

STMicroelectronics

STMicroelectronics is a French-Italian multinational electronics and semiconductor manufacturer headquartered in Geneva, Switzerland. It is commonly called **ST**, and it is Europe's largest semiconductor chip maker based on revenue. While STMicroelectronics corporate headquarters and the headquarters for EMEA region are based in Geneva, the holding company, STMicroelectronics N.V. is registered in Amsterdam, Netherlands.

The company's US headquarters is in Coppell, Texas. Headquarters for the Asia-Pacific region is in Singapore whilst Japan and Korea operations are headquartered in Tokyo. The company headquarters for the Greater China region is in Shanghai.^[1]

Contents

- History**
- Shareholders**
- Company structure**
- Manufacturing facilities**
 - Grenoble, France
 - Rousset, France
 - Tours, France
 - Milan, Italy
 - Catania, Italy
 - Kirkop, Malta
 - Ang Mo Kio, Singapore
 - Tunis, Tunisia
- Other sites**
 - Administrative headquarters
 - Assembly plants
 - Design Centers
 - Closing sites
 - Closed sites
 - Future locations
- Solar cells**
- See also**
- References**
- External links**

History

STMicroelectronics was formed in 1987 by the merger of semiconductor companies SGS Microelettronica (Società Generale Semiconduttori) of Italy and Thomson Semiconducteurs, the semiconductor arm of France's Thomson. At the time of the merger the company was known as SGS-THOMSON but took its current name in May 1998 following the withdrawal of Thomson SA as an owner.

SGS Microelettronica and Thomson Semiconducteurs were both long-established semiconductor companies. SGS Microelettronica originated in 1972 from a previous merger of two companies:

- ATES (Aquila Tubi e Semiconduttori), a vacuum tube and semiconductor maker headquartered in the Abruzzese city of L'Aquila, which in 1961 changed its name to *Azienda Tecnica ed Elettronica del Sud* and relocated its manufacturing plant to the outskirts of the Sicilian city of Catania
- Società Generale Semiconduttori (founded in 1957 by Adriano Olivetti).

Thomson Semiconducteurs was created in 1982 by the French government's widespread nationalisation of industries. It included:

- the semiconductor activities of the French electronics company Thomson.
- Mostek, a US company founded in 1969 by some ex-employees of Texas Instruments.
- Silec, founded in 1977.
- Eurotechnique founded in 1979 in Rousset, Bouches-du-Rhône as a joint-venture between Saint-Gobain of France and US-based National Semiconductor.
- EFICIS, founded in 1977.
- SESCOSEM, founded in 1969.

After its creation by merger in 1987, SGS-Thomson was ranked 14th among the top 20 semiconductor suppliers with sales of around US\$850 million. The company has participated in the consolidation of the semiconductor industry since its formation, with acquisitions including:

- In 1989, British company Immos known for its transputer microprocessors from parent Thorn EMI.
- In 1994, Canada-based Nortel's semiconductor activities.
- In 2002, Alcatel's Microelectronics division, which along with the incorporation of smaller ventures such as UK company, Synad Ltd, helped the company expand into the Wireless-LAN market.
- In 2007, US-based Genesis Microchip.^[2] Genesis Microchip is known for their strength in video processing technology (Faroudja) and has design centres located in Santa Clara, Toronto, Taipei City, Taiwan R.O.C. and Bangalore.

On December 8, 1994, the company completed its initial public offering on the Paris and New York stock exchanges. Owner Thomson SA sold its stake in the company in 1998 when the company also listed on the Borsa Italiana in Milan.

Buy-out of *VLSI Vision Ltd.*

In 2002, *Motorola* and *TSMC* joined ST and Philips in a new technology partnership. The Croles2 Alliance was created with a new 12" wafer manufacturing facility located in Croles (France).

By 2005, STMicroelectronics was ranked fifth, behind Intel, Samsung, Texas Instruments and Toshiba, but ahead of Infineon, Renesas, NEC, NXP, and Freescale. The company was the largest European semiconductor supplier, ahead of Infineon and NXP.

Early in 2007, *NXP* (formerly Philips Semiconductors) and Freescale (formerly Motorola Semiconductors) decided to stop their participation in Croles2 Alliance. Under the terms of the agreement the Alliance came to an end on December 31, 2007.^[3]

On May 22, 2007, ST and Intel created a joint venture in the memory application called *Numonyx*. This new company merged ST and Intel Flash Memory activities.

