



STRATEGIC BRIEF

Europe's Industrial Electronics Base: Building Critical Manufacturing Capacity Instead of Catching Up with China

Instead of debating the time, use it

Dirk Kaussen | EMS Strategy Group | Rev.: 1.1 | 24 September 2026

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Core Thesis

China has built an industrial structure for electronics, semiconductors and printed circuit boards over several decades whose breadth and manufacturing capacity Europe cannot reproduce in the short term. This industrial strength is real and should not be underestimated. However, this often leads to the conclusion that Europe would need 15 to 20 years to reach a comparable level.

China's decades-long development does not mean that Europe would need 15 to 20 years to regain sufficient own production capacity in critical areas. Since the 1980s, China has built industrial capacities and supply chains over several decades on an exceptional scale and breadth. Europe, by contrast, already has the necessary technological expertise, research capabilities, industrial experience, skilled workforce, established companies and strong industrial structures. In many areas, Europe is a global technological leader.

The actual problem lies less in a lack of knowledge than in implementation. Over the past decades, Europe has lost industrial manufacturing capacities and parts of its supply chains or relocated them to Asia. This development cannot be reversed within a few months. But it also does not have to take the same period that China needed to build its current industrial base.

Europe therefore does not need to rebuild China's entire industrial structure. The objective is to identify the areas in which its own production capacities and resilient supply chains are required for Europe to remain capable of acting. Based on existing knowledge, established companies, infrastructure and research capabilities, these capacities can be expanded selectively and significantly within a few years.

Complete industrial equivalence with China's breadth is neither necessary nor realistic for this purpose. Europe needs sufficient own capabilities and additional sources of supply so that, in a crisis, the security of supply does not depend on a single region.

The projects launched and announced in Europe in 2026 show that this build-up has already begun. Even if new capacities cannot be created within a few months, decisions taken today can lead to additional European production capacity within a few years.

Assessment

The frequently cited assessment that Europe would need 15 to 20 years to reach an industrial level comparable to China refers to the current scale and depth of China's production structures. This should not, however, lead to the conclusion that Europe should wait that long or take a cautious approach to building its own capacities.

Those who do not invest today will not be any closer to the goal in ten years than they are today.

The Misconception – China as the Target

A complete industrial ecosystem does not emerge overnight. A modern PCB industry consists not only of manufacturers, but also of laminate and material suppliers, copper foil, chemicals, machinery, testing technology and skilled workers. The same applies to semiconductors in areas such as wafers, lithography, packaging, testing and design. China has an exceptional industrial density in many of these areas, and this should not be underestimated.

The misconception lies in treating China's current structure as the target Europe has to reach. A more appropriate question is which critical capabilities Europe needs to remain capable of acting in a crisis. This is a significantly smaller and more realistic target than attempting to replicate Chinese

production volumes, and it can be achieved in considerably less time based on the technological and industrial capabilities already available in Europe.

Europe Does Not Start from Zero – Semiconductors 2026

Europe already has highly developed research capabilities, semiconductor technology, mechanical engineering and established companies and technology leaders such as ASML, Infineon, Bosch, STMicroelectronics and NXP. Several projects completed or launched in 2026 show that this lead is being actively expanded.

In February 2026, the EU opened the NanoIC Chips Act pilot line at the imec research center in Leuven, the largest of its kind in Europe, with an investment volume of €2.5 billion for the development of chip technologies below two nanometers.

At the European Semiconductor Manufacturing Company (ESMC) in Dresden, the joint project of TSMC, Bosch, Infineon and NXP, the topping-out ceremony was held on 14 September 2026. The chip factory, costing around €10 billion, is scheduled to start production in 2027.

In March 2026, the European Commission granted the planned packaging and testing facility of Silicon Box in Novara the status of an Open EU Foundry, a project specializing in chiplet integration with an announced investment volume of up to €3.2 billion.

In July 2026, Infineon opened its Smart Power Fab in Dresden. The company is investing around €5 billion at the site and is thereby further expanding European manufacturing capacity for power semiconductors.

And in July 2026, Intel announced a further investment of €5 billion at its Leixlip site in Ireland to expand existing manufacturing capacity for Intel 3 process technology.

None of these projects will make Europe independent in the short term. That is not the objective either. They do, however, show that the build-up of new manufacturing capacities based on existing technological and industrial capabilities is taking concrete shape within a very short period of a few years for electronics manufacturing.

