GHG Emission Report
For 2022 Year

Singatron Electronic (China) Co., Ltd.

April 2023

Contents

1. DESCRIPTION OF THE ORGANIZATION

1.1 INTRODUCTION

Global climate warming and greenhouse gas excessive emission possibly trigger the climate change and other impact which already become the important environment issue and common consensus all we faced. Singatron Electronic (China) Co., Ltd. (below in abbreviation as Singatron Electronic) would positively devoted to greenhouse gas emission evaluation and control in order to slow down the globe warming, and expect to save the energy and resources, to maintain the persistent development of global ecological environment via the management of Singatron Electronic based on the persistent development idea and devoted to the obligation of enterprise social accountability.

1.2 COMPANY PROFILE

Company Name：Singatron Electronic (China) Co., Ltd.

Type of Industry：Electronics

Category of Responsible Party：Manufacture of Electronic Connector

Address: No. 509, Xinfeng Road, Xujiang Industry Zone, Xukou Town, Wuzhong District, Suzhou City, Jiangsu Province, China

1.3 RESPONSIBLE OF REPORT

Department：General Affairs Dept.

Responsible person：Chengyuan WANG

Phone：0512-66877188-8363

2. ORGANIZATION BOUNDARY

2.1 GHG REPORT COVERED PERIOD

This report covers the period from 1st January 2022 to 31st December 2022.

2.2 ORGANIZATION BOUNDARY

The Singatron Electronic (China) Co., Ltd. applied the operational control approach to consolidate GHG emissions in the organizational boundary. The address of the company is No. 509, Xinfeng Road, Xujiang Industry Zone, Xukou Town, Wuzhong District, Suzhou City, Jiangsu Province, P. R. China.

The process including punch and plastic injection.

2.3 REPORTING BOUNDARY

The company associated with its' greenhouse gas (GHG) emissions according to the requirements of standard recognition, Category 1 direct greenhouse gas (GHG) emissions and Category 2 energy indirect greenhouse gas (GHG) emissions is included in the operational boundary.

There is no change on the company's operational boundary from the previous accounting report.

2.4 REPORTING PERIOD

Singatron Electronic would accomplish an accounting on total greenhouse gas amount of every previous year (excluding first accounting) and form a subsequent report contain the GHG emission and conclusion of previous year which could be used as the reference later.

3. GHG QUANTIZATION

3.1 GHG DEFINITION

Greenhouse gas (GHG) definition: natural and artificial atmospheric gas composition can absorb or be released from the surface of the earth, the atmosphere and the clouds release within the category of the infrared radiation

spectrum of wavelengths of radiation.

The Greenhouse Gas of Singatron Electronic include: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and hydro fluorocarbons (HFC_S), perfluorinated carbide (PFC_S), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

The GHG and greenhouse mentioned in this report was seven greenhouse gases above.

3.2 GHG ILLUSTRATION OF QUANTIZATION EXEMPTION AND IT'S CAUSE

The information may cause GHG emission of Singatron Electronic, because of them 1) without applicable measurement in technology, 2) applicable in technology but uneconomical, in other word quantization cause the cost increase by more than RMB20000, or 3) exemption when lack of materiality (the proportion in total account for less than 0.1%).

No exemption in this accounting.

3.3 Category 1 QUANTIFICATION OF DIRECT GREENHOUSE GAS EMISSIONS

3.3.1 Definition：The GHG emission of facilities within the organizational boundaries are the GHG occurred by the GHG sources which owned or controlled by organization.

3.3.2 The results of direct Greenhouse Gas emissions (Category 1) are shown in table below.

Direct greenhouse gas emissions of Singatron Electronic (China) Co., Ltd. in 2022 is 274.2027 tCO_2e。

