聲明書編號 TW22/00064GG

溫室氣體查驗聲明書

2021 年溫室氣體排放資訊

技嘉科技股份有限公司

新北市新店區寶強路 6 號

經本公司依據 ISO 14064-3:2006 完成查驗並符合下列標準要求

ISO 14064-1:2018

直接溫室氣體排放量

1,063.5185 公噸二氧化碳當量

間接溫室氣體排放量

5,796,773.1525 公噸二氧化碳當量

直接與間接溫室氣體排放量

5,797,836.671 公噸二氧化碳當量

簽署人

黃世忠

資深副總裁

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版次:1

TGP56A-15-6 2103
台灣檢驗科技股份有限公司
新北市五股區(新北產業園區)五工路 136 之 1 號
t (02) 22993279 f (02)22999453 www.sgs.com

本查驗聲明書不可單頁使用，須與查驗範圍、目標、準則及結論頁面共同使用始具效力

【全廠/集團各類別溫室氣體排放量】 單位：公噸二氧化碳當量

報告邊界			溫室氣體排放量
類別		內容說明	
直接溫室氣體排放		彙整組織邊界內由組織擁有或控制的溫室氣體。	1,063.5185
間接溫室氣體排放	輸入能源溫室氣體排放	外購電力、蒸汽	28,874.4279
	運輸溫室氣體排放	商業旅行、員工通勤	1,225.7787
	組織使用產品溫室氣體排放	購入料件、營運廢棄物	1,516,601.0931
	使用來自於組織產品溫室氣體排放	已售產品使用階段、已售產品終端處置	4,250,071.8528
	其他來源溫室氣體排放		0.0000
直接與間接溫室氣體總排放量			5,797,836.671

【各廠區各類別溫室氣體排放量】 單位：公噸二氧化碳當量

廠區	直接溫室氣體排放量	間接溫室氣體排放量	溫室氣體排放量總和
總公司	275.2284	5,729,747.7097	5,730,022.9381
矽谷園區	24.6908	311.7822	336.4730
平鎮廠	80.4301	7,327.4896	7,407.9197
東莞廠	360.0229	46,693.7825	47,053.8054
寧波廠	323.1463	12,692.3885	13,015.5348

備註：總公司的排放量因為類別四”購買商品之上游排放”，於數據庫記錄資料係由總公司下單購買，故歸屬於總公司的排放。類別五” 產品使用階段”， 因為係納入計算產品由總公司銷售至台灣地區、北美地區、歐洲地區、中國地區和其他地區之總數量，並無其他各廠的銷貨數據，故歸屬於總公司的排放。此項歸類方式係因數據可得性而採取的最佳方式。

台灣檢驗科技股份有限公司(以下簡稱SGS)，經與技嘉科技股份有限公司(以下簡稱技嘉科技)，新北市新店區寶強路6號，達成雙邊協議，依據ISO 14064-3:2006之要求執行直接與間接溫室氣體排放量之查驗，溫室氣體排放量涵蓋期間自2021年01月01日至2021年12月31日，查驗聲明內容說明如下：

角色與責任

技嘉科技管理階層確保組織溫室氣體資訊系統之發展、紀錄維護及文件化程序已符合標準要求，負責評估、決定及報告溫室氣體排放量資訊，並提供支持溫室氣體主張所需之其他資訊給SGS。

SGS秉持第三方查驗單位之準則，依據2022年01月10日簽訂之雙邊協議、ISO 14064-1:2018、ISO 14064-3:2006要求，於2022年02月23日至2022年03月10日期間執行溫室氣體排放量查驗活動，並根據技嘉科技適用範圍、目標、準則及溫室氣體排放量涵蓋期間自2021年01月01日至2021年12月31日之查驗結果，提出溫室氣體查驗聲明。

保證等級

SGS依據查驗準則及雙邊協議執行查驗程序，針對技嘉科技於溫室氣體主張所提類別一及類別二之查驗證據顯示，未違反實質性差異門檻，符合主管機關認可之合理保證等級。類別三至類別五之查驗證據顯示，符合有限保證等級。

查驗範圍

SGS依據與技嘉科技之雙邊協議，確認技嘉科技組織邊界及報告範圍內之人為活動溫室氣體排放量與相關標準要求之符合性，根據ISO 14064-3:2006準則提出上述保證聲明涵蓋內容如下：

- 查驗技嘉科技之 2021 年溫室氣體排放量
- 包含廠區：

廠區	活動範圍地理位置
總公司	新北市新店區寶強路 6 號
矽谷園區	新北市新店區北新路三段 207 號 B2F
平鎮廠	桃園市平鎮區南平路 215 號
東莞廠	東莞市黃江鎮裕元工業區裕元一路 5 號
寧波廠	寧波保稅西區創業二路 9 號