Printed Circuit Boards – More Difficult, but Moving

The starting position for printed circuit boards is more difficult than for semiconductors. The number of European manufacturers has declined significantly over the past decades, and much of the remaining production is concentrated among a small number of companies. However, current investments also show that movement is taking place here.

In 2025, AT&S commissioned Europe's first dedicated competence center for IC substrates with its HTB3 plant in Leoben and is continuing to invest in the site in 2026, including tripling the cleanroom area in Leoben and investing more than €30 million at the Fehring site.

Aspocomp has launched an investment program of more than €10 million for its plant in Oulu, which is intended to increase capacity by up to 50 percent. The program was announced in November 2025, with the new capacity scheduled to become available progressively from 2027.

These are not Chinese production volumes, and they do not have to be. The objective is to rebuild European production capabilities for strategically relevant segments such as defense, semiconductor testing and power electronics.

EMS Manufacturing Is Expanding

There is also significant movement in electronics manufacturing itself in 2026, driven in particular by European defense demand.

In August 2026, Kitron opened its new facility in Longum near Arendal, Norway, and in September 2026 announced a new building for its site in Horsens, Denmark.

In 2026, NOTE moved into a new manufacturing facility of around 9,000 square meters at its Lund site in Sweden. The new facility provides additional production, warehouse and office space and thereby expands the capacity of the site.

And Scanfil is expanding its site in Mysłowice, Poland, by 6,000 square meters, making it the largest Scanfil plant in Europe, with operations scheduled to start in early 2028.

The common denominator of these projects is not an attempt to replace Chinese production volumes. The objective is to create genuine alternatives for European OEMs and local, regulation-compliant capacity, particularly for defense, aerospace and other security-relevant applications.

Resilience Does Not Mean Autarky

The discussion about European production capabilities must not turn into an anti-China strategy. China will remain a significant part of the global electronics industry, and many European companies will continue to manufacture or source there. The right formula is not that China must disappear from the supply chain, but that China must not be the only realistic option.

At company level, this corresponds to the China+1 principle: the targeted addition of a second site to existing China-based manufacturing, for example in Europe, Vietnam, India, Mexico or Brazil. For an OEM, this does not mean withdrawing from China, but gaining an additional negotiating and operational option.

Assessment

A company with a single source of supply has a weak negotiating position, regardless of how capable that source is. Additional European capacity therefore also strengthens the position vis-à-vis existing Chinese partners rather than weakening it.

The “15-to-20-Year” Debate

Complete industrial equivalence with China may indeed require a very long period of time. However, that is not the objective Europe needs to achieve in the short term. If Europe creates additional PCB or semiconductor capacity for security-critical applications, this capacity does not have to match the total Chinese volume. It only has to provide a real alternative.

The real danger is not that the build-up takes a long time, but that it is not started because it will take a long time. A European factory that requires ten years to reach full scale will provide available capacity in ten years if work starts today, and none if it does not. Time continues to pass regardless of whether investment takes place.

Conclusion

Europe will not reproduce China's industrial depth in the short term, nor should that be the objective. However, in 2026 Europe has significant technological and industrial capabilities on which new capacities can be built, as demonstrated by the projects at ASML, imec, ESMC, Intel, Silicon Box, AT&S, Aspocomp, Infineon, Kitron, NOTE and Scanfil.

The task for the coming years is not to copy Chinese industry, but to rebuild European production capabilities selectively where they are strategically required. China can remain a partner and production location. Europe does not need isolation. Europe needs the ability to act, and this does not come from debating how many years the build-up might take, but from starting it.

Sources

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About the Author

Dirk Kaussen is Founder and Managing Director of EMS Strategy Group. With around 40 years of experience in the electronics industry — including founding and managing his own electronics manufacturing company in Germany — he brings deep expertise in manufacturing processes, EMS partner selection, supply chain stability, relocation projects, and risk management. His approach combines practical solutions with a direct connection to industrial reality.

About the EMS Strategy Group

EMS Strategy Group supports industrial enterprises in the strategic and operational advancement of their electronics manufacturing. Our core expertise lies in the strategic relocation of manufacturing volumes, the selection of qualified EMS partners, the establishment of new production capacities, and the expansion of existing manufacturing structures.

Furthermore, we design resilient supply chain frameworks, conduct comprehensive risk assessments, and guide dual-sourcing strategies, with operational support through to a successful series production ramp-up.

www.emssg.com | [LinkedIn: Dirk Kaussen](#)

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