Semiconductor market consolidation continued with ST and NXP announcing on April 10, 2008, the creation of a new joint venture of their mobile activities, with ST owning 80% of the new company and NXP 20%. This joint venture began on August 20, 2008.

On February 10, 2009, ST Ericsson, a joint venture bringing together ST-NXP Wireless and Ericsson Mobile Platforms, was established.

In 2011, STMicroelectronics announced the creation of a joint lab with Sant'Anna School of Advanced Studies. The lab will focus on research and innovation in bio-robotics, smart systems and microelectronics.^[4] Past collaborations with Sant'Anna School of Advanced Studies included DustBot, a platform that integrated self-navigating "service robots" for waste collection.^[4]

ST Ericsson was a multinational manufacturer of wireless products and semiconductors, supplying to mobile device manufacturers.^[5] ST-Ericsson was a 50/50 joint venture of Ericsson and STMicroelectronics established on February 3, 2009, and dissolved on August 2, 2013. Headquartered in Geneva, Switzerland, it was a fabless company, outsourcing semiconductor manufacturing to foundry companies.

Shareholders

As of December 31, 2014, the shareholders were:^[6]

- 68.4% public (New York Stock Exchange, Euronext Paris, Borsa Italiana Milano)
- 4.1% treasury shares
- 27.6% STMicroelectronics Holding B.V.
 - 50% FT1CI (Bpifrance 79.2% and French Alternative Energies and Atomic Energy Commission (CEA) 20.8%; previously Areva and CEA)
 - 50% Ministero dell'Economia e delle Finanze of Italy (Finmeccanica until 2004, Cassa Depositi e Prestiti until 2010, both between 2004-2009)

Company structure

Following an earlier failure, STMicroelectronics has stayed out of the volatile markets for DRAM and PC microprocessors. In 1994, it attempted to launch compatible Intel 80486 microprocessors in partnership with American company Cyrix. Only model one was completed, the 1995 Cyrix M1 microprocessor, which was intended to compete with Intel's Pentium family.

It did achieve some success, however, in the PC-compatible x86 embedded systems market with its STPC SoC line, culminating in the 486-class STPC Atlas, which reached end-of-life in 2008.

Manufacturing facilities

Unlike so-called *fabless semiconductor companies*, STMicroelectronics owns and operates its own semiconductor wafer fabs. The company owned five 8 inch (200 mm) wafer fabs and one 12 inch (300 mm) wafer fab in 2006. Most of the production is scaled at 0.18 µm, 0.13 µm, 90 nm and 65 nm (measurements of transistor gate length). STMicroelectronics also owns back-end plants, where silicon dies are assembled and bonded into plastic or ceramic packages.^[7]

Major sites include:

Grenoble, France

Grenoble is one of the company's most important R&D centres, employing around 4,000 staff. The Polygone site employs 2200 staff and is one of the historical bases of the company (ex SGS). All the historical wafer fab lines are now closed but the site hosts the headquarters of many divisions (marketing, design, industrialization) and an important R&D center, focused on silicon and software design and fab process development.

The Croles site hosts a 200 mm (8 in) and a 300 mm (12 in) fab and was originally built as a common R&D center for submicrometre technologies as part of the 1990 *Grenoble 02* partnership between SGS-Thomson and CNET, the R&D center of French telecom company **France Telecom**. The 200 mm (8 in) fab, known as Croles 1, is the company's first and was built as part of a 1991 partnership between SGS-Thomson and Philips to develop new manufacturing technologies. Croles 1 was opened on September 9, 1993 by Gérard Longuet, French minister for industry.

The 300 mm (12 in) fab was inaugurated by French president Jacques Chirac, on February 27, 2003. It includes a R&D center which focuses on developing new nanometric technology processes for 90 nm to 32 nm scale using 300 mm (12 in) wafers and it was developed for *The Croles 2 Alliance*'. This alliance of STMicroelectronics, TSMC, NXP Semiconductors (formerly Philips semiconductor) and Freescale (formerly Motorola semiconductor) partnered in 2002 to develop the facility and to work together on process development. The technologies developed at the facility were also used by global semiconductor foundry TSMC of Taiwan, allowing TSMC to build the products developed in Croles on behalf of the Alliance partners who required such foundry capacity. A new fab is under construction since 2015.

