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About Espressif

Espressif Systems is a public, multinational, fabless, semiconductor company focused on developing cutting-edge, wireless-communication, low-power chipsets. By leveraging wireless computing, we provide green, versatile and cost-effective AIoT solutions. We have accomplished a hardware-and-software, closed-loop development cycle for a series of core technologies, including RF, Wi-Fi & Bluetooth LE network protocol stacks, RISC-V MCUs, AI instruction sets and algorithms, operating systems, toolchains, compilers, IoT software application frameworks, Cloud, etc.

We have a diverse team of engineers from around the world. All company branches employ about 600 members of staff from almost 30 countries and regions, +76% of whom are based in our Research & Development Department. We have eight R&D centers in five countries, including China (4 out of 8), India, the Czech Republic, Brazil and Singapore. The company's increasing reputation in recent years has been instrumental in attracting talented engineers from across the world. Being united by our passion for technology, our diversity is our strength, as it allows the creative blending of different kinds of knowledge, perspectives and ways of thinking.



Business Highlights (Unaudited)

Key Financial Data (Unaudited)

	Three Mor	ths Ended	Fiscal Year
CNY	March 31, 2023	March 31, 2022	2022
Consolidated Statement of Income Data			
Revenue	318,117,442	288,948,065	1,271,127,201
Gross profit	129,518,046	118,589,940	508,251,068
Selling expenses	12,172,902	9,194,881	49,323,100
General and administrative expenses	13,915,033	13,404,541	59,639,944
Research and development expenses	85,483,014	74,848,290	337,121,814
Net income	31,087,430	27,852,092	97,323,103
Earnings per share:			
Basic	0.3884	0.3475	1.2129
Diluted	0.3884	0.3475	1.2127
	March 31, 2023	December 31, 2022	
Consolidated Balance Sheet Data			
Cash, cash equivalents and financial investments	1,223,950,262	1,200,219,436	
Working capital	1,441,639,623	1,518,383,808	
Total assets	2,089,451,135	2,082,796,825	
Long-term obligations	71,961,284	65,591,788	
Total shareholders' equity	1,855,848,707	1,826,677,535	
	Three Mor	ths Ended	Fiscal Year
	March 31, 2023	March 31, 2022	2022
Consolidated Cash Flow Data			
Net cash flow from operating activities	33,293,443	-36,870,506	71,321,658
Non-GAAP Adjustment			
Stock-based compensation	2,624,367	4,825,008	14,726,019
Non-GAAP net income	33,711,797	32,677,101	112,049,122

Key Financial Indicators (Unaudited)

Three Months Ended		Fiscal Year
March 31, 2023	March 31, 2022	2022
40.71%	41.04%	39.98%
26.87%	25.90%	26.52%
10.82%	11.67%	9.29%
1.69%	1.51%	5.36%

Financial Analysis

Espressif's total revenue in the first quarter of the current fiscal year (2023) was CNY 318.12 million, marking an increase of 10.10% from CNY 288.95 million in the first quarter of 2022, due to the expansion of product categories. Therefore, the net income was CNY 31.09 million, which marked an increase of 11.62% quarter-on-quarter, mainly due to the increase of revenue.

The overall gross margin was 40.71% and remained stable. Customers in China's mainland prefer purchasing chips, while customers from the rest of the world and their OEM or ODM in China's mainland prefer modules. We keep the chip margin at a reasonable level, in order to support our future R&D expenditure.



Revenue by Product Category in Q1 2023



Key Financial Indicators in Q1 2023



Management Report Business Strategy

Espressif Systems' business strategy emanates from our service/product areas and our engagement with the developer ecosystem.

Our product and service areas include AIoT chips, OS-level development environments, software tools, application solutions, and value-added services, such as Cloud and Matter. The above-mentioned products ensure that we are in the heart of numerous commercial AIoT applications in different markets, including smart home, consumer electronics, industrial automation, healthcare, etc.



