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ZHONO

Imaging a Better World

NOT ALL CHIPS ARE CREATED EQUAL

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— Mao Mao, Zhono's Product Director chips
in with solutions





Zhono

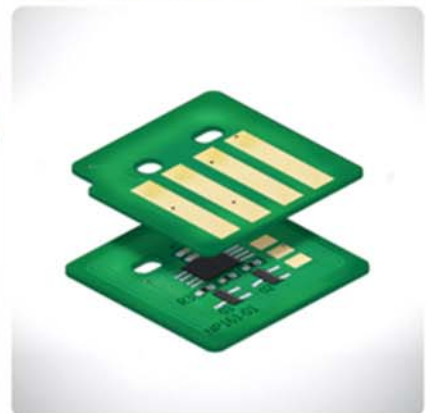
Innovation and Technology for a Better World: Zhono is a premier international high-tech company focused on integrated circuit design and committed to becoming the world's leading supplier of security chip solutions.

Headquartered in the Guangzhou High-Tech Development Zone, with R&D centers in Guangzhou, Shanghai and Xi'an, Zhono has a wholly-owned subsidiary in the United States directing sales, distribution and marketing activities throughout North America.

Zhono develops and manufactures printing consumable chips, microcontrollers (MCU) and security chips that are widely used in office equipment, smart hardware, and the Internet of Things devices. Zhono technology is highly regarded by thousands of customers worldwide. Founded in 2013, Zhono has built an extraordinary R&D team, with a complete production and supply process and a global distribution and sales network. Zhono holds numerous significant patents and has passed ISO 9001, GB/T29490, as well as other system certifications to offer the highest standards in the industry.

Our vision is to become the world's leading technology-driven company creating recognized value for our clients and customers. Our mission is to use technology innovation to make the world better by performing our business practice with sincerity, responsibility, professionalism and trust.

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Bertó's last laugh at chip safety



Zhono's product director, Mao Mao (centre), discusses chip test results from the new Fujifilm 320, the first printer to be released after Fujifilm changed its name from Fuji Xerox. This printer, which should sell well in the Asia-Pacific region, underwent the regular series of mixed, simulation and life tests as is the practice at Zhono to ensure product stability for customers.

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08 Chip Resetter Copes with Annoying OEM Firmware Updates

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Zhono takes pride that its Progeasy is the only chip resetter in the market, to date, that can reset the latest Kyocera 7th series chip.

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Making Microchips IP Safe

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— Mao Mao, Zhono's Product Director chips in with solutions

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Diary of a Chip Engineer



Xerox 2270 Copier chip

“Our Korean competitors were selling their compatible chips for US\$8 back in 2013. But I wouldn’t sell the premature products to our customers. Many compatible chips in the market proved to be unstable due to the vast number of models involved. I drove to visit customers in Guangzhou, Foshan and Huadu to test thousands of devices—many at night. I ran up 50,000 kilometers over six months in the process. Only after three years of trials did we dare market this product. For the past eight years our chip continues to be widely accepted by the market.”



Ricoh Copier Chip

“The serial number—an important factor in the design and development of the chip—is often hidden in the chip algorithm and requires a lot of analysis and many original chips to obtain the formulations. I heard there were many original toner cartridges in Hong Kong, so I went there to read the serial number. It took me 84 hours over seven uninterrupted day-and-night efforts to read tens of thousands of Ricoh serial numbers that could meet our customers’ needs.”



HP99X Chip Series

“Our official global release in March 2021 marked Zhono’s breakthrough into the compatible inkjet chip market. To be truthful, we completed this product in June 2020—nine months earlier, thanks to a very professional inkjet leasing company. This was not an easy product to crack because no two printers issue the same chip instructions. For this reason, there have been many complaints from the market over compatible chips released by others. We took six months to travel to more than 20 cities in China to test our solution in more than 100 devices. We analyzed dozens of instruction algorithms to make sure our chip worked in each case before we dared to officially release it.” ■



Mao Mao, who is the Product Director at Zhono has been with company for 13 years.

01 » Vietnam



Quach Gia Chinh,
General Manager, Khang Thang Trading
Company Limited

We have been a distributor in my region for more than 10 years now and my customers now ask for the Zhono chips every time. It has become a brand that means quality and trust. My customers trust it and so do we.

02 » Philippines



Samuel G. Madduma,
General Manager, Fastline Trading Inc.

An important reason for me is having backup and support. Zhono's after sales team is professional in that they are quick to respond, are aware of the changes in the market, have practical solutions and technical advice. Yes, the product quality is good, but I really value the back up support.

03 » Malaysia



S.K. Khor,
General manager, PTS Sales & Services
Sdn Bhd

I have been a very happy Zhono chip distributor since 2019. In recent years my customers have had many headaches when the printer companies do their firmware upgrades. Zhono is always willing to help provide replacement chips and other solutions to help me help my customers. Every time.

04 » Turkey



Mine & Pinar Ayas,
General Manager, Map Bilisim Bilgisayar
Malzemeleri Sanayi Ve Ticaret Limited

We like the fact that Zhono is always thorough in their checking. We have been involved in testing their chips in the field. Their chips are never released until all the testing is done. Once released, their chips are 100% stable and 100% reliable.