Direct greenhouse gas emissions		CO_2 (ton CO_2e)	CH_4 (ton CO_2e)	N_2O (ton CO_2e)	HFCs (ton CO2e)	PFCs (ton CO_2e)	SF_6 (ton CO_2e)	NF_3 (ton CO_2e)	SUM (ton CO_2e)
Generator	Diesel combustion	10.0941	0.0116	0.0228	0.0000	0.0000	0.0000	0.0000	10.1285
Business car	Diesel combustion	33.3679	0.0532	3.5877	0.0000	0.0000	0.0000	0.0000	37.0088
Business car	Gasoline combustion	70.0626	0.7196	2.2531	0.0000	0.0000	0.0000	0.0000	73.0353
Cold drier of No.12 punch machine	R410a leakage	0.0000	0.0000	0.0000	0.2256	0.0000	0.0000	0.0000	0.2256
Cold drier of No.4, 5, 7, 11, 16 punch machines	R407c leakage	0.0000	0.0000	0.0000	1.1982	0.0000	0.0000	0.0000	1.1982
Cold drier of No. 15 punch machines	R134a leakage	0.0000	0.0000	0.0000	0.1836	0.0000	0.0000	0.0000	0.1836
Center air conditioner-McQuay	R407c leakage	0.0000	0.0000	0.0000	96.9228	0.0000	0.0000	0.0000	96.9228
air conditioner	R32 leakage	0.0000	0.0000	0.0000	5.5496	0.0000	0.0000	0.0000	5.5496
air conditioner	R410a leakage	0.0000	0.0000	0.0000	0.2109	0.0000	0.0000	0.0000	0.2109

No.1/No,2 WEDM	R407c leakage	0.0000	0.0000	0.0000	0.3129	0.0000	0.0000	0.0000	0.3129
WPC refrigerator	R134a leakage	0.0000	0.0000	0.0000	0.0064	0.0000	0.0000	0.0000	0.0064
No.1 thermal shock tester	R404a leakage	0.0000	0.0000	0.0000	3.0259	0.0000	0.0000	0.0000	3.0259
No.1 thermal shock tester	R23 leakage	0.0000	0.0000	0.0000	9.3440	0.0000	0.0000	0.0000	9.3440
No.1 constant temperature & humidity tester	R134a leakage	0.0000	0.0000	0.0000	0.2448	0.0000	0.0000	0.0000	0.2448
No.1 constant temperature & humidity tester	R404a leakage	0.0000	0.0000	0.0000	0.7565	0.0000	0.0000	0.0000	0.7565
vehicle air conditioning	R134a leakage	0.0000	0.0000	0.0000	0.4820	0.0000	0.0000	0.0000	0.4820
CO2 extinguisher	CO2 leakage	0.0034	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0034
Factory septic-tank	CH_4 leakage	0.0000	30.4311	0.0000	0.0000	0.0000	0.0000	0.0000	30.4311
Dorm septic-tank	CH_4 leakage	0.0000	5.1313	0.0000	0.0000	0.0000	0.0000	0.0000	5.1313
Anti-rusty oil can	CO_2 leakage	0.0011	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0011

3.3.3 The choice of quantitative methodology, reason, and resources

GWP value adopted in this GHG report is derived from IPCC 2014 fifth assessment report.

Quantification of direct greenhouse gas emissions is based on the following quantification methodology, reasons and resources.

1）Electricity generator (Diesel combustion)

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: covers annual diesel consumption for generator. According to the parameters in the generator parameter table: the output power of the old generator is 800KW, the fuel consumption rate is 196g/kwh, and according to the maintenance plan, it runs for 10 minutes per week, so the annual theoretical fuel consumption=800/6×196×52/1000= 1358.93kg; the output power of the new generator is 1000KW, the fuel consumption rate is 261L/h, the diesel density is 0.84kg/L, and the annual theoretical fuel consumption=261×0.84/6×52=1900.08kg.
- EF: EF consists of three parts. One is the default emission factors of diesel from the IPCC's 2006 national greenhouse gas inventories guide (volume 2, chapter 2, and table 2.3). Another one is the diesel calorific value from the China's National Energy Statistics Yearbook 2014, else obtain the carbon oxygenation ratio from the province GHG accounting guide, those three data are multiplied to get the final mission factors.

- Change of quantification method: no change on quantization methodology.

2) Business vehicle (gasoline combustion)

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: covers the data summary of gasoline fueled in gasoline station with the evidence of fuel record, this data is deemed as the actual usage volume, and by inquire the density on web, transform the volume to the weight as the final activity data.
- EF: EF consists of three parts. One is the default emission factors of gasoline from the IPCC's 2006 national greenhouse gas inventories guide (volume 2, chapter 2, and table 2.3). Another one is the gasoline calorific value from the China's National Energy Statistics Yearbook 2014, else obtain the carbon oxygenation ratio from the province GHG accounting guide, those three data are multiplied to get the final mission factors.
- Change of quantification method: no change on quantization methodology.