Core Technologies



ESP8266, ESP32, ESP32-S, ESP32-C, ESP32-H and ESP32-P Series

Espressif offers integrated, reliable, and energy-efficient SoCs for Wi-Fi, Bluetooth Low Energy, Thread and Zigbee to various segments of the IoT market.



ESP-IDF

Espressif's official IoT Development Framework.

It provides a self-sufficient SDK for any generic application-development on these platforms, using programming languages such as C and C++.

ESP-IDF currently powers millions of devices in the field, and enables building a variety of network-connected products, ranging from simple light bulbs and toys to major appliances and industrial devices.



AFE (Audio Front-End) Algorithms

qualified as a "Software Audio Front-End Solution" for Amazon Alexa Built-in devices.

3A Audio Algorithms

including Acoustic Echo Cancelation (AEC), Audio Noise Suppression (ANS) and Automatic Gain Control (AGC), which significantly reduce noise and echo in calls, keeping high-quality voice intercoms stable at all times.



ESP RainMaker

SP-IDF

A comprehensive, development-free and maintenance-free AloT solution for private Cloud deployment.

It is an all-inclusive solution that covers everything from the underlying chip to device firmware, third-party voice-assistant integrations, mobile apps and the dashboard.

Customers can build their own AloT devices and ecosystem, with ESP RainMaker.

间 Software

With our open-source software, such as Espressif's IoT Development Framework ESP-IDF, Audio Development Framework ESP-ADF, Mesh Development Framework ESP-MDF, Cloud Connectivity Platform ESP RainMaker, Facial Recognition Development Framework ESP-WHO, and Voice-Controlled Assistant ESP-Skainet, we have developed a framework for building AIoT applications, which is both complete and innovative.



One-stop Matter Solution

This is the culmination of Espressif's ongoing contribution to the Matter platform in various areas, including protocol formulation, core stack implementation and certification test events.

Key Products - AloT Chips

Espressif is recognized as a market leader in the field of Wi-Fi MCUs. We released our first Wi-Fi MCU in 2014, and our first Wi-Fi/Bluetooth LE combo chip in 2016. In 2020, we successfully developed our own RISC-V MCU core, adding it to our product portfolio, while in 2021, we released our first Thread/Zigbee/Bluetooth LE 5 combo chip and a 2.4GHz Wi-Fi 6 chip. In 2022, we released our first 2.4 & 5GHz Wi-Fi 6 chip and our product range has expanded to Wireless SoCs. In 2023, we revealed ESP32-P4, a dual-core RISC-V MCU, expanding the current portfolio to address the high-performance computation needs of IO-Rich, HMI, and AloT applications.

In fact, we have been constantly diversifying our product portfolio, introducing new solutions through our numerous investments. Thus, we now have various product lines in the main short- and medium-range connectivity technologies. Our core technologies are self-developed, including connectivity IPs, RF components, RISC-V IPs, software frameworks, tools, AI functions etc.

We also provide IoT modules based on our chips. The benefit for customers is that they can get direct support from us, shortening and optimizing their supply chain, even in case of chip shortages.



Key Products - AloT Chip Matrix



Market

The market for wireless SoCs is truly diverse, including applications for smart homes (e.g., smart lights, air conditioners, ovens, coffee machines, etc.), consumer electronics (e.g., smart speakers, drones, etc.), industrial automation (e.g., mechanical arms), smart agriculture (e.g., soil PH detector, CO2 detector, etc.), healthcare (e.g., monitoring devices for diabetes, blood pressure, etc.), energy control (solar energy devices, EV chargers, etc.), the internet of vehicles (OBD devices, dashboards, etc.), and education (talking pens, interactive whiteboards, etc.).