05 » Spain



Jorge Alvarez Perez,
General Manager, Karkemis Medioambiental

I have been completely surprised, although I shouldn't be, with the range of chips available, not only for printers, but copiers as well. They cover thousands of different devices, and this has helped me to expand my business to support more customers. I have had no complaints from my customers, so keep developing more products.



06 » Indonesia



Franky,
General manager, PT. Adiwarna Gemilang

I often got customer complaints that my cartridges failed because of the chips. I must admit I am very price conscious, too. Since I have started using Zhono's chips, I get a competitively priced product (which makes me happy) and I no longer have any customer complaints (which also makes me happy). I am sure it is because they have such a loyal and experienced team that they can provide this level of service.

07 » Tunisia

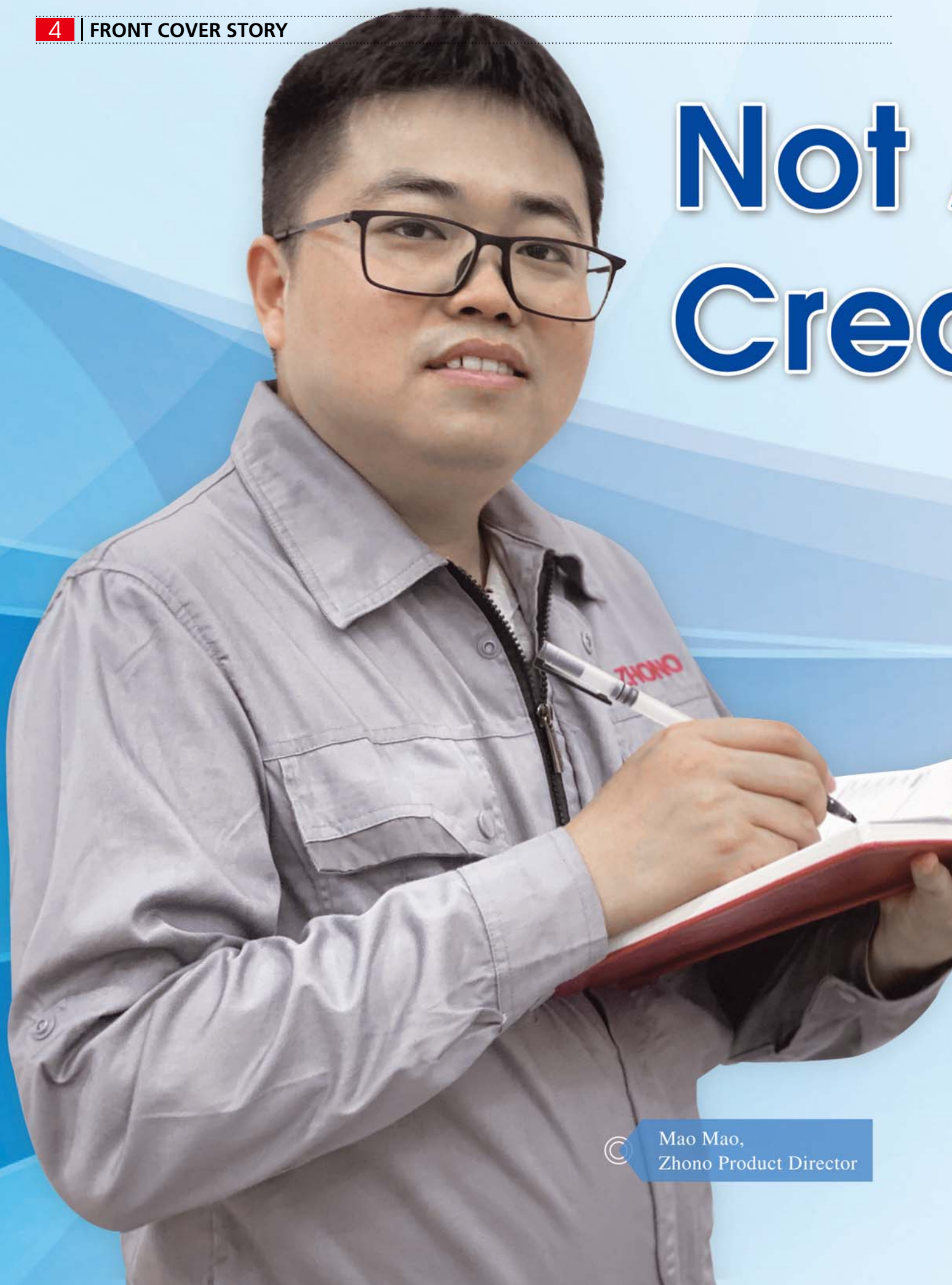


Sofien Ben Amara,
General manager, RCT

As Confucius said
"When it is obvious that the goals cannot be reached, don't adjust the goals, adjust the action steps."

And after those years we made business with wrong companies we choose to walk with Zhono Electronic Technology Co., Ltd. and we can see the success is easier with them. Zhono The only address for professional and honest trade .

Not Cred



Mao Mao,
Zhono Product Director

All Chips Are Created Equal

✍ David Gibbons

The availability and cost of microchips used in aftermarket printer cartridges has become a hot topic issue for the global industry in 2021.

