



Statement TW22/00030GG

# Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2021 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

**629.9276 tonnes of CO<sub>2</sub>e**

Indirect emissions

**11,835.9411 tonnes of CO<sub>2</sub>e**

Direct emissions and indirect emissions

**12,465.869 tonnes of CO<sub>2</sub>e**

Authorized by

David Huang

Senior Director

Date: 23 February 2022

Version 1

TGP56A-15-6 2103

SGS Taiwan Ltd.

No. 136-1, Wu Kung Road, New Taipei Industrial Park, Wu Ku District,  
New Taipei City 24803, Taiwan

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This Statement is not valid without the full verification scope, objectives, criteria and findings  
available on the Statement.

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The emission of each category is described as below:

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

Reporting Boundaries			GHG Emissions
Inventory categories	Description		
Direct emissions	This direct GHG emissions are the sum of owned or controlled by the organization within the organization.		629.9276
Indirect emissions	Imported energy	GHG emissions from imported electricity.	9,654.0514
	Transportation	<ol style="list-style-type: none"> <li>1. GHG emissions from business travel by Taiwan High Speed Rail.</li> <li>2. GHG emissions from business travel by plane.</li> <li>3. GHG emissions from commute by staff shuttle bus.</li> <li>4. GHG emissions from product shipping.</li> </ol>	405.0088
	Products used by an organization	<ol style="list-style-type: none"> <li>1. GHG emissions from the production of electricity purchased.</li> <li>2. GHG emissions from Incineration of business waste.</li> <li>3. GHG emissions from landfill of business waste.</li> <li>4. GHG emissions from business waste transportation.</li> </ol>	1,776.8809
	Associated with the use of products from the organization	NA	0.000
	Other sources	NA	0.000
Direct emissions and indirect emissions			12,465.869

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 2021 to 31 December 2021.

## 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 2021 to 31 December 2021.

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 27 January 2022 to 18 February 2022. The verification was based on the verification scope, objectives and criteria as agreed between Advantech and SGS on 13 October 2021.

## Level of Assurance

The level of assurance for category 1 and category 2 agreed is that of reasonable 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 TW22/00030GG, 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 2021
- Location/boundary of the activities:
  - Headquarters: 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 District, 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 0.502 kgCO<sub>2</sub>e/kwh (Announced by Bureau of Energy, Ministry of Economic Affairs in 2021).
    - The secondary database has Carbon Footprint Information Platform
- Directed actions: NA
- GHG information for the following period was verified: 01 January 2021 to 31 December 2021
- The version of inventory sheet: 20220218 A1
- The version of GHG assertion: 20220218 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 ISO 14064-1: 2018. The GHG information for the period 01 January 2021 to 31 December 2021 disclosing emissions of 12,465.869 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

Reporting Boundaries		GHG Emissions
Inventory categories	Description	
Direct emissions	This direct GHG emissions are the sum of owned or controlled by the organization within the organization.	629.9276
Indirect emissions	Imported energy	9,654.0514
	Transportation <ol style="list-style-type: none"> <li>1. GHG emissions from business travel by Taiwan High Speed Rail.</li> <li>2. GHG emissions from business travel by plane.</li> <li>3. GHG emissions from commute by staff shuttle bus.</li> <li>4. GHG emissions from product shipping.</li> </ol>	405.0088

Statement TW22/00030GG, continued

	Products used by an organization	1. GHG emissions from the production of electricity purchased. 2. GHG emissions from Incineration of business waste. 3. GHG emissions from landfill of business waste. 4. GHG emissions from business waste transportation.	1,776.8809
	Associated with the use of products from the organization	NA	0.000
	Other sources	NA	0.000
Direct emissions and indirect emissions			12,465.869

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 for the period 01 January 2021 to 31 December 2021 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 2021 of clients.

Lead Verifier:

Alicia Su

Verifier:

Mike Huang

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.

# 温室气体核查陈述

## VERIFICATION STATEMENT OF GREENHOUSE GAS EMISSION

No. INV-2021-JSJ-0005

本核查陈述针对:

This is to verify that:

**研华科技（中国）有限公司**

Advantech Technology (China) Co., Ltd.

地址: 江苏省昆山市玉山镇汉浦路 600 号, 887 号

Add: No. 600&887, Hanpu Road, Yushan Town, Kunshan City, Jiangsu Province,  
P.R.China

中国质量认证中心根据相关核查程序发布本核查陈述。

CQC issues a verification statement according to related verification procedures.

中国质量认证中心认为:

CQC here confirms that:

- ◆ **2022 年 1 月 21 日**发布的研华科技（中国）有限公司温室气体排放报告（版本: **A01**）表明研华科技（中国）有限公司在 **2021 年 1 月 1 日至 2021 年 12 月 31 日**之间温室气体排放量为 **21,905 吨 CO<sub>2</sub> 当量**（含废弃物运输和员工航空差旅），温室气体清除量为 **0 吨 CO<sub>2</sub> 当量**。

It's asserted in Advantech Technology (China) Co., Ltd. Greenhouse Gas Emission Report (Version: **A01**) published on **Jan. 21<sup>st</sup>, 2022** that Advantech Technology (China) Co., Ltd. greenhouse gas emission was **21,905 tonnes CO<sub>2</sub> Equivalent** (including the indirect greenhouse gas emission of waste transportation and air business travel) and Greenhouse Gas Removal was **0 tonnes CO<sub>2</sub> Equivalent** from **Jan. 1<sup>st</sup>, 2021** to **Dec. 31<sup>st</sup>, 2021**.

