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Product Carbon Footprint Report

ASUS V600 AiO (VM640GA)

Report produced: Sep. 2026

Product Introduction

5.76 kg
Product weight

4 years
Lifetime

23.8”
Screen Size

Worldwide
Use location

China
Final Manufacturing location



WHY WE DO

ASUS is committed to continuously improving the environmental performance of the products you purchase. Through product carbon footprint reports (PCF), we show the environmental impact of product lifecycles from design to disposal.

Product Features

HOW WE CONDUCT

Life cycle assessment (LCA) is commonly referred to as a "cradle-to-grave" analysis. Throughout the entire life cycle of a product, and the assessment includes the contributions material extraction, manufacturing, packaging and ship, use and end-of-life management.

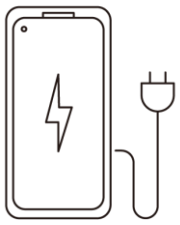
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WHAT WE PRESENT

This product's estimated carbon footprint:
We will demonstrate the total product carbon emission and also provide the approximate equivalencies to let user well understand the concept of carbon emission.

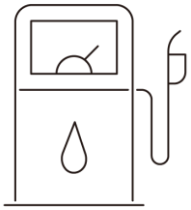
433 Kg CO_2e =



35,007

numbers of
smartphones charged

or

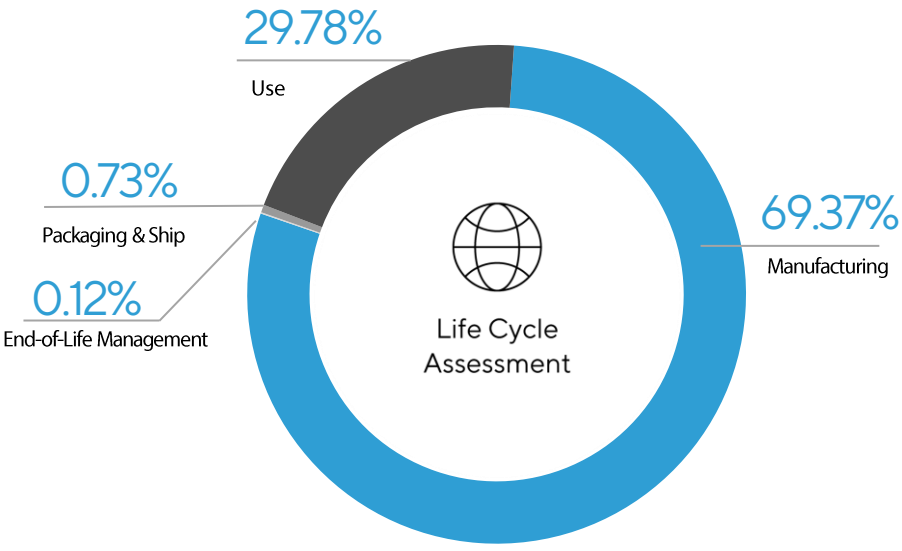


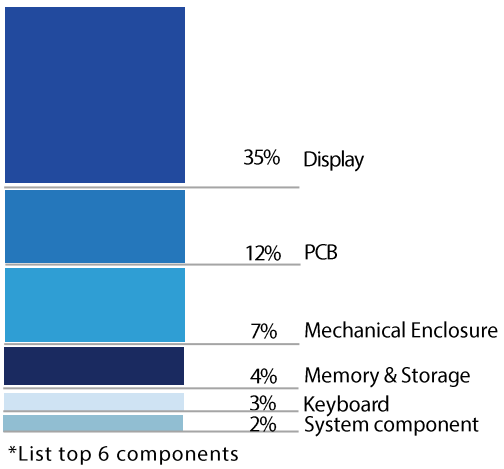
48.7

U.S. gallons of
gasoline consumed

The methodology of calculations are based on US EPA

The estimated impact across the product's life cycle and with the information of main factors from manufacturing phase.





*List top 6 components

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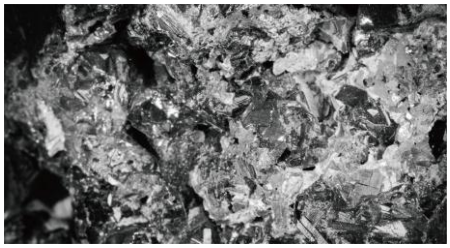
Phase 1 Manufacturing | 2 Packaging & Ship | 3 Use | 4 End-of-Life Management

Phase 1 2 3 4

Manufacturing

Raw Material Procurement

ASUS controls all materials used in the manufacture of products, including the purchase of metals. To ensure that metals meet legal mining and operations, ASUS requires suppliers that meet third party verification. The source of raw materials is in line with the supply chain of the international Responsible Mineral Initiative (RMI) due diligence and management.