Clearly, the COVID-19 pandemic has impacted many industries and the manufacture and supply of chips is no exception. The supply chain that manufactures and supplies the chip wafers, for example, is taking eight months longer to fulfil orders—a problem that will continue to impact pricing and supply for some time.

So, I made another trip to the head office and factory of Zhono in Guangzhou—the mega-sized, capital city of the prosperous Guangdong province in southern China. The word “perseverance” rings like a bell in my mind each time I visit Zhono. How are they making a difference at a time like this?

Perseverance

The company began operations in 2004 and was one of largest agents for



the sale of Static Control Components (SCC) chips in southern China.

However, with many buyers moving directly to online purchasing on sites like *JD.com*, the company began to focus on its own chip research and development. So, in 2013, founding CEO Jack Wang chose the more difficult road as a professional developer and producer of chips and formally established Guangzhou Zhono Electronic Technology Co., Ltd. (Zhono). The vision was “to become the world’s leading technology-driven enterprise” by

implementing technological innovation to “image a better world.”

Today, Zhono is one of the many well-established chip manufacturers, and in my view, it is the quiet achiever. It is not brazen in its marketing strategy as the company would rather get the product right, than be the “first to market with a half-baked solution.”

“Chip design was much simpler in the early days,” Zhono Product Director Mao admits. “Today, the chips are far more complex, and we see many others’



chips failing because they focused on being first to market before all due diligence had been completed.” Mao said he would never dare let a chip go to market that was not quite ready.

“It is a game of perseverance,” Mao says. There, I heard that word “perseverance” again.

The printing consumables industry began using chips in 2000 and they have become the single biggest obstacle to the development of the aftermarket. The chip is the key communication gateway between the printer and the cartridge. The aftermarket kept up with the OEMs at first. However, they moved to more complex microcontroller units (MCUs).

According to Mao, chips play an important role within the end-users printing experience. The chip monitors the usage of the consumables and can

provide early warning so users can prepare replacement consumables in advance to ensure the smooth completion of printing tasks. At the same time, chip data is used to avoid “grey” consumables being sold competitively in other regions impacted by currency exchange and pricing differences. However, users are finding out OEM manufacturers also use the chip’s identification function to “lock out” the use of compatible consumables.

It once took just six months to research, develop, produce, and test chips ready for stable and reliable use. Now, with the higher levels of encryption, that same cycle has blown out to three years in some cases. This is another reason for the pressure on prices and availability.

“Let me explain it this way,” says Mao. “A chip back in 2004 could be

likened to a small steel locker. By 2016, the chip’s capacity could be equated to the size of a filing room. Coming to 2020, that chip has grown in capacity to a large building. By 2024, we expect a chip to be like a skyscraper.” Mao explains that, as an engineer, “we need to take a lot of time to understand the purpose of each ‘room’.”

He also explains that by comparison, a firmware upgrade of the chip is like adding new instructions to open an originally closed room.

The highly encrypted, more complex chips used by the OEMs has meant any competitor must have deep financial pockets and be willing to invest the necessary time to deliver a stable, reliable workaround solution. Perseverance.



Innovation

In the ten years I have been in China, the one thing I have noted is that innovation is in the very DNA of the Chinese people. I have not seen it at the same level of intensity anywhere else. They are diligent and courageous in their inventiveness, too.

Here in China, you can find any components, parts or finished cartridges—whether they be remanufactured or new-build—and chips are no exception. The continuous investment and innate inventiveness of major chip manufacturers to research and develop solutions will continue to dominate global demand into the future.

General-purpose MCUs no longer work as OEMs pay more attention with the adoption of higher encryption levels and additional functions. The need to be

more innovative and to develop MCUs to meet the higher level of requirements has added for those involved in compatible chip development. The demand for talented chip design engineers has increased. This, along with the inability of the supply chain to meet the demand for wafers, contributes to increased costs and delays.

I was able to meet some of Zhono's very capable engineers during my visit. They are young, enthusiastic, professional and dedicated. They certainly have an abundance of innovative spirit and enjoy the challenge of finding solutions for their growing customer base all over the world.

Today, Zhono provides more than 10,000 compatible chip SKUs for mainstream laser printers and digital copiers. These include HP, Xerox,

Kyocera, Ricoh, Canon, Samsung, Minolta, Toshiba, OKI, Brother, Fujifilm and Lexmark.

They are committed to excellence. Being the first to market with a reliable, stable, compatible chip solution is exciting, they tell me. Exciting because it is coupled with months and sometimes years of rigorous testing not only in the lab, but out in the field in the devices owned and operated by loyal partners. Mao tells me, "There is no possibility of sacrificing stability in exchange for being the first to launch a new solution. We have seen too many others fail this way."

It all comes down to perseverance and innovation. Not all chips are created equal. ■

Chip Resetter Cop OEM Firmware Up

What are Firmware Updates?

A printer's firmware is a program stored on the printer that allows it to operate smoothly and to provide a positive end-user experience. One subtle but important role the firmware plays is to authenticate the cartridges which are installed.

Authentication occurs when then chip in the cartridge responds correctly to an algorithm challenge submitted by the printer.

By monitoring the two-way communication between a printer and an OEM chip, aftermarket chip manufacturers can reverse-engineer and develop compatible chips.