3）Business vehicle (Diesel combustion)

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: covers the data summary of gasoline fueled in Diesel station with the evidence of fuel record, this data is deemed as the actual usage volume, and by inquire the density on web, transform the volume to the weight as the final activity data.
- EF: EF consists of three parts. One is the default emission factors of diesel from the IPCC's 2006 national greenhouse gas inventories guide (volume 2, chapter 2, and table 2.3). Another one is the diesel calorific value from the China's National Energy Statistics Yearbook 2014, else obtain the carbon oxygenation ratio from the province GHG accounting guide, those three data are multiplied to get the final mission factors.
- Change of quantification method: no change on quantization methodology.

4）CO_2 leakage of WD-40 anti- rusty oil

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: refers to the total WD-40 consumption with the evidence of usage record, meanwhile according to the MSDS, the weight of CO_2 is 3%, calculated the actual emission by multiply those two factors.
- EF: based on the mass balance method, EF=1.
- Change of quantification method: no change on quantization methodology.

5）CO_2 fire extinguisher leakage

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: refers to the fire extinguisher inventory and the nameplate of the CO2 fire extinguisher. If refueled, the refuel number will be the AD.
- EF: refers to the default values from IPCC's 2006 national greenhouse gas inventories guide (volume 3, chapter 7, table 7.6.2.2). EF = 4%. If refueled, based on the mass balance method, EF=1.
- Change of quantification method: no change on quantization methodology

6）Refrigerant （R410a、R407c、R134a、R404a、R32、R23）leakage

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: according to the amount of refrigerant filled on name board, the equipment including Cold drier, central air conditioner, air conditioner ,WEDM, refrigerator, thermal shock tester, constant temperature & humidity tester and vehicle air conditioner.
- EF: refers to the defaults values from IPCC's 2006 national greenhouse gas inventories guide (volume 3, chapter 7, table 7.9).
- Change of quantification method: no change on quantization methodology

7）Methane leakage (septic tank)

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: there is no existing methodology in the company and the region, therefore, adopt the internationally used calculation method.
- AD: refers to the annual BOD production from factory septic tank. First the annual man days of all employees working in the company and living in the dormitory was obtained from HR department. Second the default value of BOD_5 (40g/person/day) from the IPCC's 2006 national greenhouse gas inventories guide (volume 5, chapter 6, table 6.4) was used. These two data are multiplied to get the annual BOD production from factory septic tank.
- EF: refers to the defaults values from IPCC's 2006 national greenhouse gas inventories guide (volume 5, chapter 6, table 6.2 and table 6.3). From table 6.2 and table 6.3, we get the B_0 (Maximum CH4 producing=0.6 kg CH4/kg BOD) and MCF (Methane correction factor=0.5). EF = B_0 x MCF
- Change of quantification method: no change on quantization methodology

3.4 Category 2 QUANTIFICATION OF ENERGY INDIRECT GREENHOUSE GAS EMISSIONS

3.4.1 Definition of Energy Indirect Greenhouse Gas emissions: GHG emission from the generation of imported electricity, heat or steam consumed by the organization.

3.4.2 Quantification of Energy Indirect Greenhouse Gas emission is shown in table below.

Energy indirect greenhouse gas emissions of Singatron Electronic (China) Co., Ltd. in 2022 is 3320.3596 tCO_2e。

Emission sources	CO_2 (ton CO_2e)	CH4 (ton CO_2e)	N_2O (ton CO_2e)	合计 (ton CO_2e)
Purchased electricity	3320.3596	-	-	3320.3596
SUM	3320.3596	-	-	3320.3596

3.4.3 Quantification methodology, reason, and resources

GWP value adopted in this GHG report is derived from IPCC 2014 fifth assessment report.

Quantification of Energy indirect greenhouse gas emissions is based on the following quantification methodology, reasons and resources.

1）Purchased electricity

- Methodology: ISO14064-1, GHG emission factor method（ADxEFxGWP）.
- Choose reason: From the public source (Ministry of Ecology and Environment) and suitable for related electricity emission calculation.
- AD：according to the electricity bills issued by the local gird company.
- EF：《Notice on Doing a Good Job in the Management of Greenhouse Gas Emission Reports for Enterprises in the Power Generation Industry from 2023 to 2025》

- Change of quantification method: no change on quantization methodology

3.5 QUANTIFICATION OF OTHER INDIRECT GREENHOUSE GAS EMISSIONS

Because the data cannot be collected for the other indirect greenhouse gases emissions, this category is not included in this GHG inventory.

