



Nanjing Software Park is one of the high-tech engines in Jiangbei New Area. PROVIDED TO CHINA DAILY

By YUAN SHENGGAO

Nanjing, the host city of the 2019 World Semiconductor Conference, is on track to become a semiconductor production base with national and international influence, according to local officials.

During a recent conference promoting high-quality growth, local leaders proposed an ambitious plan to develop the industry in the capital of East China's Jiangsu province.

According to the plan, the city is expected to become the largest integrated circuit production base in Jiangsu and will be listed among the top three nationally within the next few years.

It also aims to become a world-class semiconductor innovation and production hub, focusing on sectors such as wafers, third-generation semiconductors and integrated circuits.

The confidence of Nanjing's authorities largely comes from Jiangbei New Area, the main destination for the city's semiconductor industry.

Soon after it became a national-level new area in 2015, Jiangbei New Area had an overall growth plan in place to forge a "city of chips" with global influence.

They aim to attract the world's leading manufacturers and research institutions in the fields of semiconductors, IC and wafers.

To date, more than 200 IC enterprises from around the world have begun operating in the new area, covering design, production, manufacturing and testing.

Taiwan Semiconductor Manufacturing Co, or TSMC, is a world-leading semiconductor company that has invested in Jiangbei. Its Nanjing plant opened in 2017.

In the same year, the new area secured 36 investment projects, included one funded by ARM, one of the leading IC solution providers based in the United Kingdom.



Jiangbei New Area is expected to become one of the nation's top IC and semiconductor bases in the next few years. PROVIDED TO CHINA DAILY

'City of chips' in position to become electronics leader

Jiangbei New Area in Nanjing, Jiangsu province attracting sector heavyweights



From left: A number of business incubators are in place in Jiangbei New Area. TSMC is one of the major companies that have settled in the new area. PROVIDED TO CHINA DAILY

Unisco — the semiconductor unit of Tsinghua Unigroup, Foxconn, Global Unichip, Huada Semiconductor, Vimicro and

Spreadtrum Communications are among the heavyweights that have set up shop in Jiangbei New Area.



Renowned research institutions in the sector, such as the National Engineering Research Center for Application Specific

Integrated Circuit, and China Electronic Product Reliability and Environmental Testing Research Institute, have opened



New office buildings are in place for startups to settle down in the new area. PROVIDED TO CHINA DAILY

200+ IC enterprises

from around the world have begun operating in Jiangbei New Area

their branches in Jiangbei.

In addition to the solid industrial development in Jiangbei New Area, Nanjing has other advantages in its arsenal to develop the semiconductor and related industries.

The city has 53 higher-learning institutions, second only to Beijing.

With 800,000 university students at present and 260,000 graduates every year, the city can offer rich, high-quality human resources for the development of the semiconductor and related industries.

The city is also home to more than 600 research institutes, which can offer technological support for companies in the sector.

Nanjing has long been an electronics production hub in the east of China. The current output of the local industry amounts to 500 billion yuan (\$72.65 billion) a year.

Its products range from semiconductors, IC, computers, automotive electronics, flexible displays, mobile phones and industrial automation.

An important part of the electronic industry, the global and domestic semiconductor sector has shown vigorous growth in recent years.

According to SEMI, the international industry association representing the semiconductor industry, global sales of semiconductor equipment reached \$64.53 billion in 2018. They grew 14 percent year-on-year, reaching a record high.

SEMI said China became the world's second-largest semiconductor equipment market last year with a total sales value of \$13.11 billion and a year-on-year growth rate of 59 percent.

Looking further afield for inspiration and innovation

By YUAN SHENGGAO

Borrowing experiences from Silicon Valley in the United States and Shenzhen in South China's Guangdong province, Jiangbei New Area in Jiangsu's provincial capital of Nanjing is devoted to improving services for better business development.

One effort is the Nanjing Integrated Circuit Industry Service Center, which was founded in 2016 in Jiangbei. The center, also known as ICiC, is a public service platform for the integrated circuit industry.

It offers services including human resources, technology, finance and marketing. The center's officials said it has integrated resources from home and abroad, to offer one-stop services to enterprises and help to upgrade the local IC industry.

The center has a 7,000-square-meter training base for local personnel in the IC industry.

The training base has cooperated with seven higher-learning institutions, including Nanjing University, Southeast University and Nanjing University of Posts and Telecommunications, to form a microelectronics training alliance.

It has also teamed up with vocational colleges to establish an alliance for training IC professionals.