Updates sent through to the printer's firmware can introduce a new "challenge" not previously seen. OEM cartridge chips, manufactured by the printer maker, will "know" how to respond. Aftermarket chips may not—at least not until the design is updated to "understand" the new challenge and be able to work with the new printer firmware version.¹

In recent years, some printer OEMs have strategically pushed firmware updates to block aftermarket cartridges from working in printers. As most cartridges have chips nowadays, the production, distribution and storage

of aftermarket chips can be impacted following a firmware update.

Zhono's Solution

To cope with the ever-increasing firmware updates, Zhono launched Progeasy in 2017, which the company says is an integrated solution for programing, resetting, testing and remote chip upgrading.

Zhono is not the only chip manufacturer to develop a chip resetter solution to annoying firmware updates. However, Zhono takes pride that its Progeasy is the only chip resetter in the market, to date, that can reset the latest Kyocera 7th series chip.

Features and Strengths

Progeasy provides a solution for cartridge remanufacturers as it can avoid patent risks that confront those who use aftermarket chips. Meanwhile, it enables many OEM chips to be reused which is also good for the environment.

Once an OEM sends out a new firmware update, Zhono will immediately examine the impact of that update, will make the necessary adjustments, and upload the new data to its sever. By downloading the latest program remotely from the Zhono server, customers can easily upgrade their in-stock chip inventories—saving time and costs.

In addition, Progeasy also helps reduce costs for the purchasing, warehousing and delivery of chips. Every series of chips is different in terms of shape and design and remanufacturers must keep stock of as many as possible to customize chips for customers. However, with Progeasy, they only need "empty chips"—chips with no data. Progeasy can program the "empty chips" any chip series as requested. It makes production planning and storage much simpler saving money and supply issues. Through resetting and programing Zhono chips, users even don't have to buy "empty chips."

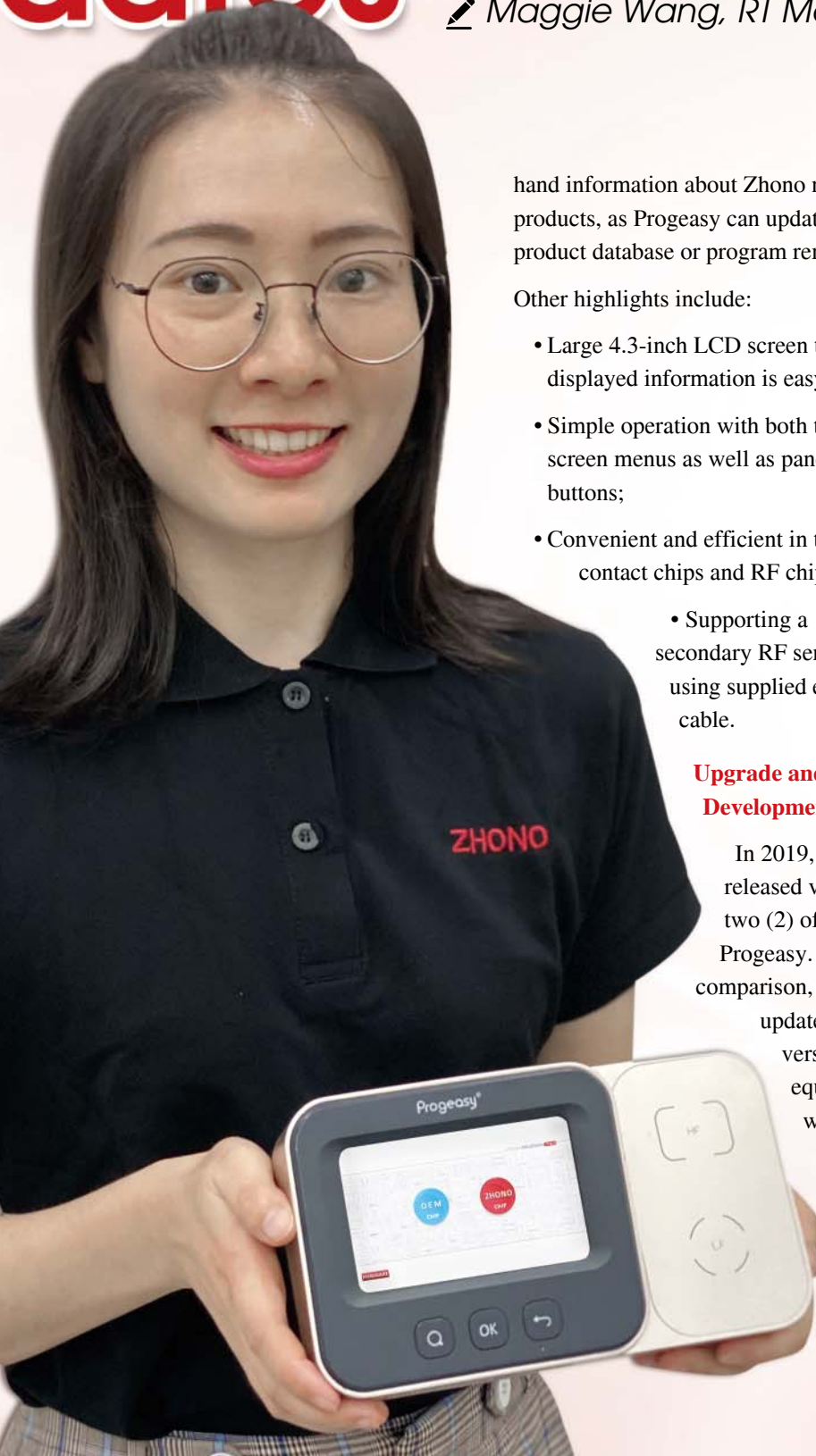
More importantly, Zhono claims that Progeasy is easy to use. Production line workers can use it to identify chips with just one click and check if they are installed correctly in terms of series, codes, page yields, and versions. Chips can be reset or programed without removing them from the cartridges, as Progeasy is embedded with extended sensor device.