- ◆ 研华科技（中国）有限公司温室气体排放和清除的量化、监测和报告遵从 **ISO 14064-1:2018** 的相关要求。

The quantification, monitoring and reporting of Advantech Technology (China) Co., Ltd. Greenhouse Gas emissions and removals comply with the requirement of **ISO 14064-1:2018**.

- ◆ 该声明不存在实质性偏差，达到了预先商定的合理保证等级。

The assertion has no material errors and reaches the reasonable level of assurance which was prior negotiated.

签发  
SIGNATURE 谢肇煦



**中国质量认证中心**  
CHINA QUALITY CERTIFICATION CENTRE





# 温室气体核查陈述

## VERIFICATION STATEMENT OF GREENHOUSE GAS EMISSION

受研华科技（中国）有限公司的委托，中国质量认证中心(CQC)在 2022 年 1 月 10 日到 2022 年 2 月 11 日期间根据 ISO14064-1: 2018 和 ISO14064-3: 2019 对研华科技（中国）有限公司温室气体排放报告进行了独立的第三方核查。研华科技（中国）有限公司是一家主要生产商用电子计算机及周边设备产品的企业，位于江苏省昆山市玉山镇汉浦路 600 号、887 号。本次核查的温室气体报告覆盖时间段为 2021 年 1 月 1 日至 2021 年 12 月 31 日，该报告中的温室气体声明是基于适用的技术文献和研华科技（中国）有限公司的历史活动数据所做出的。研华科技（中国）有限公司负责本覆盖时间段内的温室气体信息系统，包括资料的记录和报告程序的运行。

本次核查服务的范围、目的、准则和保证等级是建立在研华科技（中国）有限公司和中国质量认证中心达成共识的基础之上：

### 核查范围

中国质量认证中心对研华科技（中国）有限公司的温室气体报告以及温室气体信息、监测、量化、相关程序进行核查，包括组织对于参考文件中信息的合理使用。

组织边界	研华科技（中国）有限公司 (江苏省昆山市玉山镇汉浦路 600 号、887 号)	
报告边界	研华科技（中国）有限公司在商用电子计算机及周边设备产品的生产及相关管理过程中产生的直接温室气体排放、能源输入引起的间接温室气体排放、废弃物运输引起的间接温室气体排放和员工航空差旅引起的间接排放	
温室气体源、汇和库	仅有温室气体源，参见 2022 年 1 月 21 日发布的研华科技（中国）有限公司温室气体排放报告书（版本：A01）	
量化的温室气体种类和排放量	二氧化碳(CO <sub>2</sub> ): 21,019 吨 CO <sub>2</sub> 当量 甲烷(CH <sub>4</sub> ): 26 吨 CO <sub>2</sub> 当量 氧化亚氮(N <sub>2</sub> O): 5 吨 CO <sub>2</sub> 当量 氢氟碳化物(HFCs): 854 吨 CO <sub>2</sub> 当量	直接温室气体排放: 2,741 吨 CO <sub>2</sub> 当量 能源输入引起的间接温室气体排放: 19,036 吨 CO <sub>2</sub> 当量 废弃物运输引起的间接温室气体排放: 120 吨 CO <sub>2</sub> 当量 员工航空差旅引起的间接排放: 7 吨 CO <sub>2</sub> 当量
覆盖时间段	2021 年 1 月 1 日至 2021 年 12 月 31 日	
基准年信息	本次为研华科技（中国）有限公司第 8 次进行温室气体量化和报告的年份，因组织边界发生变更，重新设定 2021 年 1 月 1 日至 2021 年 12 月 31 日为研华科技（中国）有限公司进行温室气体量化和报告的基准年。	
证书发布时间	2022 年 2 月 11 日	



中国质量认证中心  
CHINA QUALITY CERTIFICATION CENTRE



# 温室气体核查陈述

## VERIFICATION STATEMENT OF GREENHOUSE GAS EMISSION

### 核查目的

本次核查工作旨在通过客观的证据，对相关信息提供独立的评价，包括：

- 温室气体报告中的信息是否符合相关性、完整性、一致性、准确性、透明性的原则；
- 所报告的数据结果是否存在实质性的错误和遗漏；
- 是否满足预定的保证等级。

### 核查准则

本次核查工作的准则为 ISO14064-1: 2018 和 ISO14064-3: 2019。

### 保证等级

本次核查的保证等级经双方事先确认为合理保证等级。

### 核查说明

中国质量认证中心的核查陈述是基于自身对于相关温室气体信息风险的理解和所采取的合理风险控制措施而得出的。

为获取我们认为必需的信息和证据，以保证研华科技（中国）有限公司 2021 年 1 月 1 日至 2021 年 12 月 31 日的温室气体报告达到合理保证等级，中国质量认证中心制定了核查计划，并履行了该计划。中国质量认证中心采纳的核查证据包括对组织报告的温室气体排放量和相关信息在抽样的基础之上得到的发现。

本核查陈述应当和研华科技（中国）有限公司温室气体报告同时提供给目标用户。



中国质量认证中心  
CHINA QUALITY CERTIFICATION CENTRE