Developer Community Contents

ITEM	Mar 31, 2023	Dec 31, 2022	change%
GitHub (Worldwide open-source development platform)			
ESP32 Projects	46,981	41,891	12%
ESP8266 Projects	40,813	39,294	4%
Gitee (Chinese open-source development platform)			
ESP32 Projects	2,731	2,629	4%
ESP8266 Projects	1,914	1,868	2%
CSDN (Chinese Tech-blog platform)			
Search results for ESP32	99,995	93,242	7%
Search results for ESP8266	38,177	36,286	5%
Hackaday (open-source hardware platform)			
ESP32 projects	4,973	4,702	6%
ESP8266 projects	6,141	6,101	1%
Reddit			
ESP32 group members	64,805	59,619	9%
ESP8266 group members	60,689	59,004	3%
bilibili (Chinese video-sharing platform)			
Official account followers	25,520	24,064	6%
Official account views	712,303	658,235	8%
YouTube			
Official account subscribers	16,058	14,800	9%
Official account views	914,099	810,523	13%
ESP32 community videos	736,932	641,926	15%
ESP8266 community videos	839,813	778,090	8%
Views of most watched ESP32 community video	around 3.7m	around 3.4m	
Views of most watched ESP8266 community video	around 1.7m	around 1.6m	

N.B.:

Statistical data derived from different platforms may be based on different collecting methods. It is possible for certain platforms to modify their algorithms from time to time and, therefore, impact the resulting statistical data. The above-mentioned data resulted from the Company's research at the end of each quarter reported here, unless otherwise stated.

The search results of the keyword "ESP32" include the ESP32 series, ESP32-C series, ESP32-S series, and ESP32-H series.

Business Model

Business-to-Developer-to-Business (B2D2B)

Espressif has deployed the Business-to-Developer type of marketing, not only because it has gained prominence in recent years, but also because it has proven to be more effective since the influence of developers on organizations of all sizes has gained traction. In other words, most developers are R&D employees in various companies and bring forth business opportunities from the companies they work for.

This way, the developer ecosystem we have created at Espressif demonstrates how the value of networks can grow exponentially:

- The more developers we attract as customers, the more hardware and software solutions we generate.
- The more successful hardware and software solutions we create, the more our reputation spreads with positive feedback from happy customers/developers.
- The above-mentioned interaction between people in our network prompts the creation of more content, which -in turn- attracts more users/developers searching for new content.
- Likewise, other third-party development platforms join our ecosystem and bring in new developers, as our influence continues to grow.

Having successfully applied the B2D2B model, Espressif can now focus on R&D investments, while maintaining a small business team that supports a large number of customers directly. In fact, most of our revenue is gained through direct sales.



Ownership of Securities

Basic information of securities

Share types	Ordinary share
Share capital	80,492,619 (as of Mar 31, 2023)
Listing	Shanghai Stock Exchange (SSE)
Ticker	688018.SH
Listing Date	2019-07-22

Shareholder Structure as of Mar 31, 2023

Shareholder	Share Numbers	Percentage (%)
Espressif (Hong Kong) Investment Ltd.	33,960,000	42.19
Dajia Life Insurance Co., Ltd. – Universal Products	2,602,353	3.23
Shinvest Holding Ltd.	2,546,100	3.16
ABC - Franklin Templeton Sealand Fund	1,784,545	2.22
Orient Securities -Zhonggeng Value Pioneer Fund	1,406,163	1.75
Ningbo Meishan Free Trade Port Le Tun Investment Management Partnership (Limited Partnership)	1,046,030	1.30
CITIC Securities Co., Ltd.	781,410	0.97
China Resources SZITIC Trust - Broadvision Selection II Fund	711,000	0.88
ABC - Franklin Templeton Sealand Fund	705,538	0.88
China Resources SZITIC Trust - Broadvision Selection Fund	687,000	0.85
Top 10 shareholders	46,230,139	57.43
Other public shareholders	34,262,480	42.57
Total of outstanding shares	80,492,619	100.00

Risks and Uncertainties

Financial Risk

The Company performs periodic credit evaluations of its customers' financial condition and generally requires of its customers no collateral. The Company provides an allowance for expected credit losses, based on the net amount expected to be collected on such receivables. Losses have not been significant for any of the periods presented.



