

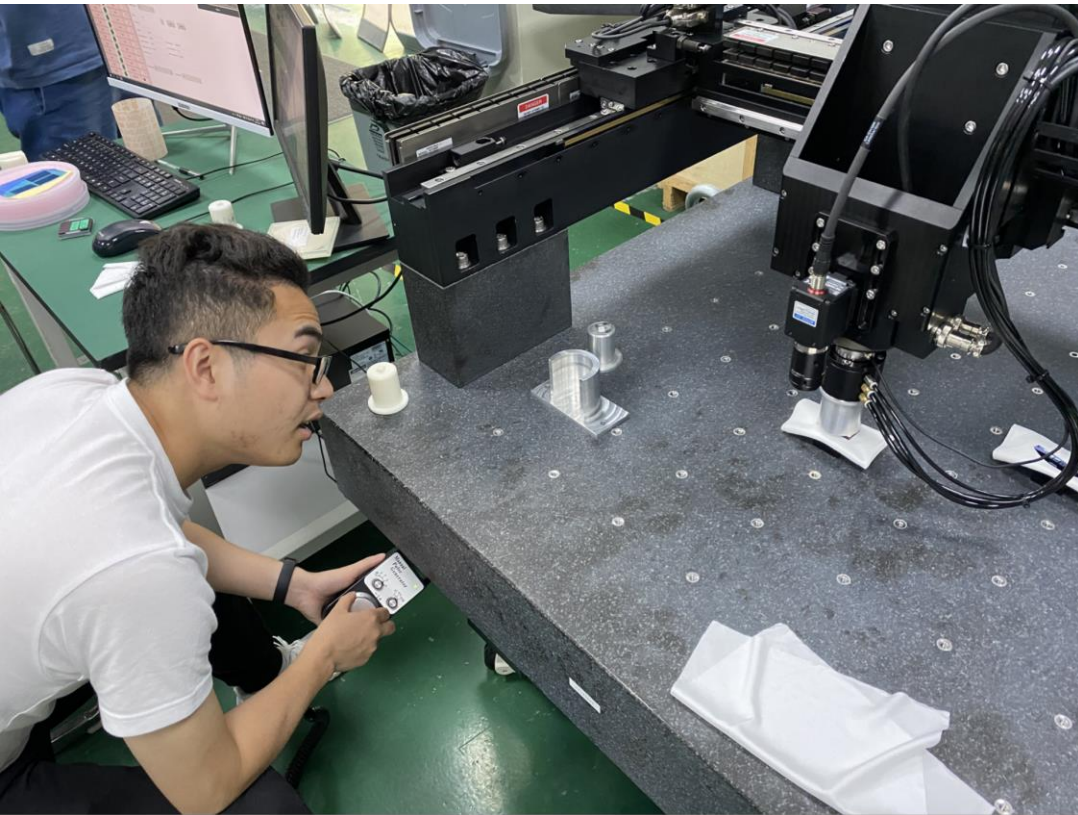
CEPC MOST2 prototype assembly Pattern recognition

Xinhui Huang

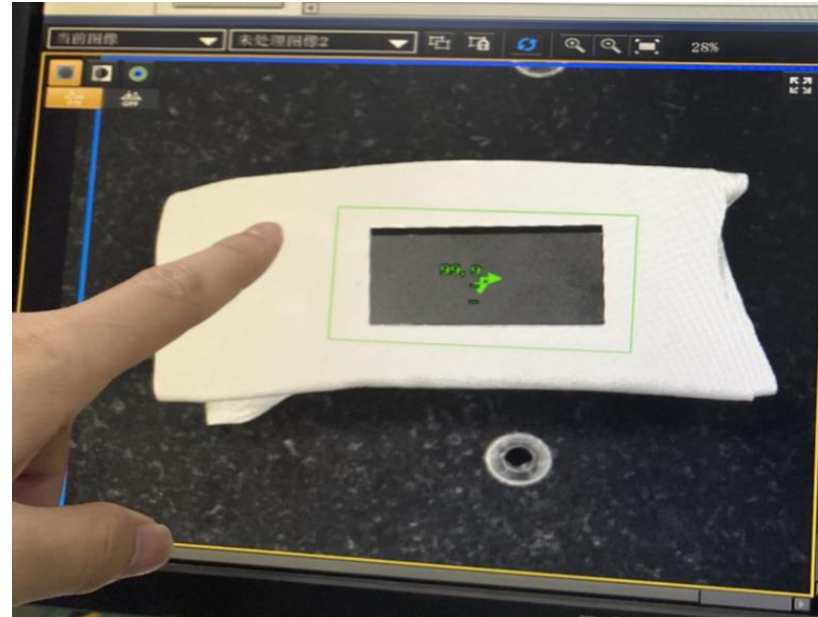
Gantry for vertex detector prototype assembly

