

# Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2022 of

**Advantech Co., Ltd.**

No. 1, Alley 20, Lane 26, Rueiguang Rd., Neihu District,  
Taipei City 114, Taiwan



has been verified in accordance with ISO 14064-3:2006 as  
meeting the requirements of

## ISO 14064-1:2018

Direct emissions

**643.8407** tonnes of CO<sub>2</sub>e

Indirect emissions

**1,108,425.8666** tonnes of CO<sub>2</sub>e

Direct emissions and indirect emissions

**1,109,069.707** tonnes of CO<sub>2</sub>e

Authorized by

Stephen Pao

Knowledge Deputy General Manager

Date: 08 June 2023

Version 1

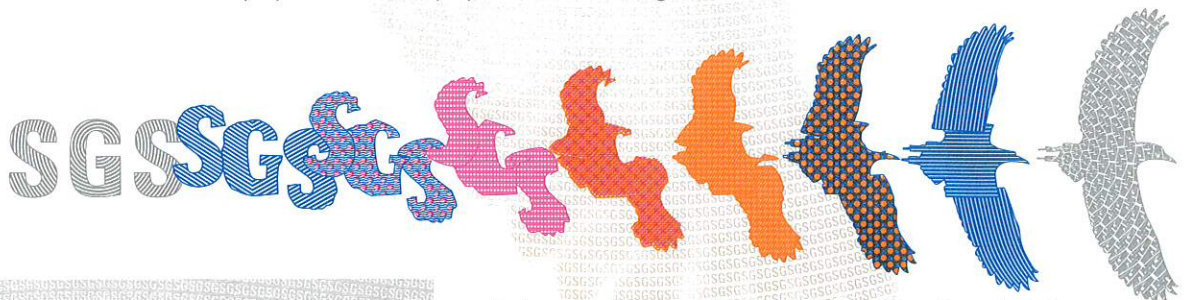
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SGS Taiwan Ltd.

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New Taipei City 24803, Taiwan

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Statement TW23/00314GG, continued

The emission of each category is described as below:

Unit: tonnes of CO<sub>2</sub>e

Reporting Boundaries			GHG Emissions	
Inventory categories	Description	Sites		
Direct emissions	This direct GHG emissions are the sum of owned or controlled by the organization within the organization.	Rueiguang Building(HQ),	114.2103	
		Sunny Building	116.4047	
		Donghu Manufacture Center	0.1240	
		Linkou Campus	413.1017	
Indirect emissions	Imported energy	GHG emissions from imported electricity.	Rueiguang Building(HQ)	857.5108
			Sunny Building	1,381.0218
			Donghu Manufacture Center	820.1822
			Linkou Campus	6,813.4740
	Transportation	GHG emissions from business travel by Taiwan High Speed Rail, plane, and staff shuttle bus. GHG emissions from material and product shipping in Taiwan.	Rueiguang Building(HQ), Sunny Building, Donghu Manufacture Center and Linkou Campus	570.7756
	Products used by an organization	GHG emissions from the production of electricity and goods, capital goods, upstream leased assets and incineration and transportation of business waste	Rueiguang Building(HQ), Sunny Building, Donghu Manufacture Center and Linkou Campus	199,133.2343
	Associated with the use of products from the organization	GHG emissions from the use of sold products by energy, end of life treatment of sold products by incineration and investments	Rueiguang Building(HQ), Sunny Building, Donghu Manufacture Center and Linkou Campus	898,849.6679
	Other sources	NA	--	--
	Direct emissions and indirect emissions			1,109,069.707



SGS has been contracted by Advantech Co., Ltd. (hereinafter referred to as “Advantech”), No. 1, Alley 20, Lane 26, Rueiguang Rd., Neihu District, Taipei City 114, Taiwan for the verification of direct and indirect Greenhouse Gas emissions in accordance with

**ISO 14064-3:2006**

as provided by Advantech hereinafter referred to as (“Advantech”), No. 1, Alley 20, Lane 26, Rueiguang Rd., Neihu District, Taipei City 114, Taiwan, in the GHG Assertion in the form of GHG report covering GHG emissions of the period 01 January 2022 to 31 December 2022.

**Roles and responsibilities**

The management of Advantech is responsible for the organization’s GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS’s responsibility to express an independent GHG verification opinion on the GHG emissions as provided in the GHG Assertion for the period 01 January 2022 to 31 December 2022.

SGS conducted a third-party verification of the provided GHG assertion against the principles of ISO 14064-1:2018, ISO 14064-3:2006 in the period 04 March 2023 to 22 March 2023. The verification was based on the verification scope, objectives and criteria as agreed between Advantech and SGS on 28 September 2022.

**Level of Assurance**

The level of assurance for category 1 and category 2 agreed is that of reasonable assurance. Category 3 till category 6 agreed is that of limited assurance.

**Scope**

Advantech has commissioned an independent verification by SGS Taiwan of reported GHG emissions of Advantech arising from Design and manufacture of Industrial Automation Series Product (Signal Process Module, Interface Card), Industrial PC Series Product (Industrial Workstation), Embedded PC Series, Wire/Wireless Communication Product, Industrial Panel PC Series Product, Video & Audio Product, Instrument product and Medical: Computing Platform Product activities, to establish conformance with ISO 14064:2018 principles within the scope of the verification as outlined below.