With programs offered online and offline, the base's major subjects include IC design, testing, manufacturing and other applications.

To date, the base has offered training classes for about 5,000 people.

Meanwhile, the ICiC has encouraged high-caliber professionals from the rest of China and



An ICiC official discusses with media representatives how the center serves local businesses. PROVIDED TO CHINA DAILY

overseas to work with local companies and institutions.

To make the IC industry in Jiangbei New Area better known to university students in China, the ICiC has organized a number of collegiate IC design contests.

Nearly 5,000 students from 100 universities and colleges across China have attend Jiangbei events. Many have shown an interest in this new hub, according to ICiC officials.

Despite its great market potential, officials admitted the IC industry is hindered by a short supply of qualified professionals and core technologies.

The new area's collaboration with institutions and companies to offer training programs and curriculum can help overcome the short supply of talent, local officials said.

To solve the bottleneck in core technologies, the ICiC, as well as the administration of Jiangbei New Area, has taken multiple measures.

One is the establishment of public technological service platforms.

The platforms include an electronics design automation center, an IC research and development laboratory, an internet of things applications lab and an IC instruments and information center.

These facilities aim to help enterprises improve their R&D capability and efficiency through sharing resources.

The facilities have also helped substantially cut R&D costs, said the officials.

They estimate the saving of corporate expenditure amounted to more than 100 million yuan

(\$14.5 million) in the past few years.

Another significant facility to help startups grow is the 5,000-sq-m "chip incubator" for innovation and entrepreneurship, which allows companies to start R&D when they are in the construction stage.

To learn from the experiences of others, the ICiC has organized events for brainstorming, networking and information sharing during the past three years.

These include annual meetings for the Chinese semiconductor market in 2017 and 2018, a forum for the development of China's IC professionals, the 2017 Sino-German smart manufacturing conference and the 2017 SOI Technology Summit.

Jiangbei officials said the new area has plans to improve the local business environment to attract more big-name companies from China and overseas.

For instance, the new area is planning for specific industrial parks to host businesses of various segments. These would include an industrial and technological R&D park for IC development, the Nanjing Software Park for IC and software design and the Pukou Economic Development Zone for wafer production and testing.

The local government predicts the output of Jiangbei's IC industry will reach 100 billion yuan this year. The new area will gather more than 300 enterprises and 10,000 professionals in the sector.

The 100-billion-yuan benchmark means that Jiangbei will become one of the leading IC bases in China, local officials said.

Industry leaders converge to discuss latest trends

By YUAN SHENGGAO

The latest ideas, technologies and products in the semiconductor and related industries are being displayed at the 2019 World Semiconductor Conference. It takes place from Friday to Sunday in Nanjing, capital city of East China's Jiangsu province.

Leaders of semiconductor industry associations, well-known experts, business leaders and professionals are taking part in the event.

They will discuss the latest development and achievements of the semiconductor industry.

They will also discuss hot topics, such as the global semiconductor market and application trends, the internet of things and artificial intelligence.

The conference includes a summit forum, a forum for innovation, an international semiconductor expo in an exhibition area of 15,000 square meters, and a job fair for professionals in the integrated circuit sector offering nearly 200 key positions and

another 800 job vacancies. A total of 14 symposiums relating to topics such as IoT, wireless communications, electronic design automation and automotive electronics will also be held.

According to the organizers of the conference, the international semiconductor expo is one of the highlights of the event.

About 200 companies from countries and regions including China, the United States, Japan, the United Kingdom, the Netherlands, South Korea and Belgium will exhibit their products at the expo. These will include semiconductors, chips, IC and wafers, as well as services including design, testing and investment promotion. At various forums and symposiums, leaders of renowned semiconductor companies, such as Samsung, SK Hynix, Taiwan Semiconductor Manufacturing Co, Unisoc, and GigaDevice, will share their insights on the latest trends of the industry.

During the conference, reports on the development trends of the global and Chinese semiconductor industry and a list of China's innovative semiconductor products and projects will be released. These will provide a guide to investments, according to the organizers.

Also held concurrently with the event is the 17th Annual Meeting for the Chinese Semiconductor Market.

The three-day event is jointly organized by the China Semiconductor Industry Association, China Center for Information Industry Development, Jiangsu Industry and Information Department and the administrative committee of Jiangbei New Area.



The experience of Jiangbei New Area's IC industry will be a hot topic at the ongoing conference in Nanjing. PROVIDED TO CHINA DAILY