3.6 EMISSION FROM THE COMBUSTION OF BIOMASS

Not applicable, there was no emission from the combustion of biomass during the reporting period.

3.7 THE SUMMARY OF GREENHOUSE GAS EMISSIONS

The total GHG emissions of the company in 2022 was 3594.5623 tone CO_2e。

4. UNCERTAINTY EVALUATION OF THE QUANTIFICATION OF GREENHOUSE GAS

4.1 DATA MANAGEMENT OF THE EMISSION SOURCES

The accounting data of company comply with the ISO14064-1 “Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals” on Relevancy, Completeness, Consistency, Accuracy and Transparency.

4.2 METHOD AND OUTCOME OF UNCERTAINTY EVALUATION OF ACTIVITY DATA AND

Data uncertainty assessment activities need to consider the data category and emission factor two aspects, according to the activity data classification assignment and emission factor classification assignment to calculate the average, multiplied by the percentage of emission source, and then get up overall uncertainty evaluation.

1）Activities in accordance with the data acquisition category are divided into three categories, and give 1, 2, 3 points, respectively. As shown in table 4-1.

Table 4-1 activity data assignment

Activity Data classification	Given score
Automatic continuous measurement	1
Measured on a regular basis (including meter recording data)/nameplate data	2
Estimated	3

2）Source emission factor categories and levels in accordance with the collection are divided into six types, and give 1, 2, 3 score. As shown in table 4-2.

Table 4-2 emission factor value assignment

Emission factor classification	Assign a score
Measurement/mass balance	1
With the process/equipment experience	2
Factory provided emission factor	3
Regional emission factor	4
National emission factor	5
International emission factor	6

3) Data is divided into five levels, the higher the level, quality of data quality is better.

Table 4-3 Data Quality Rating Comparison Table

级别	分数
Excellent+	>=5.0
Excellent	<5.0,>=4.0
Good	<4.0,>=3.0
Commonly	<3.0,>=2.0
Difference	<2.0

4.3 UNCERTAINTY EVALUATION OF ACTIVITY DATA AND OF EMISSIONS SOURCES

Uncertainty assessment of activity data and its emission is shown in table 4-4 below.

Table 4-4 uncertainty evaluation of activity data

Emission sources		Activity data level	Emission factor level	SUM	Emission (ton of CO2e)	Percentage	weighted average of the integral
Generator	Diesel combustion	1	1	2.7	10.1285	0.28%	0.01
Business car	Diesel combustion	3	1	3.3	37.0088	1.03%	0.03
Business car	Gasoline combustion	3	1	3.3	73.0353	2.03%	0.07
Cold drier of No.12 punch machine	R410a leakage	3	1	3.3	0.2256	0.01%	0.00
Cold drier of No.4, 5, 7, 11, 16 punch machines	R407c leakage	3	1	3.3	1.1982	0.03%	0.00
Cold drier of No. 15 punch machines	R134a leakage	3	1	3.3	0.1836	0.01%	0.00
Center air conditioner-McQuay	R407c leakage	3	1	3.3	96.9228	2.70%	0.09
air conditioner	R32 leakage	3	1	3.3	5.5496	0.15%	0.01
air conditioner	R410a leakage	3	2	3.7	0.2109	0.01%	0.00
No.1/No,2 WEDM	R407c leakage	3	1	3.3	0.3129	0.01%	0.00
WPC refrigerator	R134a leakage	3	1	3.3	0.0064	0.00%	0.00
No.1 thermal shock tester	R404a leakage	3	1	3.3	3.0259	0.08%	0.00
No.1 thermal shock tester	R23 leakage	3	2	3.7	9.3440	0.26%	0.01
No.1 constant temperature &	R134a leakage	3	1	3.3	0.2448	0.01%	0.00

humidity tester							
No.1 constant temperature & humidity tester	R404a leakage	3	1	3.3	0.7565	0.02%	0.00
vehicle air conditioning	R134a leakage	3	1	3.3	0.4820	0.01%	0.00
CO2 extinguisher	CO2 leakage	3	1	3.3	0.0034	0.00%	0.00
Factory septic-tank	CH_4 leakage	1	1	2.7	30.4311	0.85%	0.02
Dorm septic-tank	CH_4 leakage	1	1	2.7	5.1313	0.14%	0.00
Anti-rusty oil can	CO_2 leakage	1	6	4.3	0.0011	0.00%	0.00
Electrical equipment	Purchased electricity	6	2	4.7	3320.3596	92.37%	4.31
Weighted total							4.56
Weighted level							Excellent