- 溫室氣體排放源資訊來源為技嘉科技之盤查資訊
- 排放溫室氣體種類：二氧化碳(CO_2)、甲烷(CH_4)、氧化亞氮(N_2O)、氫氟碳化物(HFCs)、全氟碳化物(PFCs)、六氟化硫(SF_6)、三氟化氮(NF_3)
- 全球暖化潛勢(GWP)引用 IPCC 2021 第六次評估報告之全球暖化潛勢值
- 排放係數資料庫來源:
  - 直接溫室氣體排放: 行政院環保署溫室氣體排放係數管理表 6.0.4

- 間接溫室氣體排放:
  - 台灣廠區輸入能源之電力引用經濟部能源局 2021 年公布之 2020 年電力排放係數: 0.502 公斤二氧化碳當量/度計算
  - 寧波廠輸入能源之電力引用中國國家發展改革應對氣候變化司公布《2019 中國區域電網基準線排放因子》公告電力排放係數: 0.7921 公斤二氧化碳當量/度計算
  - 東莞廠輸入能源之電力引用中國國家發展改革應對氣候變化司公布《2019 中國區域電網基準線排放因子》公告電力排放係數: 0.8042 公斤二氧化碳當量/度計算
  - 二級資料庫引用 SimaPro 生命週期評估軟體資料庫 9.1 版、Ecoinvent 3、台灣環保署產品碳足跡計算服務平台
- 溫室氣體排放量資訊涵蓋週期：2021 年 01 月 01 日至 2021 年 12 月 31 日
- 盤查清冊版本次：2022.03.11
- 盤查報告書版本次：2022.03.30
- 查驗聲明之預期使用者： 組織自行使用

查驗目標

SGS獨立客觀的取得支持溫室氣體主張揭露資訊的佐證，確保報告資訊符合準確性、完整性、一致性及透明度之準則，其內容包含錯誤或遺漏之項目。

查驗準則

遵守下列相關標準要求執行溫室氣體主張之查驗:

- ISO 14064-1:2018 溫室氣體－第 1 部：組織層級溫室氣體排放與移除之量化及報告附指引之規範

實質性

技嘉科技定義溫室氣體主張符合性之實質性差異門檻判斷準則為5%，SGS依據此準則確認溫室氣體揭露資訊之遺漏或錯誤程度。

結論

技嘉科技依據查驗準則要求提出溫室氣體主張，揭露資訊涵蓋期間自2021年01月01日至2021年12月31日，期間溫室氣體排放量為 5,797,836.671 公噸二氧化碳當量及生質燃燒之二氧化碳排放量為 0.0000 公噸二氧化碳當量。SGS採用風險評估方法為基礎，確保並控管溫室氣體排放資訊揭露風險；規劃及執行查驗流程，包含行前評估、取樣計畫、證據之蒐集，取得查驗聲明需要之資訊、說明及相關佐證，確保揭露之溫室氣體排放量準確性。

【集團各類別溫室氣體排放量】 單位：公噸二氧化碳當量

報告邊界			溫室氣體排放量
類別		內容說明	
直接溫室氣體排放		彙整組織邊界內由組織擁有或控制的溫室氣體。	1,063.5185
間接溫室氣體排放	輸入能源溫室氣體排放	外購電力、蒸汽	28,874.4279
	運輸溫室氣體排放	商業旅行、員工通勤	1,225.7787
	組織使用產品溫室氣體排放	購入料件、營運廢棄物	1,516,601.0931
	使用來自於組織產品溫室氣體排放	已售產品使用階段、已售產品終端處置	4,250,071.8528
	其他來源溫室氣體排放		0.0000
直接與間接溫室氣體總排放量			5,797,836.671

【各廠區各類別溫室氣體排放量】 單位：公噸二氧化碳當量

廠區	直接溫室氣體排放量	間接溫室氣體排放量	溫室氣體排放量總和
總公司	275.2284	5,729,747.7097	5,730,022.9381
矽谷園區	24.6908	311.7822	336.4730
平鎮廠	80.4301	7,327.4896	7,407.9197
東莞廠	360.0229	46,693.7825	47,053.8054
寧波廠	323.1463	12,692.3885	13,015.5348

備註：總公司的排放量因為類別四”購買商品之上游排放”，於數據庫記錄資料係由總公司下單購買，故歸屬於總公司的排放。類別五” 產品使用階段”， 因為係納入計算產品由總公司銷售至台灣地區、北美地區、歐洲地區、中國地區和其他地區之總數量，並無其他各廠的銷貨數據，故歸屬於總公司的排放。此項歸類方式係因數據可得性而採取的最佳方式。

SGS以客觀公正之立場，評估技嘉科技溫室氣體資訊系統、監督方法及報告程序，溫室氣體排放量涵蓋期間自2021年01月01日至2021年12月31日，依據查驗結果保證其適用範圍、目標及準則之一致性及適切性，針對類別一及類別二提出合理保證之查驗聲明，無保留意見之列舉。

