TPC Semiconductor Market Survey

June 5, 2020
TPC May 2020 Survey Summary

Survey Date: May 29 – June 1  Respondents: ~6,200 Location: Worldwide (~80% Asia)  Who: Active Electronics Industry Professionals  Response Composition (multiple choices): Industrial 39%, Auto 20%, Comm 23%, Computing 21%, Mobile 36%, Data Ctr 17%, Other 11%

• We completed our monthly survey last weekend (~6,200 respondents) which saw weakening in both C2Q & C3Q growth expectations. In addition C2Q bookings expectations also slightly weakened while C3Q booking remained roughly the same.

• End customers have still been reluctant to cancel production to their manufactures instead pushing out production into future quarters but appear to be booking less for the near term during the past 30 days.

• The survey showed a growth outlook for C2Q20 weaker vs. last month with 47% expecting q/q growth vs. 53% previously, but only 14% see it as weaker vs. 12% last month.

• The survey showed a weakening in bookings growth outlook for C3Q20 with 33% expecting improving bookings vs. C2Q compared to 36% last month. Only 13% expect weaker bookings.

• Backlog cancellation expectations (slide 6) shows a reverse in the past 3 month’s trend of decreasing cancellations over the last 3 months which we view as slightly negative.

• Availability of critical parts are now becoming less of a concern with lead-times shrinking slightly and inventories starting to increase slightly. Slide 7, which shows a more granular view of inventory by key components, showed improvements across most products in inventory and availability.

• The Consumer segment has shown improvement over the past couple of months while the Automotive segment continues to deteriorate. Communications and Industrial remain little changed.
Q/Q Demand Growth Outlook

C2Q Growth Expectations vs. C1Q

C2Q20 Growth Expectations

C3Q Growth Expectations vs. C2Q

3Q Growth Expectations

May 2020 TPC Proprietary
Q/Q Seasonality Expectations

C2Q Seasonality Expectations

C3Q Seasonality Expectations

3Q Seasonality Expectations

May 2020

TPC Proprietary
Q/Q Bookings Growth Expectations
Backlog Order Cancellations vs. 30 Days Ago
(Delta between increasing and decreasing cancellations – Higher % is more positive)
Inventory Status

(Using a scale of 1 to 5 with 1 being extremely low inventory, 3 being the normal amount, and 5 being extremely high; how do you view inventory levels for the following products?)

Still seeing most products being at normal inventory levels.
Q/Q Inventory Growth

**C2Q20 Inventories vs. C1Q20**
- Jan: 7%
- Feb: 14%
- Apr: 8%
- May: 10%

**C3Q20 Inventories vs. C2Q20**
- Apr: 26%
- May: 33%

Decreasing (green)
Increasing (red)
Q/Q Pricing Trends

C2Q20 Pricing vs. C1Q20

<table>
<thead>
<tr>
<th>Month</th>
<th>Down &gt;2%</th>
<th>Flat +/-2%</th>
<th>Up &gt;2%</th>
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</thead>
<tbody>
<tr>
<td>Jan</td>
<td>11%</td>
<td>61%</td>
<td>28%</td>
</tr>
<tr>
<td>Feb</td>
<td>13%</td>
<td>62%</td>
<td>25%</td>
</tr>
<tr>
<td>Apr</td>
<td>15%</td>
<td>55%</td>
<td>30%</td>
</tr>
<tr>
<td>May</td>
<td>16%</td>
<td>56%</td>
<td>28%</td>
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C3Q20 Pricing vs. C2Q20

<table>
<thead>
<tr>
<th>Month</th>
<th>Down &gt;2%</th>
<th>Flat +/-2%</th>
<th>Up &gt;2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr</td>
<td>22%</td>
<td>45%</td>
<td>35%</td>
</tr>
<tr>
<td>May</td>
<td>23%</td>
<td>48%</td>
<td>37%</td>
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The outlook for Communications continues to be above previous years while Auto continues to erode.