Zhono also claims its customers can get first-



es with Annoying dates

 Maggie Wang, RT Media



hand information about Zhono new products, as Progeasy can update a new product database or program remotely.

Other highlights include:

- Large 4.3-inch LCD screen to ensure displayed information is easy to read;
- Simple operation with both touch screen menus as well as panel buttons;
- Convenient and efficient in testing contact chips and RF chips;
- Supporting a secondary RF sensor using supplied extension cable.

Upgrade and Development

In 2019, Zhono released version two (2) of the Progeasy. By comparison, the updated version is equipped with a wireless

identifier device, which is deemed an industry innovation. The wireless identifier device enables users to better cope with complicated scenarios with faster identifying and resetting.

Zhono claims it is developing a further updated version of Progeasy. Zhono expects to launch Progeasy Version 3 to the market in the middle of 2022.

Feedback from Customers

According to Zhono, Progeasy has been well received by customers. The volume of sales continues to rise since its introduction in 2017. By updating the database online, Progeasy can reset and program more and more chip series, making it popular with remanufacturers and distributors of finished products around the world.

From a practical perspective, Progeasy saves delivery time for users who no longer need to wait for new chips to be shipped. Neither do they need to purchase new chips. They only need to buy some credits at a comparatively very low price to reset the chips through Progeasy.

Considering the impact brought on by the COVID-19 pandemic, delivery delays and failures have become much more common in all industries. Zhono engineers say they are very pleased that their Progeasy users don't have to have worry about being affected. ■

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5 QUESTIONS

Making Microchips IP Safe

— Zhono's IP Director Fang Du discusses the importance of patents

What does it mean to be “IP-safe” when it comes to chips?

Being “Chip IP-safe” has a direct impact on a company's value and profit, as chips are one of the important components in a printer cartridge. Chip design requires strong self-development capability. Therefore, it is crucial for a company to reduce the risk of patent-infringing chip as much as possible. In pursuit of being “IP-safe” and to provide its customers with a sense of peace and security, Zhono not only studies the patent layout of the OEMs but also the patents of other aftermarket companies.

Why is the market demanding IP-safe products such as chips?

To stabilize market share, OEMs take intellectual property as a weapon to block the availability of aftermarket consumables. OEMs create technical barriers in printers and limit the development of aftermarket consumables through intellectual property rights. If the aftermarket wants to satisfy customers' needs with their products, and at the same time make profits, they definitely need to provide IP-safe products. Zhono believes that chipmakers should take the responsibility to get to know the limitations relating to intellectual property, by reducing or eliminating any patent-infringing risk with workaround solutions. In this way, the industry and distributors can run stable businesses.

How is it that Zhono can provide IP-safe chips?

Intellectual property rights are not only the embodiment of technical strength, but also the “moat” of innovative technology. Through self-researched and

self-developed chips, Zhono has been able to satisfy its customers' demands and prevent any imitation or use of its technologies by third parties under the protection of intellectual property. IP-safe chips are Zhono's core assets, which improve also provide Zhono's competitiveness.

Relying on its strong R&D capacity, Zhono achieved technology innovation. Zhono has an experienced intellectual property team, which created a complete intellectual property layout. These laid the foundation for Zhono to provide IP-safe chips.

What has Zhono achieved so far in IP protection?

To date, Zhono has successfully applied for more than 160 patents, covering several countries and regions. Meanwhile, the company has also carried out a patent layout for core technologies. Zhono won the Excellence Award in the “High-value Patent Cultivation Layout” competition in the Guangdong-Hong Kong-Macao Greater Bay Area, and it is also a Guangdong Province Intellectual Property Demonstration Enterprise and a National Intellectual Property Advantage Enterprise.

What are the biggest challenges in developing IP-safe microchips?

The biggest challenges, from a technological point

of view, are the OEM printer firmware updates that are becoming more and more frequent. Consequently, it has become increasingly more difficult to avoid patent-infringement with some technical limitations. Now that chips have become a global focus, we not only have to face the intellectual property blockade of OEMs, but also the potential risk of infringing IP as well. To deal with this, chipmakers—from within the cartridge aftermarket as well as other industries—have been advancing their technology development in recent years.

Sometimes they need to turn to special technical testing methods to evaluate if their intellectual property rights are being violated or not. IP protection will continue to be a challenge in the future.



Fang Du, IP Director, Zhono < alexdu@zhono.com >

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Cultivating the Culture of Caring

Zhono has built up an image in the minds of its customers of being a fighter—a positive, deep impression it has established over its 16 years.

