INSTRUCTIONS

1. If you need a hard copy of the survey questions, a copy of the blank questionnaire in PDF is available here.

2. For public companies, preliminary (unaudited) financial information is acceptable.

3. Please report value data in **U.S. dollars**. Links to exchange rate tables are in the survey.

4. Report only the dollar value of printed circuit board sales and bookings in **North America**. Do not include items such as freight, tooling, services, recycling income, etc.

5. North American shipments and bookings are intended to reflect **sales in North America**, which may include sales of boards produced abroad and imported for resale. Participants in this program who do not have easy access to total sales data and whose North American production is primarily for the North American market may, instead, report the value of their North American production.

6. **Backlog information should include only orders with delivery dates**, not long term contract orders without dates. When the customer provides a delivery date, the order value should be moved into backlog as appropriate.

7. Backlog information should include only PCB value and not additional items, such as freight, tooling, services, recycling income, etc.
8. Data provided for 2018 and 2019 should include **same-facility information and/or same scope of business**. If you have purchased or sold a business unit, please revise your prior-year data to make it comparable to the business scope of your current-year data, or contact us.

9. Please enter the **actual dollar value** (not in thousands or millions) and do not enter any non-numeric character such as "$" or "k". Enter the full amount (e.g. do not enter $500K or $0.5M, but please enter it as 500,000). You may use commas in numbers greater than 999, but they are not necessary.

10. If you need to leave an incomplete survey and return to complete it later, you may do so. Be sure to complete the current page and click the forward icon (>>>) to send that data. When you wish to resume the survey, use the same computer and browser, then click your original survey link to return to your survey.

11. Once you have submitted your completed survey, you will not be able to re-enter the survey form to make changes. If you need to make changes to a submitted survey, please contact Piyamart Holmgren at piyamartholmgren@ipc.org or +1 847-597-2868.

12. After submitting your survey, you will see a confirmation page. Scroll down to see your completed survey. It is suggested that you right-click on the page and save or print it for future reference.

**QUARTERLY SALES DATA**

(Click here for exchange rates.)

1. Total net sales/shipments of rigid PCBs in North America **LAST QUARTER** by product type.

   a. Single-sided rigid PCB shipments $ 
   b. Double-sided rigid PCB shipments $ 
   c. Multilayer rigid PCB shipments $ 
   d. HDI/microvia rigid PCB shipments $ 
   Total net rigid PCB shipments $
2. Total net sales/shipments of rigid PCBs in North America in the **SAME QUARTER LAST YEAR**.

a. Single-sided rigid PCB shipments $ 

b. Double-sided rigid PCB shipments $ 

c. Multilayer rigid PCB shipments $ 

d. HDI/microvia rigid PCB shipments $ 

Total net rigid PCB shipments $ 

3. What percentage of last quarter's North American rigid PCB sales were for **military/aerospace** applications?

% 

4. What percentage of last quarter's North American rigid PCB sales were for **medical device** applications?

% 

5. What percentage of last quarter's North American rigid PCB sales were **prototypes**?

% 

6. What percentage of last quarter's North American rigid PCB sales were **RF or microwave** boards?

%
QUARTERLY BOOKINGS DATA
Please report only bookings that have scheduled delivery dates.

(Click here for exchange rates.)

7. Total net bookings (orders) for rigid PCBs in North America **LAST QUARTER**.

- a. Single-sided rigid PCB bookings  
  - 
- b. Double-sided rigid PCB bookings  
  - 
- c. Multilayer rigid PCB bookings  
  - 
- d. HDI/microvia rigid PCB bookings  
  - 
Total net rigid PCB bookings  
  -

8. Total net bookings (orders) for rigid PCBs in North America in the **SAME QUARTER LAST YEAR**.

- a. Single-sided rigid PCB bookings  
  - 
- b. Double-sided rigid PCB bookings  
  - 
- c. Multilayer rigid PCB bookings  
  - 
- d. HDI/microvia rigid PCB bookings  
  - 
Total net rigid PCB bookings  
  -

**FORECAST**

9. Please provide your best estimate of your company’s North American PCB sales growth for the next **three-month period** compared to the last three-month period (in percent), including a minus sign if it is negative.

  - %
10. Please provide your best estimate of your company’s North American PCB sales growth for the next 12-month period compared to the last **12-month period** (in percent), including a minus sign if it is negative.

\[ \text{\%} \]

**OPERATIONS**

11. What was the past quarter’s percentage of **capacity utilization** in your rigid PCB operations? Total capacity should be based on current facilities and equipment. A good estimate is acceptable if data are not available.

\[ \text{\%} \]

12. What were the **average lead times in days** for rigid PCB orders during the past quarter? Lead time is defined as the number of working days from acceptance of order to delivery of the finished product.

Single-sided

Double-sided

Multilayer

HDI/microvia

13. What was the number of **inventory turns** in the past quarter? Inventory turns can be calculated as follows: Cost of goods sold (COGS) for the quarter / Average net inventory for the quarter.

\[ \text{\%} \]

14. Are there any conditions or trends that are significantly increasing your **costs**?

Yes

No
If yes, please specify what costs are increasing beyond normal inflation and what is driving the increase.

REPORT DISTRIBUTION

If you have colleagues in your company who would benefit from receiving this report, please provide us with their email addresses. We will add them to the distribution list.

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COMMENTS

Please share any comments, questions or suggestions you have concerning this survey.