Rousset, France

Employing 3,000 staff, *Rousset* hosts several division headquarters including smartcards, microcontrollers, and EEPROM as well as several R&D centers. Rousset also hosts an 8-inch (200 mm) fab which was opened on May 15, 2000 by French prime minister Lionel Jospin.

The site opened in 1979 as a 100 mm (5.9 in) fab operated by Eurotechnique, a joint venture between Saint Gobain of France and National Semiconductor of the US. Rousset was sold to Thomson-CSF in 1982 as part of the French government's 1981-82 nationalization of several industries. As part of the nationalisation, a former Thomson plant in the center of Aix-en-Provence operating since the 1960s was closed and staff were transferred to the new Rousset site. The original 100 mm (4 in) fab was upgraded into 130 mm (5.1 in) and later 150 mm (6 in) fab in 1996. It is now being shut down.

In 1988, a small group of employees from the Thomson Rousset plant (including the director, Marc Lassus) founded a start-up company, *Gemalto* (formerly known as *Gemplus*) which became a leader in the smartcard industry.

Tours, France

Employing 1,500 staff, this site hosts a fab and R&D centers.

Milan, Italy

Employing 6,000 staff, the Milan facilities match Grenoble in importance. Agrate Brianza, employs around 4000 staff and is a historical base of the company (ex SGS). The site has several fab lines (including an 300 mm (12 in) fab) and an R&D center. Castelletto, employs 300 to 400 staff and hosts some divisions and R&D centers.

Update-2012: Numonyx JV (with Intel) is acquired by Micron As such, R2 Fab (Agrate previous R&D 200mm Fab) is currently a Micron entity

Catania, Italy

The Catania plant in Sicily employs 5,000 staff and hosts several R&D centers and divisions, focusing on flash memory technologies as well as two fabs. The plant was launched in 1961 by ATES to supply under licensing to RCA of the US and initially using Germanium. The site's two major wafer fabs are a 200 mm (8 in) fab, opened in April 1997 by Romano Prodi, president of the Italian council and a 300 mm (12 in) fab that has never been completed and which was transferred in its current state to Numonyx in 2008.

Kirkop, Malta

As of 2010, ST employed some 1,500 people in Kirkop, making it the largest private sector employer, and the country's leading exporter.^[8]

Ang Mo Kio, Singapore

In 1970, SGS created its first assembly back-end plant in Singapore, in the area of *Toa Payoh*. Then in 1981, SGS decided to build a wafer fab in Singapore. The Singapore technical engineers have been trained in Italy and the fab of Ang Mo Kio started to produce its first wafers in 1984. Converted up to 200 mm (8 in) fab, this is now an important 200 mm (8 in) wafer fab of the group. Ang Mo Kio also hosts some design centers. The site currently employs 6000 staff.

Update-2012: Numonyx JV (with Intel) is acquired by Micron in 2010. As such, AMK8 Fab (200mm HVM Fab) is currently a Micron entity. AMK5 and AMK6 remains to be STM entities.

Tunis, Tunisia

Application, design and support. about 110 employees. Divisions: MCD

Other sites

Administrative headquarters

- Geneva, Switzerland: Corporate headquarter which hosts most of the ST top management. It totals some hundred of employees.
- Saint-Genis-Pouilly, France, near Geneva: A few hundred of employees. Headquarters for logistics.
- Paris: Marketing and support.

Assembly plants

- Malta: In 1981, SGS-Thomson (now STMicroelectronics) built its first assembly plant in Malta. STMicroelectronics is, as of 2008, the largest private employer on the island, employing around 1,800 people.
- Muar, Malaysia: around 4000 employees. This site was built in 1974 by Thomson and is now an assembly plant.
- Shenzhen, Guangdong province, China, near Hong Kong: In 1994, ST and the Shenzhen Electronics Group signed a partnership to construct and jointly operate an assembly plant (ST has majority with 60%). The plant is located in Futian Free Trade Zone and became operational in 1996. It has around 3,300 employees. A new assembly plant is planned in Longgang for 2008. The R&D, design, sales and marketing office is located in the Hi-tech industrial park in Nanshan district.
- Calamba City, in the province of Laguna, Philippines: In 2008, ST acquired this plant from NXP Semiconductors. Initially as part of joint venture with NXP but later acquired the whole share turning it into a full pledge STMicroelectronics Assembly and Testing plant. Currently it employs 2,000 employees.