Being a “fighter” works when it comes to business and delivering strong products that work. At the same time, the Guangzhou-based microchip developer and manufacturer knows how to “fight” for its staff as well. By nurturing its hard-working staff and building a strong team it has been able to keep a loyal team with many of the original staff still happily employed there.

Jack Wang, the founding CEO of Zhono—pictured below in front of his role model Albert Einstein—continues to encourage excellence in learning and innovation. By empowering his team to grow their thinking skills, he believes the company has a more sustainable and solid future.

The company runs classes covering management, R&D, marketing, production management, administration, as well as new staff orientation. The program is called Zhono Business Administration (ZBA) and the practical and effective classes have been helping staff be more effective in their daily work since 2015.



Zhono also invites guest lecturers to visit and provide specialist classes from time to time. The company also offers study allowances for those staff wanting to seek external education and skill development.

Instead, the company insisted its staff go on a 10km hike to improve employee health and teamwork. The August 15, 2020 hiking activity, themed “Fighter,” revealed Zhono to be as concerned for its employees’ well being as much as it is for chip security.

“Every step and every path we took and every effort we made during the hiking was like what Zhono has been through these years,” one employee told the group. “From setting up a small shop to the building of a manufacturing plant with several R&D departments, from starting in the domestic market to the setting up of an international branch, Zhono has had overcome difficulties time after time and pass by another milestone.”

As a result, staff have grown in confidence and the ability to overcome difficulties together. The team are willing and confident to brainstorm on certain tasks, to solve problems and to create ideas that would be adopted by the company. ■



Listening to and Serving Customers



Listen to Customers

Janny Lee

Account Manager, Zhono Sales & Marketing Department

Originally, the components used on replacement Xerox 3500 series chips were not sealed. However, some Japanese customers asked that key components be fully sealed and reinforced. They were worried the components might become loose during installation, rendering them useless. Despite the unlikelihood of this, we requested the component supplier to add sealing to the components of concern. Despite the increase in cost, we wanted to reinforce customers’ confidence with Zhono chips.



Thorough market research

Mandy Deng

Account Manager, Zhono Sales & Marketing Department

The Toshiba 2309 cartridge comes in different versions for different regions. Turkey being the gateway between Europe and Asia has both the European and Asian versions at the same time. This has confused some customers as they were not sure which replacement chips they should use. So, Zhono developed a universal chip to be used in all regions saving communication costs and stock management confusion.



Rigorous testing

John Ma

Testing Engineer, Zhono Product Center

A Malaysian customer was anxious that Zhono’s compatible 561 chips didn’t work in Sharp MX-5050n printers. So, staff flew to Malaysia and found a firmware update was the cause of the problem. The trip increased costs but the product line was upgraded with a stable solution thanks to help from customers that sell Sharp printers. Chips for the Sharp MX61, for example, can now be verified immediately following any firmware updates.

Einstein: Discovering the Impossible

Eight secrets that inspired Zhono's Jack Wang, have also made Einstein a role model for many wanting to achieve success in business.

Albert Einstein admired Charlie Chaplin, a famous English comic actor in the era of silent film. When they met in 1931, Einstein commented, "You don't say a word, yet the world understands you!"

Chaplin replied, "It is true. But your fame is even greater: the world admires you, even when nobody understands what you say."

Not many of us, if we are honest, can explain the theory of relativity nor the $E=mc^2$ formula he became so famous for. However, his diligence and determination to attain the "impossibles" in life is what has attracted the likes of the founding CEO of Zhono—Jack Wang (pictured in front of his Einstein wall on page 13).

Life wasn't always easy for Einstein. He was born in Ulm, Germany on March 14, 1879, with a fat, misshaped head and his mother and grandmother feared he was deformed. Young Albert struggled to speak fluently until the age of four. At the age of five, however, his young mind was fascinated by the way the magnets moved inside a pocket compass given to him by his father. He wondered what made the needle point in a

certain direction and not anywhere else. At the age of 16, he wrote his first scholarly paper inspired by his compass, which discussed the force of magnetism.

Some interesting facts include:

- The parietal lobe of his brain was 15% larger than that of an average brain;
- His favorite scientist was Galileo Galilei;
- His teachers did not consider him a good student and refused to recommend him for further employment;
- He was extremely forgetful and would often leave behind his suitcase and could not keep track of his keys;
- He never learned to swim but loved sailing throughout his life;
- He never wore socks;
- His famous formula $E=mc^2$ made the 26-year-old a star;
- He had to wait until 1921 to win

The Nobel Prize in Physics—he was 42.