SGS根據自身角色及責任，在此聲明溫室氣體主張具實質性、正確性，以及公平性地陳述溫室氣體數據及資訊，並依據ISO 14064-1:2018製備執行溫室氣體量化、監督及報告溫室氣體資訊，本查驗聲明將視為說明技嘉科技溫室氣體主張之查驗結果。

保密性聲明

此報告及附件可能包含屬於技嘉科技之機密資訊，未經技嘉科技書面同意，其他個人、團體或公司禁止自行複製或發行。

利益衝突迴避聲明

此報告及附件內容完全依照主管機關之標準方法與程序等相關規定，秉持公正、誠實進行查驗作業。絕無虛偽不實，如有違反，就政府機構所受損失願負連帶賠償責任之外，並接受主管機關依法令所為之行政處分及刑事處罰。

所有查證人員瞭解如自身受政府機關委任從事公務，亦屬於刑法上之公務員，並瞭解刑法上圖利罰、公務員登載不實偽造公文書及貪污治罪條例之相關規定，如有違反，亦為刑法及貪污治罪條例之適用對象，願受最嚴厲之法律制裁。

本公司與受查驗單位並無財務投資之關係，且符合主管機關對利益衝突迴避之要求。如有違反前述事實情事，經主管機關查證屬實時，此報告及附件內容願接受主管機關判定為無效之處分。

查證團隊

上述聲明係查證團隊依據公正之查驗過程，針對技嘉科技之 2021 年溫室氣體排放量所提出之聲明。

主導查驗員：黃國泰

查 驗 員：羅雅之　　徐福言

備註：本查驗聲明遵照 SGS 溫室氣體查驗服務條款要求 http://www.sgs.com/terms_and_conditions.htm，聲明書內容由台灣檢驗科技股份有限公司依據溫室氣體主張之查驗結果進行編製，業經客戶同意後發行。本聲明書非用以解除客戶遵守組織章程、全國或者地方法令，以及任何被發佈國際指南章程之責任；客戶與 SGS 彼此為獨立之個體，客戶非受 SGS 約束，在此 SGS 除客戶之外毋須代表其面對其他組織團體。

Statement TW22/00064GG

Greenhouse Gas Verification Statement

The inventory of Greenhouse Gas emissions in year 2021 of

GIGA-BYTE TECHNOLOGY CO., LTD.

No.6, Baoqiang Rd., Xindian Dist.,
New Taipei City 231, Taiwan

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

ISO 14064-1:2018

Direct emissions
1,063.5185 tonnes of CO_2e
Indirect emissions
5,796,773.1525 tonnes of CO_2e
Direct emissions and indirect emissions
5,797,836.671 tonnes of CO_2e

Authorized by

David Huang
Senior Director
Date: 11 April 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
t (02) 22993279 f (02)22999453 www.sgs.com

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

The emission of each category is described as below: Unit: tonnes of CO_2e

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.	1,063.5185
Indirect emissions	Imported energy	Indirect emissions from incoming electricity and steam	28,874.4279
	Transportation	Emissions from employee commuting and business travel	1,225.7787
	Products used by an organization	Emissions from purchased goods and solid waste treatment	1,516,601.0931
	Associated with the use of products from the organization	Emissions from the use stage of the product and end of life stage of the product	4,250,071.8528
	Other sources	--	0.0000
Direct emissions and indirect emissions			5,797,836.671

The emission of each site is described as below: Unit: tonnes of CO_2e

Site	Direct emissions	Indirect emissions	Total GHG emissions
Main Office	275.2284	5,729,747.7097	5,730,022.9381
Taipei Silicon Valley Park Office	24.6908	311.7822	336.4730
Ping-Jen Plant	80.4301	7,327.4896	7,407.9197
Dong Guan Plant	360.0229	46,693.7825	47,053.8054
Ningbo Plant	323.1463	12,692.3885	13,015.5348

Note: Main Office total GHG emissions include category 4 “Indirect GHG emissions from goods purchased by organization” that purchased order by main office and category 5 " Indirect GHG emissions from the use stage of the product" that the total number of products sold by the head office to Taiwan, North America, Europe, China and other regions. Due to the data availability, this is the best way to include above Indirect GHG emissions to main office.

SGS has been contracted by GIGA-BYTE TECHNOLOGY CO., LTD. (hereinafter referred to as "GIGA-BYTE"), No.6, Baoqiang Rd., Xindian Dist., New Taipei City 231, Taiwan for the verification of direct and indirect Greenhouse Gas emissions in accordance with

ISO 14064-3:2006

as provided by GIGA-BYTE TECHNOLOGY CO., LTD. (hereinafter referred to as "GIGA-BYTE"), No.6, Baoqiang Rd., Xindian Dist., New Taipei City 231, 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 GIGA-BYTE 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 23 February 2022 to 10 March 2022. The verification was based on the verification scope, objectives and criteria as agreed between GIGA-BYTE and SGS on 10 January 2022.

