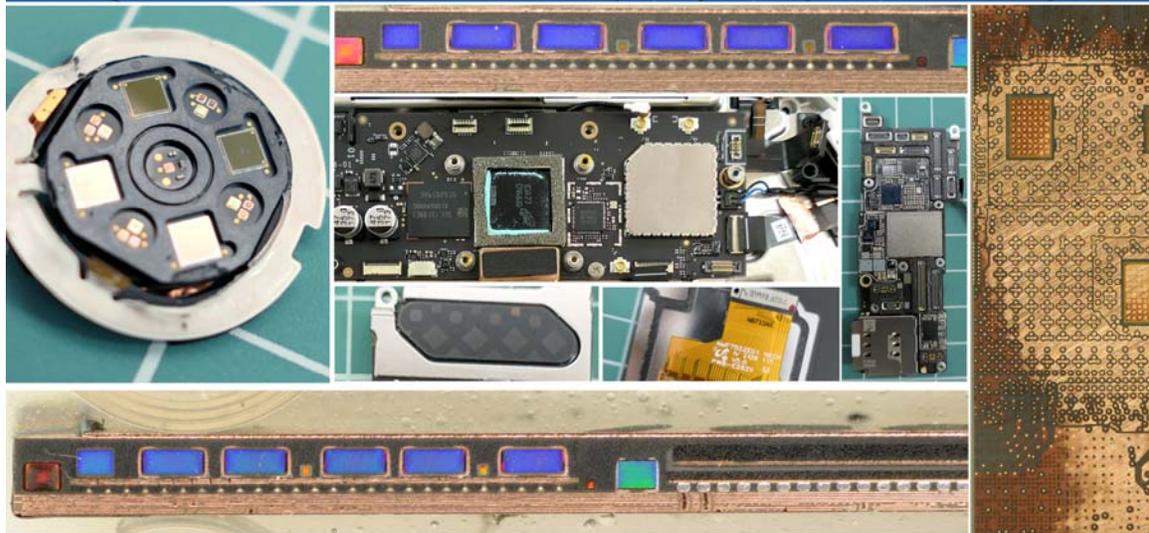


# THE PRINTED CIRCUIT REPORT

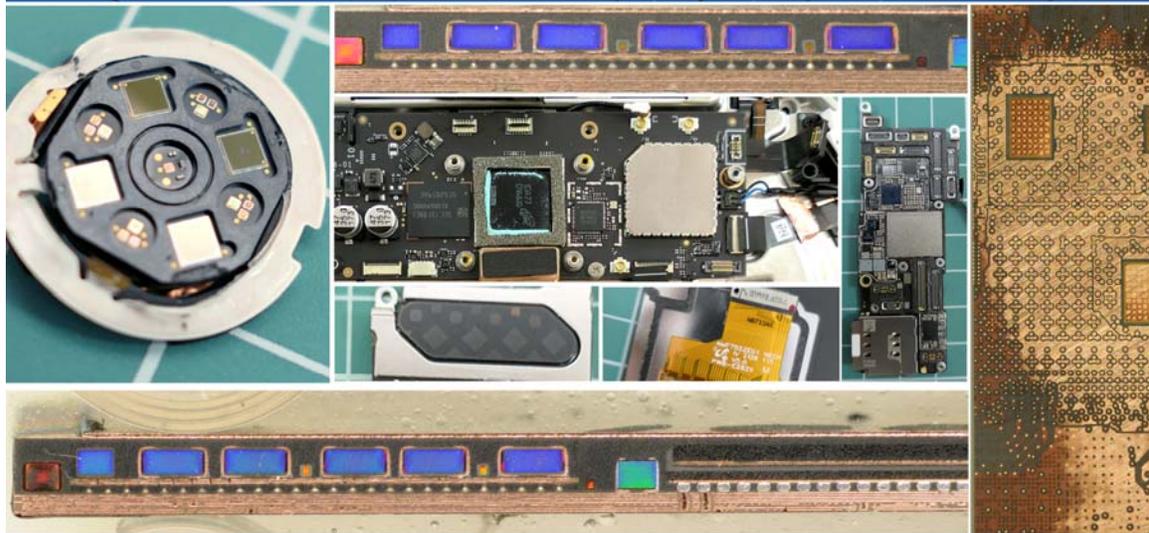
THIRD QUARTER • NOVEMBER 2022



- The forty leading PCB suppliers, which account for over one-half of industry sales, reported aggregate YoY revenue growth of 3.2% in Q3 2022. Compared to Q2 2022, aggregated Q3 2022 revenues increased 11.0%. Revenues for the first three quarters of 2022 increased by 11.3% over the same period in 2021.
- The key growth drivers for the PCB market in Q3 included:
  - Resilient demand for packaging substrates, reflected by strong performances by Unimicron, Nan Ya, Kinsus, AT&S, Simmtech, and Daeduck.
  - Apple's outstanding Q3 demand, which boosted sales for its key PCB suppliers, including Zhen Ding, Dongshan Precision, Compeq, FLEXium, and AKM Meadville.
  - Exceptional growth performances by a handful of FPC companies, including BH, Sumitomo Electric Industries, and Career Technology.
  - Acquisition-driven revenue growth (TTM, Summit, and Olympic)
- Altogether, the PCB market is estimated to have reached \$21.18Bn in Q3 2022 – up 3.6% from Q2 2022, but down 1.7% from Q3 2021. These numbers reflect a significant slowdown in the PCB market's growth trajectory relative to previous quarters.
- The PCB market outperformed expectations by a substantial margin in Q3, despite increasing signs of an impending global economic slowdown. Prismark has upgraded its aggregate forecast for the 2022 PCB market, with sales expected to grow by 2.9%, compared to the previous forecast of 1.5%.
- Prismark now projects positive growth in every regional PCB market, except Europe (-1.8%). The Chinese market—previously projected to decline by 1.2%—is now forecast to grow by 0.1% due to higher-than-anticipated HDI and FPC production. Prismark has also upgraded its 2022 growth forecast for the Americas (+2.6%) and Japan (+3.7%).
- In this report:
  - An assessment of the geopolitical backdrop (inflation and monetary tightening, US export controls, Ukraine conflict, China's COVID policy adjustments) and their impact on the global economy, electronics industry, and PCB market.
  - Comprehensive data and analysis of the PCB market, showing forecasts for 2022 and 2026 by PCB technology and region of production.
  - A detailed discussion of developments in the HDI market and technology.

# THE PRINTED CIRCUIT REPORT

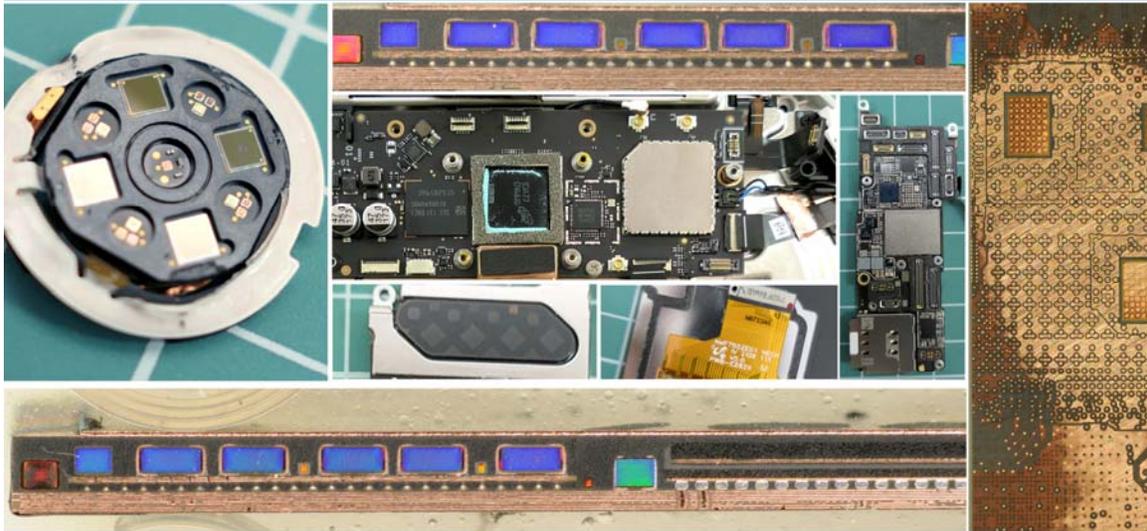
SECOND QUARTER • AUGUST 2022



- The forty leading PCB suppliers, which account for over one-half of industry sales, reported an aggregate revenue increase of 12.4% in Q2 2022 over Q1 2021. Compared to Q1 2022, aggregated Q2 2022 revenues declined 2.7%. 1H 2022 over 1H 2021 revenues increased 17.2%.
- Altogether, the PCB market is estimated to have reached \$20.7Bn in Q2 2022 – down 2.6% from Q1 2022, but up 9.9% from Q2 2021.
- Given the continuing macro-economic challenges, Prismark has reduced its forecast for the 2022 PCB market, with sales expected to grow by 1.5%, compared to the earlier forecast of 4.2%. While this is a very strong decline in growth compared to last year (24.1%), the current outlook is clouded, and in line with Prismark's expectations for electronics systems sales. The substrate market will continue to strongly outpace the overall PCB market (18.9% growth).
- PCB production in both Europe (-1.9%) and China (-1.2%) are expected to decline in 2022, while Asia (xJp/Cn) should show the strongest growth (6.3%) due to growth in package substrates and HDI.
- In this report:
  - An assessment of the geo-political backdrop (pandemic, inflation, Ukraine conflict) and their impact on the global economy, electronics industry, and PCB market.
  - Comprehensive data and analysis of the PCB market, showing forecast for 2022 and 2026 by PCB technology and region of production.
  - An analysis of the profitability of the 30 leading public PCB companies, and their capex activity.
  - A detailed discussion of developments in the flexible circuit market and technology.