Eight secrets that inspired Zhono's Jack Wang, have also made Einstein a role model for many wanting to achieve success in business:

1. Simplicity: When a master

wants to share something complex, that person will do it in a way that a six-year-old can understand it. Simplicity is a key to success;

2. Curiosity: Einstein inspired us to ask questions and look for reasons. A childlike curiosity opens the doors of imagination which leads to discoveries;

3. Perseverance: Einstein said, "It's not that I am so smart, it's just that I stay with the problems longer." You must not succumb so easily to failure DURING the toughest of times and dilemmas. Success will not elude you for long;

4. Focus: Einstein once mused, "If you are kissing while driving a car, you are not paying the right amount attention to the kiss." You cannot multitask and be the best at all you do. Focus on what will bring you most success;

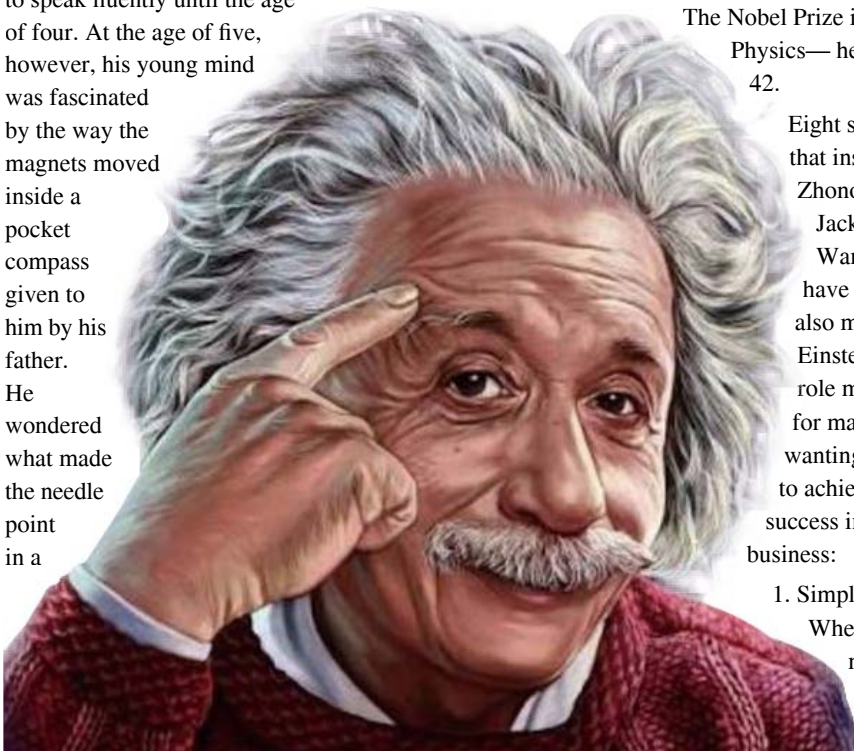
5. Imagination: If you are eyeing a better world for tomorrow, your imagination is the door to discoveries and ideas, but you have to exercise it to turn it into reality;

6. Mistakes: Making a mistake is not wrong, not learning from it is. Einstein never hesitated to take risks out of fear of making a mistake;

7. Never be Repetitive: You cannot expect different results when you do the same things over and over again and you have to explore new ideas and strategies;

8. Be Unconventional: Thinking rationally is good, but sometimes you have to break out and be unconventional like Einstein whose thinking was not like others. Be brave and use your actions to make yourself distinct and stand out.

These lessons from Einstein do not apply to scientists alone; they apply to all those who want their life to mean something, to be successful and become part of the 1% elite. ■



David Gibbons



You Have a Choice

How important is choice? We only realise how fundamental it is when it is taken away.

I remember quite clearly the day our local butcher shop closed when I was a child. It must have been significant because I still remember it half a century later.

I also remember Mum and Dad saying to each other at the time, “We should have bought more from him instead of going to the supermarket to buy our meat. Now that he has gone, we don’t have choice anymore.”

I am sure it must have been more convenient going to the supermarket. It may have been cheaper too, but why did we regret the closure of the independent butcher? Maybe his products were fresher and tastier? Maybe he provided added value services? In any case. He was gone. We lost choice in the process.

How important is choice? We only realise how fundamental it is when it is taken away. Only after the butcher closed did we realise what we had lost. The supermarket won that day and had created a monopoly.

“Fair competition” refers to an open and free market in which there is an equitable competition between the rival companies based on a few parameters including quality, price and customer service. It generates new employment opportunities, raises the quality of products, maintains reasonable pricing, and provides the best customer service possible.

While monopolies do exist, governments try to keep an eye on them to make sure those who are market leaders do not take advantage of this and charge the customers high rates for their goods and services. Anti-competitive, or anti-trust laws are put into place in most countries to protect consumers from predatory behavior of monopolistic

companies. Here in China, for example, companies can be fined between 1% and 10% of their annual revenue for antitrust violations. Meituan, the country’s largest on-demand delivery service provider, is facing a hefty fine following an antitrust probe from Beijing regulators, a fate like what befell Alibaba Group Holdings.

Those manufacturers who patent their inventions, however, are allowed to have a legal “monopoly” share of the market albeit for a short period of time. During the time the patent is in force no other company can use its invention for its own purposes. After the patent rights dissolve, others are permitted to enjoy market share as well. It’s all for the benefit of the consumer.

The printer and imaging supplies industry is a good example of where choice is being gradually eroded. Globally, there used to be tens of thousands of printer cartridge

remanufacturers. It is also true for the component and finished goods manufacturers. As the industry matured, some have grown bigger, while others have merged with each other or formed alliances. Some of the independents were forced to close. The bigger ones, however, have grown bigger and are at risk of monopolising the market.

Our industry has seen vicious price wars. The 2612A cartridge, for example, sells for less than US\$3 dollars each. Is this kind of war good for the industry? Is it just a tactic by some to shut down their competitors?

Let’s discuss the availability and pricing of chips. Raw material costs have increased, and demand has outstripped supply. Since 2020, the global chip shortage has been creating headaches for companies in many industries. Not just our own.