R&D Risk

Espressif's research and development strategy is focused on leveraging new technologies for the creation of innovative AloT products. Any delays or changes in the development of these technologies by our industry partners, or a failure of our products to achieve market acceptance, could compromise our competitive position.



Competitors

As the market for AloT products grows, we face an increasing antagonism from relatively large competitors, such as Realtek, MediaTek, Infineon, NXP, Qualcomm and others. Intense competition from current players, as well as new entrants, such as Silicon Labs and Nordic, may reduce our product sales and market share.



Suppliers

A significant portion of the Company's products is fabricated by the Taiwan Semiconductor Manufacturing Company Limited (TSMC). The inability of TSMC to deliver wafers to the Company in a timely manner could impact the production of the Company's products for a certain period of time, which could have an adverse effect on the Company's business, financial condition, results of operations and cash flow.



Customers

The Company sells directly to end customers, distributors, solution providers and contract manufacturers. Our customers are a mix of several big customers and numerous small customers. The concentration ratio for our top-five customers was 30.8% in the first quarter of 2023.

Consolidated Financial Statements (Unaudited)

Consolidated Balance Sheet (Unaudited)

CNY	March 31, 2023	January 1, 2023	December 31, 2022
Assets			
Current assets:			
Cash and cash equivalents	324,630,351	350,677,354	350,677,354
Held for trading financial assets	439,230,911	461,223,082	461,223,082
Notes receivable	2,742,270	789,099	789,099
Accounts receivable, net	227,751,114	198,406,116	198,406,116
Accounts receivable, financing	6,460,424	1,441,520	1,441,520
Prepayments	10,240,868	9,724,045	9,724,045
Other receivables	9,735,746	9,578,753	9,578,753
Including: Interest receivable	1,693,509	838,168	838,168
Inventories	385,272,779	448,981,896	448,981,896
Other current assets	197,216,305	228,089,444	228,089,444
Total current assets	1,603,280,767	1,708,911,310	1,708,911,310
Non-current assets:			
Debt investment	304,474,500	212,484,600	212,484,600
Investment in other equity assets	35,340,648	35,340,648	35,340,648
Other non-current financial assets	19,879,347	19,879,347	19,879,347
Fixed assets	63,236,168	60,243,507	60,243,507
Construction work in progress			
Right-of-use assets	23,860,940	21,692,767	21,692,767
Intangible assets	2,217,562	2,412,317	2,412,317
Long-term deferred expenses	7,826,380	6,565,887	6,565,887
Deferred income tax assets	29,334,823	18,987,186	15,266,444
Total assets	2,089,451,135	2,086,517,567	2,082,796,825

Consolidated Balance Sheet (Unaudited)

CNY	March 31, 2022	January 1, 2023	December 31, 2022
Liabilities & Shareholders' Equity			
Current liabilities:			
Accounts payable	81,544,639	77,918,867	77,918,867
Contract liabilities	11,623,624	9,044,287	9,044,287
Payroll payable	33,662,927	85,041,335	85,041,335
Taxes payable	12,700,000	5,211,995	5,211,995
Other payable	9,534,556	2,925,552	2,925,552
Non-current liabilities due within one year	11,645,314	9,607,030	9,607,030
Other current liabilities	930,084	778,437	778,437
Total current liabilities	161,641,144	190,527,502	190,527,502
Non-current liabilities:			
Lease liabilities	13,320,777	12,839,126	12,839,126
Provisions	603,625		
Deferred income tax liabilities	58,036,882	56,473,404	52,752,662
Total liabilities	233,602,428	259,840,032	256,119,290
Owners' equity (or shareholders' equity):			
Share capital	80,492,619	80,484,430	80,484,430
Capital reserves	1,313,157,066	1,309,813,001	1,309,813,001
Less: Treasury stock	40,966,012	40,966,012	40,966,012
Other comprehensive income	11,677,862	16,946,374	16,946,374
Surplus reserves	46,570,910	46,570,910	46,570,910
Retained earnings	444,916,262	413,828,832	413,828,832
Total shareholders' equity	1,855,848,707	1,826,677,535	1,826,677,535
Total liabilities and shareholders' equity	2,089,451,135	2,086,517,567	2,082,796,825