# THE PRINTED CIRCUIT REPORT

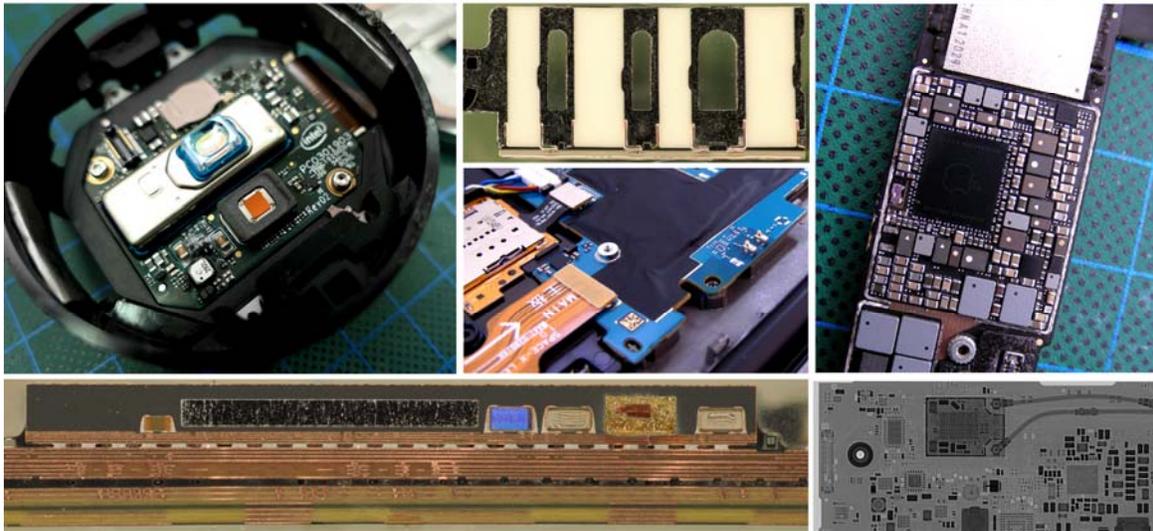
FIRST QUARTER • MAY 2022



- The forty leading PCB suppliers, which account for over one-half of industry sales, reported aggregate revenue increases of 21.3% in Q1 2022 over Q1 2021. Compared to Q4 2021, aggregated Q1 2022 revenues did show typical seasonality with a 12.1% decline.
- Altogether, the PCB market is estimated to have reached \$20.9Bn in Q1 2022 – down 7.9% from Q4 2021, but up 17.4% from Q1 2021.
- Prismark's revised forecast for 2022 calls for PCB sales to grow by 4.2%. This moderation in growth after last year's blistering 24.1% growth rate should not be surprising, and is in line with Prismark's expectations for electronics systems sales. The substrate market will continue to outpace the overall PCB market.
- All regions are expected to grow this year, with Japan and Asia (xJp/Cn) showing the strongest growth due to their over-weighted exposure to package substrates.
- In this report:
  - An assessment of the geo-political backdrop (pandemic, inflation, Ukraine conflict) and their impact on the global economy, electronics industry, and PCB market.
  - Comprehensive data and analysis of the PCB market, showing Prismark's final assessment for 2021, and a forecast for 2022 and 2026 by PCB technology and region of production.
  - Prismark's annual ranking of the 100 leading PCB companies based on their 2021 revenues, followed by a discussion of the regional breakdown of the PCB supply base.
  - An analysis of the profitability of the 30 leading public PCB companies, and their capex activity.
  - A detailed discussion of the major trends the multilayer PCB market.

# THE PRINTED CIRCUIT REPORT

FOURTH QUARTER • FEBRUARY 2022



- The forty leading PCB suppliers, which account for over one-half of industry sales, reported aggregate revenue increases of 19% YoY in Q4 2021, and 24.4% for the year 2021.
- Altogether, the PCB market is estimated to have reached \$22.4Bn in Q4 2021 – a new quarterly production record for the industry.
- Prismark's revised accounting for 2021 shows growth of 23.4% in 2021, driven by the widespread economic recovery as the pandemic is controlled and pent-up consumer demand results in strong consumption. Europe, Japan, and China experienced the strongest growth overall, and among the PCB segments, package substrates and high-layercount multilayers were the leading growth drivers.
- All PCB segments and all regions performed unusually well in 2021.
- This report provides:
  - An update on the pandemic and its continuing impact on the global economy, electronics industry, and PCB market.
  - Comprehensive data and analysis of the PCB market, showing Prismark's estimate and forecast for 2021, 2022, and 2026 by PCB technology and region of production.
  - A detailed discussion of the major trends in the substrate market including various applications and different technologies.



*CONSULTANTS TO THE ELECTRONICS INDUSTRY  
BUSINESS OPPORTUNITY FROM TECHNOLOGY AND  
MARKET CHANGES*

**PRISMARK PARTNERS LLC**

*This material is © Prismark Partners LLC*

130 Main Street, Cold Spring Harbor, NY 11724 USA • Telephone: 631-367-9187 • Fax: 631-367-9223 • e-mail: [partners@prismark.com](mailto:partners@prismark.com)

Prismark Asia, 8F., No. 96, Guangfu N. Road, Taipei 105, TAIWAN • Telephone: 886-2-25779697 • Fax: 886-2-25701230

Visit our website at **[www.prismark.com](http://www.prismark.com)**