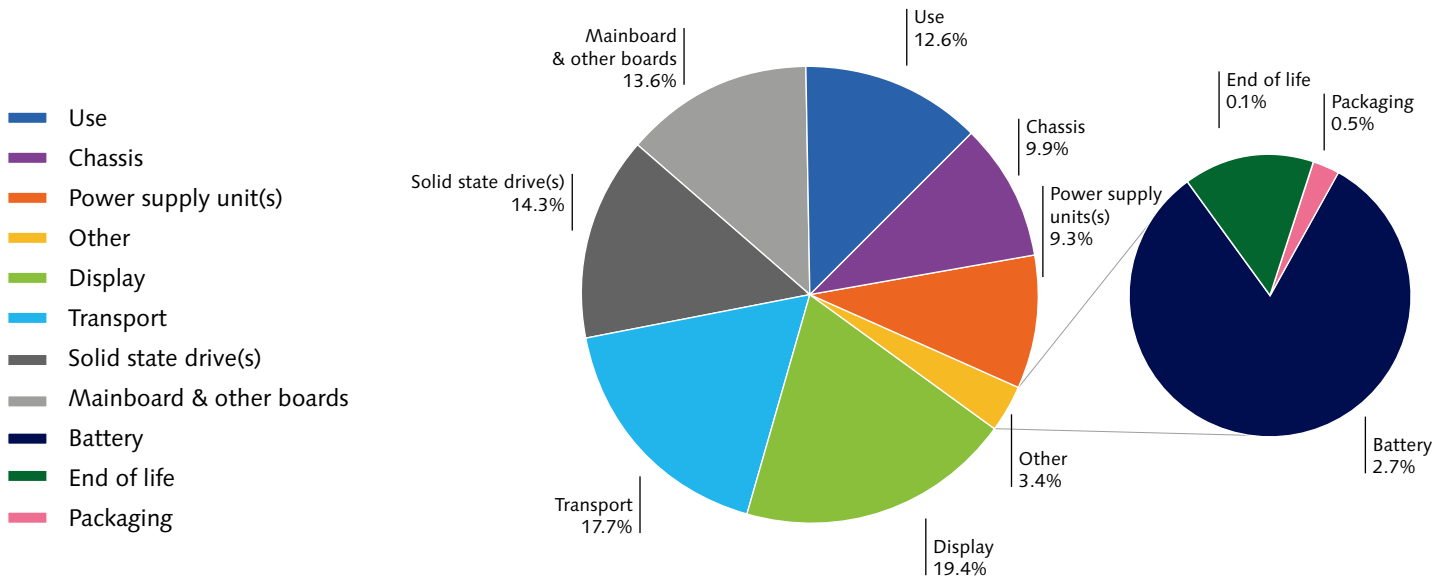


Product Carbon Footprint:
TOUGHBOOK 33

At Panasonic, we are committed to continually improving the environmental performance of our products and processes. By calculating a product's carbon footprint, and understanding the impacts that occur throughout its lifecycle, we can innovate smarter – reforming frontline processes across various sectors to reduce CO₂ emissions and make effective use of limited resources.



Panasonic uses PAIA (Product Attribute to Impact Algorithm) to calculate our product carbon footprints.

PAIA is a streamlined LCA tool developed by MIT's Materials System Laboratory which takes into consideration the specifications listed under 'Assumptions' on Page 2 to calculate the product's CO₂ equivalent emissions based on the footprint of a corresponding industry-average device.

This product's estimated carbon footprint:

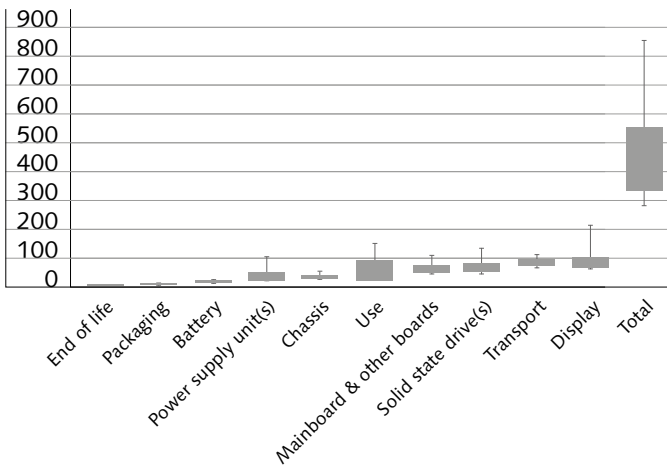
462 kgCO₂e
+/- 63.5 kgCO₂e

To provide our customers with greater transparency, this chart demonstrates the degree of uncertainty that exists within the PAIA model for product carbon footprinting.

Uncertainty can result from differences in data, assumptions, and methodology used.



GWP impact/product (kg CO₂ eq)



Product lifetime	Product size	Screen size	Assembly location	Energy demand (yearly TEC)
5 Years	313mm x 288.4mm	12	Taiwan	23.40



***Disclaimer**

This calculation was done using the Product Attribute to Impact Algorithm (PAIA) model, Version 1.3.1, copyright by the ICT Benchmarking collaboration.

Results shown here are subject to change as the tool is updated. And because uncertainty can be significant, results should not be compared with those of other products. They are intended to improve transparency and influence product design and life cycle management decisions.