N.B.:

Starting from 2023, the company will implement the "Accounting Treatment for Deferred Income Tax Related to Asset and Liability Arising from a Single Transaction That Does Not Qualify for Initial Recognition Exemption" as stipulated in Interpretation No. 16 of the Enterprise Accounting Standards issued by the Ministry of Finance. The company will adjust the application of this standard to single transactions that occurred between the beginning of the earliest period reported in the financial statements and the date of the first implementation of this standard. This includes adjusting the lease liabilities, right-of-use assets, estimated liabilities related to disposal obligations and corresponding related assets that were recognized due to the application of this standard on the initial period reported in the financial statements when the standard was first implemented. If there are temporary differences that result in taxable or deductible amounts related to the abovementioned adjustments, the cumulative impact on retained earnings and other relevant financial statement items at the beginning of the reporting period will be adjusted according to the provisions of this standard and Enterprise Accounting Standard No. 18 - Income Taxes. So, the amount of deferred income tax assets of January 1, 2023 exceeds the amount of December 31, 2022 disclosed in the 2022 annual report by CNY 3,720,742. The amount of deferred income tax liabilities is also the same.

Consolidated Income Statement (Unaudited)

	Three Months Ended		
CNY	March 31, 2023	March 31, 2022	
Revenue	318,117,442	288,948,065	
Cost of Revenue	188,599,396	170,358,125	
Gross Profit	129,518,046	118,589,940	
Taxes and surcharges	1,786,501	518,433	
Selling expenses	12,172,902	9,194,881	
General and administrative expenses	13,915,033	13,404,541	
Research and development expenses	85,483,014	74,848,290	
Financial expenses	-3,649,089	568,027	
Including: Interest expenses	264,117	212,682	
Interest income	2,014,022	696,647	
Add: Other income	389,875	252,748	
Investment income (mark"-" for loss)	6,258,547	3,180,588	
Income from changes in fair value (mark"-" for loss)	7,829	3,076,241	
Credit impairment losses (mark"-" for loss)			
Assets impairment losses (mark"-" for loss)	-938,171	-412,271	
Assets disposal income (mark"-" for loss)	4,739		
Operating Income	25,532,504	26,153,075	
Add: Non-operating revenue			
Less: Non-operating expenses	2,465		
Income before income taxes	25,530,039	26,153,075	
Provision (benefit) for income taxes	-5,557,391	-1,699,018	
Net Income	31,087,430	27,852,092	
Earnings per share			
Basic	0.3884	0.3475	
Diluted	0.3884	0.3475	
	Three Months	Ended	
CNY	March 31, 2023	March 31, 2022	
Net Income	31,087,430	27,852,092	
Other comprehensive income (loss), after tax	01,001,400	21,002,002	
Changes to the fair value of investment in other equity instruments		-5,500	
Currency translation reserves	-5,268,512	-1,639,720	
Other comprehensive income (loss)	-5,268,512	-1,645,220	
Comprehensive income	25,818,918	26,206,872	

Consolidated Cash Flow Statement (Unaudited)

