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# VERIFICATION OPINION

## The CFP Study Report of Power Adapter (including package) EA/ EM1068 Series

accomplished on 12-03-2024, which was developed by

### EDAC POWER ELECTRONICS CO., LTD.

11 F.-2, No. 150, Jian 1st Rd., Zhonghe Dist., New Taipei City  
235603, Taiwan, R.O.C.

**was verified in accordance with ISO 14064-3:2019 and  
with regard to compliance with the requirements of  
ISO 14067:2018.**

The Lifecycle Inventory and respective Product Carbon Footprint were calculated at the lifecycle stage of acquisition of raw material and production ("cradle to gate"). Emissions resulting from transportation, the use of the product and the end-of-life treatment were excluded.

<b>Declared Unit</b>	per piece of the Power Adapter (including package)-EA/ EM1068 Series
<b>Total GHG Emissions per Declared Unit</b>	6.5 kg CO <sub>2e</sub>
<b>Covered Period</b>	2022-01-01 to 2022-12-31
<b>Level of Assurance</b>	Reasonable
<b>Level of Materiality</b>	5% for the total sum
<b>Verification Report No.</b>	61.027.23.029.01

This verification opinion is only valid for the mentioned scope of application and in combination with the objectives, explanations and criteria for evaluation specified in the attached verification report.

Opinion No. TÜV 23 12 5010969444. 01

Taiwan, 2024-04-23

TÜV SÜD Asia Ltd., Taiwan Branch  
TÜV SÜD Group



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## Explanations to the verification opinion

### **Abstract of the verification process**

EDAC POWER ELECTRONICS CO., LTD. (hereinafter referred to as EDAC) has voluntarily entrusted TÜV SÜD Asia Ltd. Taiwan Branch (hereinafter referred to as TÜV SÜD) to carry out an independent (third party) verification of greenhouse gas declaration in form of a CFP Study Report of Power Adapter (including package) -EA/ EM 1068 Series developed by EDAC, which was revised and final released on March 12<sup>th</sup>, 2024.

The assessment is based on the intended area of application, the goals and criteria mutually agreed by both parties.

Lead Verifier Jo Fang and Verifier Chun Lian from TÜV SÜD carried out a document review at the client's premises and audits of responsible and collaborating staff at 11 F.-2, No. 150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235603, Taiwan, R.O.C., Taiwan in the period from Dec 21<sup>th</sup> to March 12<sup>th</sup>, 2024.

### **Roles and responsibilities**

The determination and reporting of GHG emissions are the sole responsibility of our client. Our role and responsibility as a third party was to independently verify the adequacy of the GHG emissions reported by our client, as well as the underlying systems and processes for data collection, analysis and control, in accordance with the requirements of ISO 14064-3:2019.

### **Standards for data processing**

ISO 14067:2018 ("Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification"), ISO 14044:2006 ("Environmental management – Life cycle assessment – Requirements and guidelines") and ISO 14040:2006 ("Environmental management – Life cycle assessment – Principles and framework")

### **Scope of application / System boundaries**

The GHG declaration includes the CFP of one product:

Power Adapter (including package)- EA/ EM 1068 Series



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The declared unit is defined as: per Piece of the Power Adapter (including package).

The Lifecycle Inventory Analysis (LCI) was quantified with the models that consist of activity data times an emission factor in which obtains emission factors from databases such as Simapro – v9.3.0.3, Taiwan EPA Carbon Footprint Information Platform, and CHINA POPULATION RESOURCES AND ENVIRONMENT. The considered production system and its boundaries are defined “cradle-to-gate”, the LCI covers the following stages: acquisition of raw material, and production. The GHG declaration covers the foreground processes at No. 59, Chang Sheng Road, Sheng Pu, Suzhou Industrial Park, Suzhou, Jiangsu, China., EDAC POWER ELECTRONICS CO., LTD. (Suzhou Factory), and the background processes outside the production site.

Downstream processes, which would include the transportation, use of products and end-of-life treatment of products, are not included in the GHG declaration.

stage	acquisition of raw material	production	transportation / delivery	use	end-of-life treatment
kg CO <sub>2e</sub> / Declared Unit	6.09	0.41	n.a.	n.a.	n.a.

Main GHG sources are “diode” as the acquisition of raw material emission.

No direct GHG removals or storages were present at the time of the verification.

The temporal representativeness is assumed to be 3 years.

**Relevant emissions in the balance**

The greenhouse gas inventory contains the specified greenhouse gases with information as CO<sub>2</sub> equivalents.

**Objectives of the verification**

Our verification was performed in accordance with ISO 14064-3:2019 "Specification with guidance for verification and validation of GHG statements" to critically review the data presented in the above named GHG statement and to identify any remaining inconsistencies.



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**Criteria**

The data review was conducted according to the following criteria:

Relevance, completeness, accuracy, coherence, transparency of information and consistency.

**Agreed level of assurance**

reasonable

*Annotation:*

*At a reasonable - but not absolute - level of assurance, we verify that the GHG statement is substantially correct. This includes a review of the processes, data, and evidence on their correctness and accuracy with an appropriately adequate sample size.*

**Materiality threshold**

5 % for the total sum

**Methods of verification**

- Document review and reconciliation with documentation requirements
- Strategic analysis and risk assessment based on the submitted GHG declaration
- Interviews of personnel of EDAC, within the scope of audits
- Random sample checks of supporting evidence and database values
- Review of data and information systems and methodology for collection aggregation, analysis and verification of information used to determine GHG emissions
- Sample review of data and supporting documents for determination of GHG emissions
- Plausibility checks



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## Conclusions

With our review of the greenhouse gases declaration of CFP Study Report of Power Adapter (including package)-EA/ EM 1068 Series prepared by EDAC POWER ELECTRONICS CO., LTD., we find that, in all material respects, the greenhouse gas emissions are presented fairly and factually in accordance with the specifications and standards used as a basis here.

Based on the results of our verification process, we confirm that the GHG statement is without material discrepancy, and the verification activities provide the level of assurance agreed to at the beginning of the verification process.

Our verification opinion is only to be interpreted together with the partial CFP Study Report of EDAC POWER ELECTRONICS CO., LTD.. released by EDAC POWER ELECTRONICS CO., LTD..

This opinion is issued in accordance with the agreement reached with the client and within the framework of our validation and verification regulations.

Note: This opinion is issued, on behalf of the client, by TÜV SÜD under its general conditions for Greenhouse Gas Verification Service Description. The findings recorded hereon are based upon an audit performed by TÜV SÜD. A full copy of this opinion, the findings and the supporting GHG statement may be consulted at the organization. To check the validity of this opinion please call (+886-2-2898-6818). This Opinion does not relieve client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on TÜV SÜD and TÜV SÜD shall have no responsibility vis-à-vis parties other than its client

## Appendix

The carbon footprint of this product is quantified by series. The series models are as follows:

EA/ EM1068XYWWWWWW ('X' can be 1 ,2 , 3 or 6 to denote different inlet type; 'Y' can be A, B, C, D, E, F, G , g ,H ,J ,K ,W ,M ,N ,P ,Q ,R ,Y ,S , U ,V L or T to denote different output voltage range ; 'W' can be 0-9,a-z,A-Z,'-' or blank to denote different client for marketing purpose.