Level of Assurance

The level of assurance for category 1 and category 2 agreed is that of reasonable assurance and category 3 to category 5 is that of limited assurance.

Scope

GIGA-BYTE has commissioned an independent verification by SGS Taiwan of reported GHG emissions of GIGA-BYTE arising from the design and manufacture of computer system, bare bone, motherboard, add-on card, server platform, router, notebook and mobile phone activities, to establish conformance with ISO 14064:2018 principles within the scope of the verification as outlined below.

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 GIGA-BYTE in year 2021
- Location/boundary of the activities:
  - No.6, Baoqiang Rd., Xindian Dist., New Taipei City 231, Taiwan
  - B2F, No. 207, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
  - No. 215, Nan Ping Road Ping-Jen Dist. Taoyuan City 324. Taiwan
  - No.5, Yue Yuen 1 Road, Yue Yuen Industrial Park, Huang Jiang Town, Dong Guan City, Guang Dong Province, P.R.C.
  - No.9, Chuangye 2 Road, Western Area, Ningbo Free Trade Zone, Beiun, Ningbo City, Zhejiang Province, P.R.C.
- Physical infrastructure, activities, technologies and processes of the organization: the design and manufacture of computer system, bare bone, motherboard, add-on card, server platform, router, notebook and mobile phone
- GHG sources, sinks and/or reservoirs included: Sources as presented in the inventory spreadsheet provided by GIGA-BYTE
- Types of GHGs included: CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3
- The IPCC 2021 AR6 GWP values are applied in this inventory.
- Emission factor:
  - Direct emissions: Greenhouse Gas Emission Factor Table (6.0.4), EPA.
  - Indirect emissions:
    - Taiwan Electricity emission factor is 0.502 $kgCO_2e/kwh$ (Announced by Bureau of Energy, Ministry of Economic Affairs in 2021).
    - Ningbo GIGA-BYTE TECHNOLOGY CO., LTD.: 0.7921 kgCO2e/kWh (Announced by Department of Climate change, National Development and Reform Commission, China, in 2019)
    - Dong Guan GIGA-BYTE TECHNOLOGY CO., LTD.: 0.8042 kgCO2e/kWh (Announced by Department of Climate change, National Development and Reform Commission, China, in 2019)
    - The secondary database have SimaPro LCA Software ver. 9.1, Ecoinvent 3 and Taiwan EPA Carbon Footprint Calculation Platform.
- Directed actions: NA
- GHG information for the following period was verified: 01 January 2021 to 31 December 2021
- The version of inventory sheet: 2022.03.11
- The version of GHG assertion: 2022.03.30
- 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

GIGA-BYTE provided the GHG assertion based on the requirements of ISO14064-1: 2018. The GHG information for the period 01 January 2021 to 31 December 2021 disclosing emissions of 5,797,836.671 metric tonnes of CO_2 equivalent and 0.0000 metric tonnes of direct CO_2 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_2e

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.	1,063.5185
Indirect emissions	Imported energy	Indirect emissions from incoming electricity and steam	28,874.4279
	Transportation	Emissions from employee commuting and business travel	1,225.7787
	Products used by an organization	Emissions from purchased goods and solid waste treatment	1,516,601.0931
	Associated with the use of products from the organization	Emissions from the use stage of the product and end of life stage of the product	4,250,071.8528
	Other sources	--	0.0000

Reporting Boundaries		GHG Emissions
Inventory categories	Description	
Direct emissions and indirect emissions		5,797,836.671

The emission of each site is described as below: Unit: tonnes of CO_2e

Site	Direct emissions	Indirect emissions	Total GHG emissions
Main Office	275.2284	5,729,747.7097	5,730,022.9381
Taipei Silicon Valley Park Office	24.6908	311.7822	336.4730
Ping-Jen Plant	80.4301	7,327.4896	7,407.9197
Dong Guan Plant	360.0229	46,693.7825	47,053.8054
Ningbo Plant	323.1463	12,692.3885	13,015.5348

Note: Main Office total GHG emissions include category 4 “Indirect GHG emissions from goods purchased by organization” that purchased order by main office and category 5 " Indirect GHG emissions from the use stage of the product" that the total number of products sold by the head office to Taiwan, North America, Europe, China and other regions. Due to the data availability, this is the best way to include above Indirect GHG emissions to main office.

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 GIGA-BYTE 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 GIGA-BYTE 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: Enz Huang

Verifier: Roya Lo

Andy Hsu

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. 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 GIGA-BYTE TECHNOLOGY CO., LTD, No.6, Baoqiang Rd., Xindian Dist., New Taipei City 231, 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.