Many chip manufacturers in our industry are struggling to meet the demands from within their own groups and alliances. Which means their customers—the small and medium cartridge manufacturers and remanufacturers—are left empty handed or have to pay huge prices.

So, independent chip manufacturers—like Zhono—are crucial for all of us. They don’t belong to any group or alliance. They do not take sides. They are necessary to maintain relative fairness within our industry.

Support the independents if you value choice! ■

David Gibbons is the publisher of this magazine and is a director of RT Media Ltd. You can watch Gibbons share his messages on InTouch TV: <http://bit.ly/inTouchTV>.





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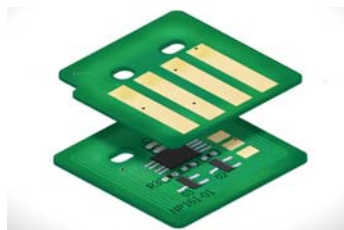
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DID YOU KNOW?



Zhono was first to launch several compatible chips for use in Xerox devices.

QUICK FACTS



80% The percentage of global independent consumables companies that obtain chip samples from Zhono.



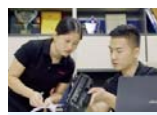
>10,000 The number of mainstream laser printer and digital copier models that can use Zhono's aftermarket chips.



>1,000 The number of printers used for testing purposes in Zhono's chip testing center.



15% The percentage of Zhono's 158 graduate staff who hold masters' degrees or higher academic credentials.



30% The percentage of Zhono staff working in R&D



42 The number of staff that have worked at Zhono for more than 5 years with 10 staff providing loyal and dedicated service for more than 10 years.



80% The percentage of female staff working in Zhono's sales team.



30% The percentage of its revenue Zhono spends on R&D.

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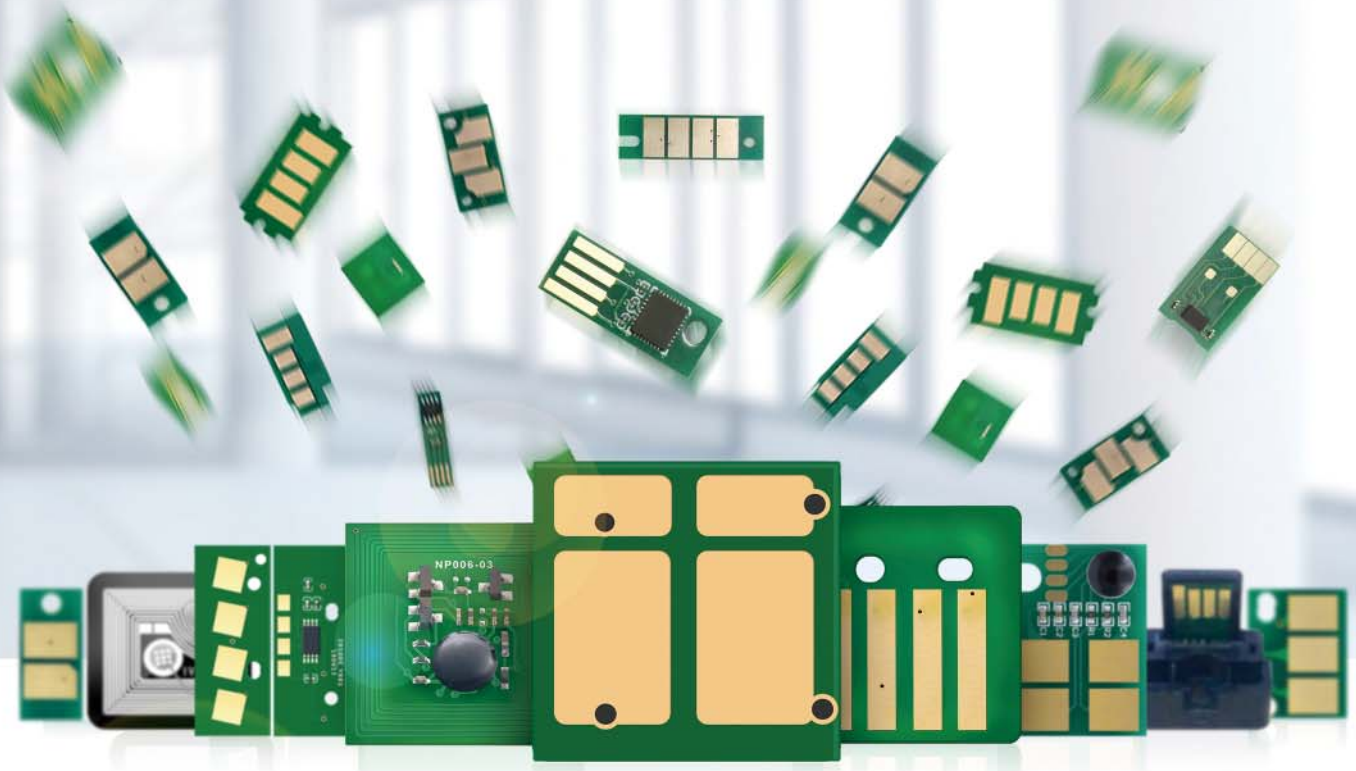
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