- 3~5um good position resolution require high assembly precision
- Cooperate with domestic company on R & D Gantry automatic module assembly.
 - **Pattern recognition with high resolution camera**
 - Automatic chip pick-up and positioning
 - Automatic Glue dispensing

Gantry system



Pattern recognition



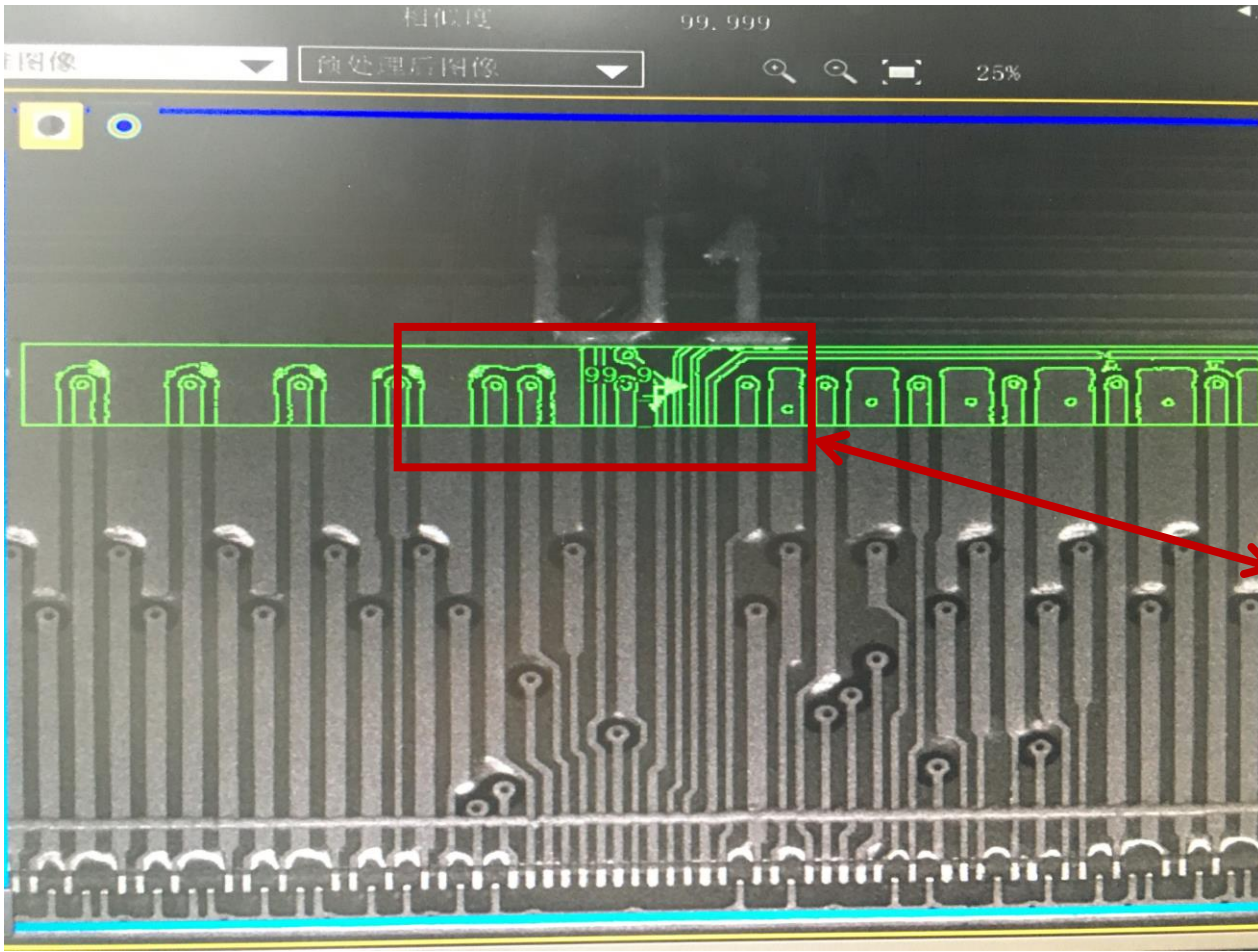
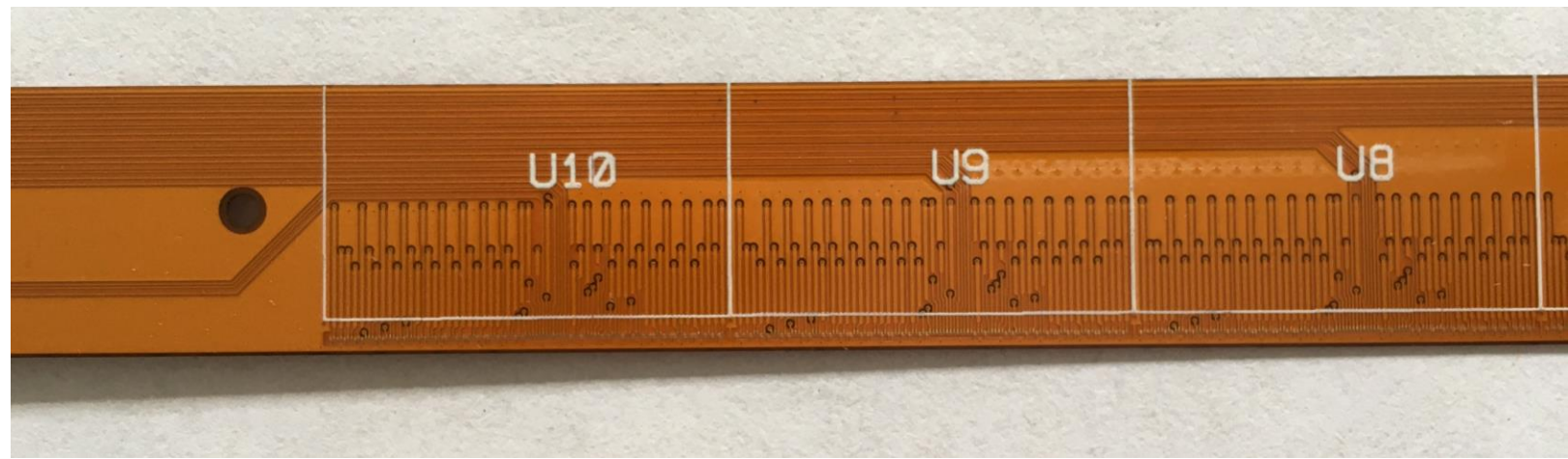
automatic glue dispensing