Design Centers

- Rabat, Morocco: A design center that employs 160 people.
- Naples, Italy: A Design center employing 300 people.
- Lecce, Italy: HW & SW Design Center which hosts 20 researchers in the Advanced System Technology group.
- Ang Mo Kio, Singapore: In 1970, SGS created its first assembly back-end plant in Singapore, in the area of Toa Payoh. Then in 1981, SGS decided to build a wafer fab in Singapore. The Singapore technical engineers have been trained in Italy and the fab of Ang Mo Kio started to produce its first wafers in 1984. Converted up to 8 inch (200 mm) fab, this is now an important 8 inch (200 mm) wafer fab of the ST group. Ang Mo Kio also hosts design centers for various groups.
- Greater Noida, India: The Noida site was launched in 1992 to conduct software engineering activities. A silicon design center was inaugurated on February 14, 1995. With 120 employees, it was the largest design center of the company outside Europe at the time. In 2006, the site was shifted to Greater Noida for further expansion. The site hosts mainly design teams. It is now primarily involved with the design of home video products (Set-Top Box, DVD), GPS and Wireless LAN chips, and accompanying software. Worldwide Data center support is also transferred to Greater Noida in 2004. The employee strength in Greater Noida is around 2000. This also includes employees of ST-Ericsson.
- Santa Clara, California, (Silicon Valley), United States: 120 staff in marketing, design and applications.
- La Jolla, California, (San Diego, United States): 80 staff in design and applications.
- Lancaster, Pennsylvania, U.S.: Application, support, and marketing.
- Prague, Czech Republic: 100 to 200 employees. Application, design and support.
- Tunis, Tunisia: 110 employees. Application, design and support.
- Sophia Antipolis, near Nice, France: Design center with a few hundred employees.
- Edinburgh, Scotland: 200 staff focused in the field of imaging.
- Ottawa, Ontario, Canada: In 1993, SGS-Thomson purchased the semiconductor activities of Nortel which owned in Ottawa an R&D center and a fab. The fab was closed in 2000, however, a design, R&D centre and sales office is operating in the city.
- Toronto, Ontario, Canada: HW & SW Design Center primarily involved with the design of video processor ICs as part of ST's TVM Division.
- Palermo, Sicily, Italy: Design Center.
- Bangalore, India: HW and SW design center employing more than 250 people (Including the employees of ST Ericsson and Genesis Microchip).

- Zaventem, Belgium: 100 employees. Design & Application Center. Closed in 2013
- Helsinki, Finland: Design Center.
- Turku, Finland: Design Center.
- Oulu, Finland: Design Center.
- Tampere, Finland: Design Center.
- Longmont, Colorado USA: Design Center.

Closing sites

The Phoenix, Arizona 8 inch (200 mm) fab, the Carrollton, Texas 6 inch (150 mm) fab, and the Ain Sebaa, Morocco fab are beginning rampdown plans, and are destined to close by 2010.^[9]

The Casablanca, Morocco site consists of two assembly parts (Bouskoura and Ain Sebaâ) and totals around 4000 employees. It was opened in the 1960s by Thomson.

The Bristol, United Kingdom site (approx. 150 employees) is scheduled to ramp down and close by early 2014.

The Ottawa, Ontario, Canada plant (approx. 450 employees) will close down by 2013 end.^[10]

Closed sites

- Rennes, France hosted a 6-inch (150 mm) fab and was closed in 2004
- Rancho Bernardo, California, a 4-inch (100 mm) fab created by Nortel and purchased by SGS-Thomson in 1994, after which it was converted into a 6-inch (150 mm) fab in 1996.
- SGS's first presence in the US was a sales office based in Phoenix in the early 1980s. Later, under SGS-Thomson, an 8-inch (200 mm) fab was completed in Phoenix in 1995. The company's second 8" fab after Croles 1, the site was first dedicated to producing microprocessors for Cyrix. On July 10, 2007, ST said that it would close this site, and in July 2010 the shell of the Phoenix PF1 FAB was bought by Western Digital Corporation.^[9]
- The Carrollton, Texas site was built in 1969 by Mostek, an American company founded by former employees of Texas Instruments. In 1979, Mostek was acquired by United Technologies which sold it to Thomson Semiconducteurs in 1985. Initially equipped with a 4-inch (100 mm) fab, it was converted into a 6-inch (150 mm) fab in 1988. The Colorado Springs activities of British company IMOS were transferred to Carrollton in 1989 following its acquisition by SGS Thomson. Since then the site has been refocused to wafer testing. On July 10, 2007, ST announced it would close this fab, and it was finally closed in 2010.^[9]
- "About us – General Information – ST-Ericsson" (https://web.archive.org/web/20101223123424/http://stericsson.com/about/General_Information.jsp). *stericsson.com*. Archived from the original (http://www.tericsson.com/about/General_Information.jsp) on 23 December 2010. Retrieved 24 February 2011.