	Three Months Ended		
CNY	March 31, 2023	March 31, 2022	
Operating Activities			
Cash from sales of merchandise and provision of services	316,945,873	392,796,778	
Tax refund	22,390,791	27,316,374	
Other received cash related to operational activities	6,144,834	9,288,587	
Subtotal of cash inflow from operational activities	345,481,498	429,401,738	
Cash paid for merchandise and services	145,033,851	336,017,954	
Cash paid to and for employees	134,472,294	107,719,618	
Cash paid for taxes and surcharges	13,455,282	6,938,817	
Other paid cash related to operational activities	19,226,628	15,595,855	
Subtotal of cash outflow from operational activities	312,188,056	466,272,244	
Net cash provided by operating activities	33,293,443	-36,870,506	
Investing activities			
Cash arising from the disposal of investments	817,734,181	833,768,443	
Cash arising from investment income	1,754,367	1,427,583	
Net cash arising from the disposal of fixed assets, intangible assets and other long-term assets	17,850		
Other received cash relating to investment activities	311,000		
Subtotal of cash inflow from investment activities	819,817,397	835,196,026	
Cash paid for the purchase and construction of fixed assets, intangible assets and other long-term assets	14,725,260	12,606,551	
Cash paid for investments	863,000,000	755,100,000	
Other paid cash relating to investment activities	300,000		
Subtotal of cash outflow from investment activities	878,025,260	767,706,551	
Net cash used by investment activities	-58,207,863	67,489,475	
Financing activities			
Cash arising from the issuance of common stock	727,886	20,316,335	
Including: Cash arising from subsidiaries absorbing investments by minority shareholders			
Subtotal of cash inflow from financing activities	727,886	20,316,335	
Cash paid for the distribution of dividends and profits, or payment of interests			
Including: dividends and profits paid to minority shareholders by subsidiaries			
Other paid cash relating to financing activities	3,331,678	1,236,611	
Subtotal of cash outflow from financing activities	3,331,678	1,236,611	
Net cash used for financing activities	-2,603,791	19,079,723	
Impact of fluctuation in exchange rates on cash and cash equivalents	1,471,208	-2,226,953	
Net increase in cash and cash equivalents	-26,047,003	47,471,739	
Add: Cash and cash equivalent at the commencement of the period	350,677,354	367,142,726	

Further Information

Terms and Conditions of the Report

Responsibility Statement

The Board of Directors, the Board of Supervisors and executive management of the Company warrant that the contents of this report are true, accurate and complete, and do not contain any false information, misleading statements or material omissions, severally and jointly accepting any legal responsibility thereof.

Shanghai, 28 April 2023 Espressif Systems

Board of Directors

Teo Swee Ann Founder and Chairman

Ng Pei Chi Information Technology Officer

Teo Teck Leong Shareholder-elected

Xu Xin Shareholder-elected

Lan Yuzhe Independent Director

Koh Chuan Koon Independent Director

Lee Sze Chin Independent Director

Board of Supervisors

Lv Zhihua Employee-elected

Fu Hanyu Shareholder-elected

Wang Yiwen Shareholder-elected

Executive Management

Teo Swee Ann Founder and CEO

Wang Jue Deputy General Manager

Shao Jingbo Financial Director



Forward-looking Statements

This report contains forward-looking statements and/or assessments about the business, financial condition, performance and strategy of the Espressif Group. These statements and/ or assessments are based on assumptions and management expectations resting upon currently available information and current estimates. These are subject to a multitude of uncertainties and risks, many of which are partially or entirely beyond Espressif's control. Espressif's actual business development, financial condition, performance and strategy may, therefore, differ from what is discussed in this report.

List of abbreviations

AI	Artificial Intelligence
AloT	Artificial Intelligence and Internet of Things
Bluetooth LE	Bluetooth Low Energy
CEO	Chief Executive Officer
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
Espressif	ESPRESSIF SYSTEMS (SHANGHAI) CO., LTD.
GM	Gross Margin
IC	Integrated Circuit
ют	Internet of Things
OBD	On-Board Diagnostics
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer
R&D	Research & Development
RF	Radio Frequency
RISC-V MCU	Reduced Instruction Set Computer-V Microcontroller Unit
ROE	Return on Earnings
SG&A	Selling, General and Administrative
SH	Shanghai
SoCs	System on Chips
TSR	Techno Systems Research

Investor Relations



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Official Platforms

www.espressif.com

blog.espressif.com

github.com/espressif

esp32.com

esp8266.com

bbs.espressif.com

Social Media

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All amounts presented in these condensed Consolidated Financial Statements are shown in CNY unless stated otherwise. Slight discrepancies between the amounts presented may occur due to rounding.