5. SELECTION AND ESTABLISHMENT OF BASE YEAR

5.1 SELECTION OF BASE YEAR

Singatron Electronic (China) Co., Ltd. selects the year 2014 (1st January 2014 to 31st December 2014) as its base year because the ISO14064 system was first introduced in 2014, else the production is stable and the management and technology were maturated in 2014 so has good reference value for comparative purpose.

5.2 BASE YEAR GHG INVENTORY

Base year GHG inventory is shown as follow, total emission 4076.30-ton CO_2e, in which emission from biomass combustion was 0 ton CO_2e.

GHG Emission Category	CO_2 (ton CO_2e)	CH_4 (ton CO_2e)	N_2O (ton CO_2e)	HFCs (ton CO2e)	PFCs (ton CO_2e)	SF_6 (ton CO_2e)	NF_3 (ton CO_2e)	Sum (ton CO_2e)
Category1 Direct GHG Emission	288.39	55.24	6.64	54.46	0.00	0.00	0.00	404.72
Category2 Indirect GHG Emission	3671.58	0.00	0.00	0.00	0.00	0.00	0.00	3671.58

5.3 CHANGE TO THE BASE YEAR AND RECALCULATION OF THE BASE YEAR

The base year was not changed. Therefore, there is no change to the base year.

6. GHG DECREMENT STRATEGY AND PERFORMANCE

6.1 GHG DECREMENT STRATEGY

From this report, it is clearly known that energy indirect GHG emission was the largest emission, therefore, Singatron Electronic will devoted to:

1）promote the saving of energy, decrease the use of electricity

2）enhance the equipment maintenance, reduce the abnormal equipment operation, improve the equipment

operation efficiency, decrease energy consumption

3）Using the energy saving equipments to lower the energy use (like using the energy saving lamp and frequency conversion device etc.)

7. ABOUT THIS REPORT

7.1 RESPONSIBILITY OF THIS REPORT

There was not extra report requirement from the law and regulation.

This report was entrusted by Singatron Electronic and prepared by SGS based on the information, data and evidence provided by Singatron Electronic and according to the ISO14064-1:2018. This report did not represent that SGS had expressed an independent GHG verification opinion on the GHG assertion as provided by Singatron Electronic for the period 1st January 2022 to 31st December 2022.

Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than Singatron Electronic.

This report had not been verified by third party as per ISO14064-3:2019.

7.2 APPLICATION OF THIS REPORT

The GHG report of Singatron Electronic was available to public by voluntary and welcome surveillance from all sectors of society. Meanwhile, this report provides the reference for the management to plot the strategy and the basis for setting the future emission decrement plan, in order to undertake more social accountability.

7.3 PURPOSE OF THIS REPORT

Purpose of this report as to:

For the establishment of inner GHG traceability of decrement and to adapt the national and international trend earlier.

Disclosure of the GHG emission information of Singatron Electronic that to improve the corporate social image.

7.4 FORMAT OF THIS REPORT

As the show of this report, Singatron Electronic entrust SGS to prepare the report format as per ISO14064-1:2018.

7.5 OBTAINMENT AND SPREAD METHOD OF THIS REPORT

This report may be consulted to the following units:

Contact person: Mr. Wang Chengyuan

Unit: Singatron Electronic (China) Co., Ltd.

Department: General Affairs Dept.

Telephone: 0512-66877188-8363

Address: No. 509, Xinfeng Road, Xujiang Industry Zone, Xukou Town, Wuzhong District, Suzhou City, Jiangsu Province, China

8. REFERANCE DOCUMENTS

This report is prepared refer to the following documents:

1. ISO14064-1: 2018 GHG- 1st Part: “Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals”

2. “China's Energy Statistics Yearbook 2014”

3. 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

4. http://www.ghgprotocol.org

5. IPCC2014 /ar5-wg1-errata

6. 《Notice on Doing a Good Job in the Management of Greenhouse Gas Emission Reports for Enterprises in the

---Report END---