Hazardous Substance Free

All ASUS products comply with the mandatory requirement from European Union's Electrical and Electronic Equipment Restriction of Hazardous substances (EU RoHS) and other national hazardous substances control laws, and all print circuirt board laminates also meet voluntary halogen-free requirement.

Recycle Material

ASUS continues to increase the use of recycled plastics & metals in our products. VM640GA is made with 3.4% post-consumer recycled plastic based on product weight*.

Human Right

ASUS protects labor rights and implements responsibility manufacturing. To commit the protection, ASUS joined to Responsible Business Alliance as the full member.

Responsible Business Alliance
Formerly the Electronic Industry Citizenship Coalition
Advancing Sustainability Globally

Supplier Energy Use

Final assembly site are transitioning to renewable energy progressively for ASUS production.

Phase 1 2 3 4

Packaging and Ship

ASUS have designed the packaging to minimize its weight and volume, which helps conserve natural resources and allows more devices to be transported in a single shipping container. VM640GA use 90% recycled content for packaging box.



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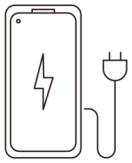
Phase 1 2 3 4

Use

Energy Saving

VM640GA meet the requirement of Energy Star and average energy consumption is lower than Energy star standard 31%.

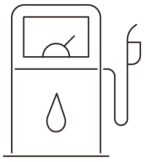
31 % =



4,672

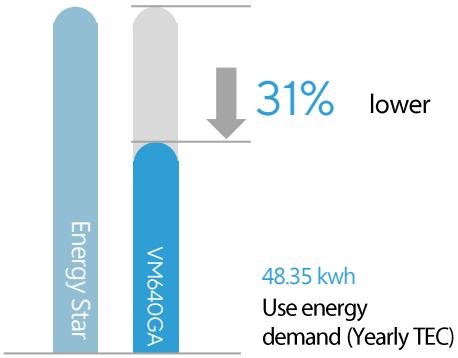
numbers of smartphones charged

or



6.5

U.S. gallons of gasoline consumed



The methodology of calculations are based on US EPA

Phase 1 2 3 4

End-of-Life Management



ASUS promises to recycle second-hand electronic products, and cooperate with qualified recyclers to properly recycle the waste products, in line with the EU Waste Electrical and Electronic Equipment Directive (EU WEEE) and other national waste management laws. The five major regions provide recycling services, including Europe, North America, Taiwan, China, and Australia.

To see more
ASUS' sustainability effort

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DEFINITIONS

Methodology

Estimated emissions are calculated in accordance with guidelines and requirements as specified by ISO 14040, ISO 14044 and follow ISO 14067 to conduct product carbon footprint for quantification. There is inherent uncertainty in modeling carbon emissions due primarily to data limitations.

Life Cycle

With reference to the ISO 14040 standard, the main stages of the environmental life cycle of the product are defined raw material procurement, product manufacturing, product transportation, product use, and product waste.

Calculation

The environmental footprint of this product is calculated using the life cycle assessment software SimaPro 10.3; and based on the Ecoinvent 3 database data, the carbon footprint of each phase is calculated using the IPCC 2021 GWP 100 method.

Manufacturing

It includes the refining, manufacturing, transportation of raw materials, as well as the manufacture, assembly and transportation of parts and packaging materials.

Packaging and Ship

The route is from the final assembly factory to the Shanghai Airport in China, and then distributed to the warehouses in various continents. Transportation methods include: land by truck and rail, and air by airplane. Considering the reduction of transportation carbon footprint, ASUS prioritizes the use of rail in land.

Use

The period of use is set to 4 years, and the carbon footprint of this phase is calculated based on the data of the ENERGY STAR standard test method.

End-of-Life Management

According to the recovery processing vendor model and path calculation of ASUS regional cooperation.

Uncertainty

There are uncertainties in this report caused of the following factors:
① Uncertainty in modeling carbon emissions due primarily to data limitations. For the top component contributors to Asus's carbon emissions, Asus addresses this uncertainty by developing detailed process-based environmental models with Asus-specific parameters.
For the remaining elements of Asus's carbon footprint, rely on industry average data and assumptions. Calculation includes emissions for the following life cycle phases contributing to Global Warming Potential (GWP 100 years) in CO2 equivalency factors (CO2e).

② Impact calculation of production phase including the refining, manufacturing, transportation of raw materials, as well as the manufacture, assembly and transportation of parts and packaging materials are based on the database of SimaPro software, not primary data.

③ Impact calculation of use phase is based on Energy Star test result and is assumed

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Note

* The value of post-consumer recycled content % is based on the EPEAT (Electronic Product Environmental Assessment Tool) criteria.

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