

Market evolution: Printed circuits (CN 8534) — 2015–2025

Introduction

Printed circuits (CN 8534) form the backbone of modern electronic assemblies. Between 2015 and 2025, the European Union's extra-EU trade in this product category underwent a pronounced structural change. While total import values expanded strongly, export values grew only marginally, and the quantity of exported circuits fell sharply. Underneath these headline figures lies a story of deepening import reliance, a dramatic shift in trade partners, and a domestic production base that contracted significantly. This report examines the key dynamics using official trade statistics, drawing on data from the trade dashboard.

1. Mounting import dependence and China's overwhelming dominance

The EU's import bill for printed circuits grew while the export base struggled to keep pace, leaving the Union ever more dependent on foreign suppliers.

Extra-EU import value rose by 26.9%, pushing the trade deficit to a new level

In 2015, imports of printed circuits stood at €3 972.4 million; by 2025 they had reached €5 039.7 million, an increase of 26.9%. Over the same period, exports moved from €878.3 million to €931.4 million, a modest gain of 6.0%. As a result, the trade deficit widened from –€3 094.1 million to –€4 108.2 million (–32.8%), peaking at –€4 996.6 million in 2022. Import quantity rose by 19.0% (from 81 521 tonnes to 96 971 tonnes), while export quantity actually contracted by 27.5% (from 9 342 tonnes to 6 776 tonnes), indicating a deepening physical supply-demand gap.

Year	Exports (M€)	Imports (M€)	Balance (M€)
2015	878.3	3 972.4	–3 094.1
2025	931.4	5 039.7	–4 108.2

Source: Trade overview

China cements its role as the dominant supplier, lifting import concentration

Imports from China surged from €2 318.2 million to €3 453.2 million (+49.0%), making it by far the largest source of printed circuits. Its share of extra-EU imports rose accordingly, and the Herfindahl-Hirschman Index (HHI) for import values climbed from 3 604 to 4 785 (+32.8%), signalling a more concentrated supply base. By 2025, more than two-thirds of EU external purchases originated from a single country.

Source: Top partners

Source: Import concentration

A diverging supplier landscape: Korea rises, Taiwan and Hong Kong fade

Not all Asian suppliers benefited equally. Imports from the Republic of Korea jumped 60.0% (from €102.6 million to €164.1 million), whereas deliveries from Taiwan and Hong Kong plummeted (–52.9% and –64.6% respectively). Thailand remained a steady second-tier supplier (+16.5%). This re-ordering suggests a relocation of circuit production within East Asia and a reduced role for traditional entrepôt channels.

2. Export restructuring: higher value per unit and a new geographic orientation

EU exports of printed circuits became more expensive and more targeted, with a decisive shift away from some legacy markets.

Export volume shrinks while unit value surges, pointing to an upmarket move

Between 2015 and 2025, export quantity fell by 27.5% (9 342 to 6 776 tonnes), but export value still rose by 6.0%. Consequently, the implicit export price per tonne jumped from €93 951 to €137 370 (+46.2%). This suggests that European producers increasingly focus on higher-complexity, higher-priced circuit boards, abandoning low-value segments where competition from Asian imports is intense.

Source: Trade overview

Post-Brexit collapse in the United Kingdom and the Moroccan success story

The single largest export market, the United Kingdom, saw EU sales drop from €150.8 million to €67.5 million (–55.2%). In stark contrast, exports to Morocco soared 68.0% (from

€33.3 million to €55.9 million), and Spain's extra-EU exports overall grew by 74.7%, with Morocco a key destination. The shrinking UK market likely reflects both post-Brexit trade friction and the relocation of assembly operations towards North Africa.

Source: Top partners

Stability in traditional partners and large swings in smaller streams

Exports to the United States grew 7.2% (to €142.5 million) and to Switzerland 8.7% (to €94.4 million), providing a reliable base. Among the top seven destinations, Tunisia and Ukraine also recorded increases (7.3% and 15.3%). However, behind these aggregates lies considerable volatility: several export flows, such as those to Japan (CV 0.79), North Macedonia (CV 0.66) and Hong Kong (CV 0.56), displayed extreme year-on-year swings, underlining the opportunistic nature of non-core routes.

Source: Volatility chart

3. A shrinking production base and the strategic vulnerability of EU electronics

While trade flows expanded, EU-based production of printed circuits retreated, eroding the industrial footprint and increasing exposure to external disruptions.

EU production quantity fell by 30.2%, with value contracting as well

According to PRODCOM estimates, the volume of circuits manufactured in the EU dropped from 3 342 million units in 2016 to 2 332 million units in 2024 (–30.2%). The production value shrank from €3 408 million to €2 752 million (–19.3%). This decline was widespread, although a few Member States such as Slovakia, Romania, and Bulgaria retained a high specialisation in printed circuits.

Source: Production volumes

Source: Specialisation map

Net import reliance reaches 52.5%, and trade intensity climbs sharply

The net-import-reliance ratio rose from 43.4% in 2016 to 52.5% in 2024, meaning that over half of the circuits consumed in the EU are now sourced from outside the bloc. The trade-intensity ratio (the sum of extra-EU exports and imports relative to production) increased from 57.9% to 68.0%, while the export-propensity ratio (exports/production) went from 18.0% to 24.8%. The EU is therefore both more open to foreign supply and more dependent on that supply.

Source: Net import reliance

Source: Trade intensity

Price shocks and high import volatility highlight supply-side fragility

The concentration and dominance of China were accompanied by a notable price shock in 2022, when Chinese import unit values spiked by 19.5% against a baseline, an event flagged as highly abnormal (abnormality score 73.8). Other price shocks, such as a 56.2% jump in export prices to Türkiye in 2023 and a 40.4% shock on Hong Kong-bound exports in 2017, illustrate the vulnerability of both import and export circuits to sudden price adjustments. On the quantity side, imports from the United Kingdom (CV 0.78), Viet Nam (CV 0.62), and Taiwan (CV 0.34) exhibited high year-to-year instability, making supply planning difficult.

Source: Shock events

Source: Volatility bars

Conclusion

The 2015-2025 period transformed the EU's printed-circuit trade landscape. A steep rise in imports, overwhelmingly from China, deepened the trade deficit and pushed supplier concentration to new highs. EU exporters responded by upgrading their product mix—shipping fewer, but much more valuable, circuits—and by redirecting sales away from the UK towards Morocco and other markets. However, the domestic production base contracted severely, and net import reliance crossed the 50% threshold. Combined with supply-side price shocks and persistent quantity volatility from key partners, this pattern points to a structurally more open but strategically more vulnerable position. Whether current trends persist will depend on the pace of re-shoring efforts, the diversification of import sources, and the resilience of Europe's high-value circuit manufacturing.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at [this address](#).