Statement TW23/00314GG, continued

This engagement covers verification of emission from anthropogenic sources of greenhouse gases included within the organization's boundary and is based on ISO 14064-3:2006.

- Title or description activities: GHG verification for Advantech in year 2022
- Location/boundary of the activities:
  - Advantech:
    - ◆ Rueiguang Building(HQ): No.1, Alley 20, Lane 26, Rueiguang Rd., Neihu District, Taipei City 114, Taiwan
    - ◆ Sunny Building: No.33, Lane 365, Yang Guang Street, Neihu District, Taipei City 114, Taiwan
    - ◆ Donghu Manufacture Center: B1, 5~7F, No. 1, Lane 169, Kang-Ning St., Xizhi District, New Taipei City 221, Taiwan
    - ◆ Linkou Campus: No. 27/No. 27-3, Wende Rd., Kueishan Dsitrict, Taoyuan City 333, Taiwan
- Physical infrastructure, activities, technologies and processes of the organization: Design and manufacture of Industrial Automation Series Product (Signal Process Module, Interface Card), Industrial PC Series Product (Industrial Workstation), Embedded PC Series, Wire/Wireless Communication Product, Industrial Panel PC Series Product, Video & Audio Product, Instrument product and Medical: Computing Platform Product
- GHG sources, sinks and/or reservoirs included: Sources as presented in the inventory spreadsheet provided by Advantech.
- Types of GHGs included: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>
- The IPCC 2013 AR5 GWP values are applied in this inventory.
- Emission factor:
  - Direct emissions: Greenhouse Gas Emission Factor Table (6.0.4), EPA.
  - Indirect emissions:
    - Electricity emission factor is 0.509 kgCO<sub>2</sub>e/kwh (Announced by Bureau of Energy, Ministry of Economic Affairs in 2022).
    - The secondary database has Carbon Footprint Information Platform, SimaPro - Ecoinvent 3.8 (Method - IPCC 2021 GWP 100) · UK and England's carbon footprint to 2019 · EA Emissions Factors 2022.
- Directed actions: NA
- GHG information for the following period was verified: 01 January 2022 to 31 December 2022



Statement TW23/00314GG, continued

- The version of inventory sheet: 2023.03.22 A1
- The version of GHG assertion: 2023.03.22 A1
- Intended user of the verification statement: Private

**Objective**

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the GHG emissions are as declared by the organization’s GHG assertion
- The data reported are accurate, complete, consistent, transparent and free of material error or omission.

**Criteria**

Criteria against which the verification assessment is undertaken are the principles of ISO 14064-1:2018.

**Materiality**

The materiality required of the verification was considered by SGS to 5%, based on the needs of the intended user of the GHG Assertion.

**Conclusion**

Advantech provided the GHG assertion based on the requirements of ISO14064-1: 2018. The GHG information for the period 01 January 2022 to 31 December 2022 disclosing emissions of 1,109,069.707 metric tonnes of CO<sub>2</sub> equivalent and 0.0000 metric tonnes of direct CO<sub>2</sub> emissions from the combustion of biomass are verified by SGS to a reasonable level of assurance, consistent with the agreed verification scope, objectives and criteria.

The emission of each category is described as below:

Unit: tonnes of CO<sub>2</sub>e

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Statement TW23/00314GG, continued

Reporting Boundaries			GHG Emissions	
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Other sources	NA	--	--	
Direct emissions and indirect emissions			1,109,069.707	

SGS’s approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions information and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the organization’s reported GHG emissions.

We planned and performed our work to obtain the information, explanations, and evidence that we considered necessary to provide a reasonable level of assurance that the GHG emissions of category 1 and category 2, and limited level of assurance of category 3 till category 6 for the period 01 January 2022 to 31 December 2022 are fairly stated.



We conducted our verification with regard to the GHG assertion of Advantech which included assessment of GHG information system, monitoring and reporting plan/protocol. This assessment included the collection of evidence supporting the reported data, and checking whether the provisions of the protocol reference, were consistently and appropriately applied.

In SGS's opinion the presented GHG assertion

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with ISO14064-1:2018 on GHG quantification, monitoring and reporting.

### **Confidentiality**

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

### **Avoidance of Conflict of Interest**

The reports and attachments are completely complied with the standards and procedures that related authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

This statement shall be interpreted with the GHG assertion of Advantech as a whole.

**Verifier Group**

Above statements coincide with auditing process with fairness and impartiality and aim at the emission of year 2022 of clients.

Lead Verifier:

*Hans Lin*

Verifier:

*William Li*

*Royal Lo*

Verifier:

*Mike Huang*

*Eddie Liu*

Verifier:

*Dr. W. Lu*

*Chris Hsieh*

Note: This Statement is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Greenhouse Gas Verification Services available at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement, the findings and the supporting GHG Assertion may be consulted at Advantech Co., Ltd., No. 1, Alley 20, Lane 26, Rueiguang Rd., Neihu District, Taipei City 114, Taiwan, This Statement 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 SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.