- "2014 Annual Report" (http://phx.corporate-ir.net/External.File?item=UGFY2W505UQ9NfC0Nj0QfENoaVxKSUQ9MjC30DU1fFR5cGU9M0=#&t=1). STMicroelectronics. 26 March 2015. Retrieved 20 February 2016.
- "Company Information - STMicroelectronics" (https://www.st.com/content/st_com/en/about/st_company_information/who-we-are.html). STMicroelectronics. Retrieved 2011-05-04. "ST operates a worldwide network of front-end (wafer fabrication) and back-end (assembly and test and packaging) plants"

- "ST Microelectronics announces investment in Malta" (http://www.timesofmalta.com/articles/view/20100629/local/st-to-invest-further-in-malta-plant). *timesofmalta.com*. 29 June 2010. Retrieved 2013-07-10.
- "Archived copy" (https://web.archive.org/web/20070713103639/http://www.st.com/stonline/press/news/year2007/c2542c.htm). Archived from the original (http://www.st.com/stonline/press/news/year2007/c2542c.htm) on July 13, 2007. Retrieved July 11, 2007.

- STMicroelectronics to close Ottawa plant - Archives - Ottawa Business Journal (https://archive.is/20130717153551/http://www.obj.ca/Other/Archives/2001-05-31/article-2152352/STMicroelectronics-to-clo-se-Ottawa-plant/1). Obj.ca (2001-05-31). Retrieved 2013-12-08.
- STMicroelectronics to close Aztec West Business Park site (https://www.bbc.co.uk/news/uk-england-bristol-23225566) Archived (https://web.archive.org/web/20130713005433/http://www.bbc.co.uk/news/uk-england-bristol-23225566) July 13, 2013, at the Wayback Machine. BBC News
- "Archived copy" (https://web.archive.org/web/20070816080217/http://www.st.com/stonline/press/news/year2007/c2547c.htm). Archived from the original (http://www.st.com/stonline/press/news/year2007/c2547c.htm) on August 16, 2007. Retrieved August 14, 2007.

- "About us" (http://www.nokia.com/A4136001?newsid=1144794). *Nokia.com*. 4 December 2013. Retrieved 5 July 2016.
- "Nokia lines up chip transfer to ST - Electronics Weekly" (http://www.electronicweekly.com/Articles/2007/08/08/41943/nokia-lines-up-chip-transfer-to-st.htm). *Electronicweekly.com*. 8 August 2007. Retrieved 5 July 2016.
- "Loading" (http://www.analogzone.com/grnp0602.htm). *Analogzone.com*. Retrieved 2013-07-10.

External links

- Official website (https://www.st.com/)

Retrieved from "https://en.wikipedia.org/w/index.php?title=STMicroelectronics&oldid=847728188"

This page was last edited on 27 June 2018, at 11:11 (UTC).

Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply.
By using this site, you agree to the [Terms of Use](#) and [Privacy Policy](#).
Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.

STMicroelectronics N.V.	
	
 <div>life.augmented</div>	
Type	Naamloze vennootschap
Traded as	BIT: STM (http://www.borsaitalia.na.it/borsa/azion/i/scheda/NL0000226223.html?lang=en) <div>Euronext: STM (https://www.euronext.com/en/sectorch_instrument/s/NL0000226223)<div>NYSE: STM (https://www.nyse.com/quote/XNYS:STM)<div>CAC 40 Component</div></div></div>
Industry	Semiconductors
Founded	1957 as Società Generale Semiconduttori, 1987 as SGS-Thomson
Headquarters	Schiphol, Amsterdam, Netherlands
Key people	Jean-Marc Chery (President and CEO), Nicolas Dufourcq (Chairman of the supervisory board)
Products	Integrated circuits for specific applications, memory (including EEPROM), microcontrollers, transistors, smartcards
Revenue	US\$ 8.35 billion (2017)
Number of employees	45,500 (December 2017)
Website	st.com (https://www.st.com/)



STMicroelectronics building in Geneva, Switzerland, aerial view