Global PCB Industry Report, 2015-2020

Aug. 2016
STUDY GOAL AND OBJECTIVES
This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

REPORT OBJECTIVES
◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
◆ To complement the organizations’ internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
◆ To help company to succeed in a competitive market, and

METHODOLOGY
Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

INFORMATION SOURCES
The primary information sources include Company Reports, and National Bureau of Statistics of China etc.
Abstract

Global PCB Industry Report, 2015-2020 highlights the followings:
1. Global PCB Market and Status Quo of the Industry
2. Global Downstream Markets of PCB
3. Mobile Phone PCB Trends
4. Tablet PC/Laptop Computer/Automotive PCB Trends
5. Ranking of Global and Chinese PCB Vendors
6. Study of Major Global and Chinese PCB Vendors

Global PCB market was valued at USD57 billion in 2015, a 4.4% decline from 2014, largely due to: 1) depreciation of Japanese yen, euro, and NTD against the dollar; 2) stagnation in saturated mobile phone market, continuous decline in PC market, and a plunge in tablet PC market. The sluggish demand from downstream markets has extended to 2016 and it is expected there will be no substitute for smartphone to drive PCB market until the year 2020. Global PCB industry is projected to keep shrinking in 2016 with a market size of USD55.3 billion (a 3.0% contraction).

Automotive PCB market is the biggest highlight. Global automotive PCB market size was USD5.28 billion in 2015 and is expected to grow by 8.3% to USD5.72 billion in 2016 and by 8.2% to USD6.19 billion in 2017, primarily because of impetus of millimeter-wave radar to RF board, of connected vehicle to multi-layer board, and of chassis electronization to metal substrate.

The biggest change in PCB industry in 2017 will be wider application of substrate like. According to Apple’s suppliers, iPhone 7S/8 to be launched in 2017 will see some substantial upgradings in specification with substrate-like HDI replacing commonly-used HDI so as to massively import System in Package (SiP) technology with the aim of modularizing sub-system.

Compared with traditional HDI, the biggest change in the specification of substrate-like HDI is the line space/width on circuit board which moves toward fine pitch in order to work properly with SiP technology. Particularly, the line space/width must be miniaturized below 35 micrometers. In such case, traditional PCB HDI process cannot meet technical requirements on fine pitch, and large sums of money are needed to upgrade manufacturing equipment and re-explore production processes. By contrast, IC substrate vendors can easily produce such PCB, showing overwhelming superiority.
According to Apple’s suppliers, for iPhone 7S/8 to be launched in 2017, the original one large traditional HDI board will be disassembled into four small substrate-like HDI boards, thus not only speeding up import of SiP technology but also freeing up more space for larger battery capacity. Apple has asked suppliers to send samples in the third quarter, attracting IC substrate vendors including Ibiden, Kinsus, and Unimicron to scramble for orders. However, it now seems that Kinsus, a key SiP board supplier for Apple, has the best chance of winning substrate-like HDI order, and ASE Group is likely to grab SiP packaging & testing order.

### Global Top10 HDI Vendors in 2015 by Revenue

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Region</th>
<th>Revenue (USD mln)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Unimicron</td>
<td>Taiwan</td>
<td>750</td>
</tr>
<tr>
<td>2. COMPEQ</td>
<td>Taiwan</td>
<td>650</td>
</tr>
<tr>
<td>3. AT&amp;S</td>
<td>Austria</td>
<td>557</td>
</tr>
<tr>
<td>4. Ibiden</td>
<td>Japan</td>
<td>402</td>
</tr>
<tr>
<td>5. SEMCO</td>
<td>South Korea</td>
<td>392</td>
</tr>
<tr>
<td>6. TTM</td>
<td>United States</td>
<td>376</td>
</tr>
<tr>
<td>7. ZDT</td>
<td>Taiwan</td>
<td>320</td>
</tr>
<tr>
<td>8. Tripod Technology</td>
<td>Taiwan</td>
<td>315</td>
</tr>
<tr>
<td>9. Unitech</td>
<td>Taiwan</td>
<td>290</td>
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<td>10. LG INNOTEK</td>
<td>South Korea</td>
<td>280</td>
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Source: Global PCB Industry Report, 2015-2020 by ResearchInChina
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- Routing No # : 332906
- Bank SWIFT Code: COMMCHNJ
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