Pattern recognition

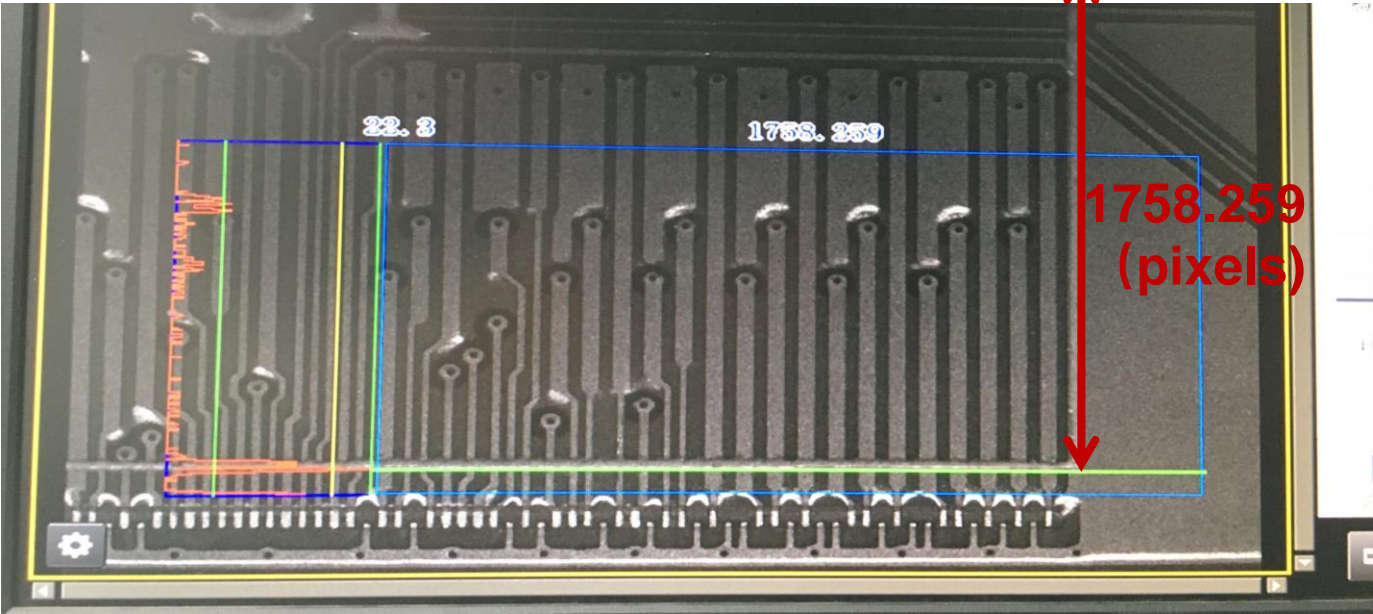
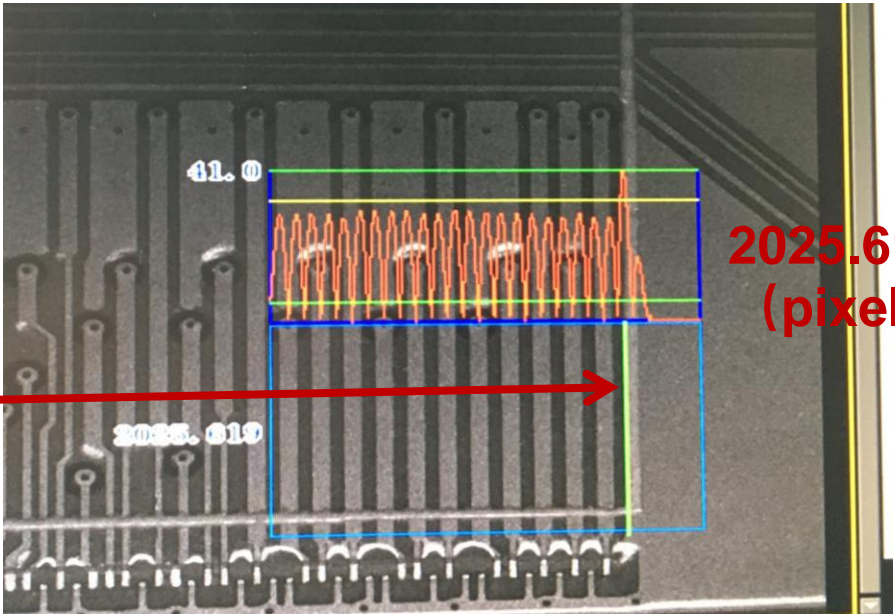
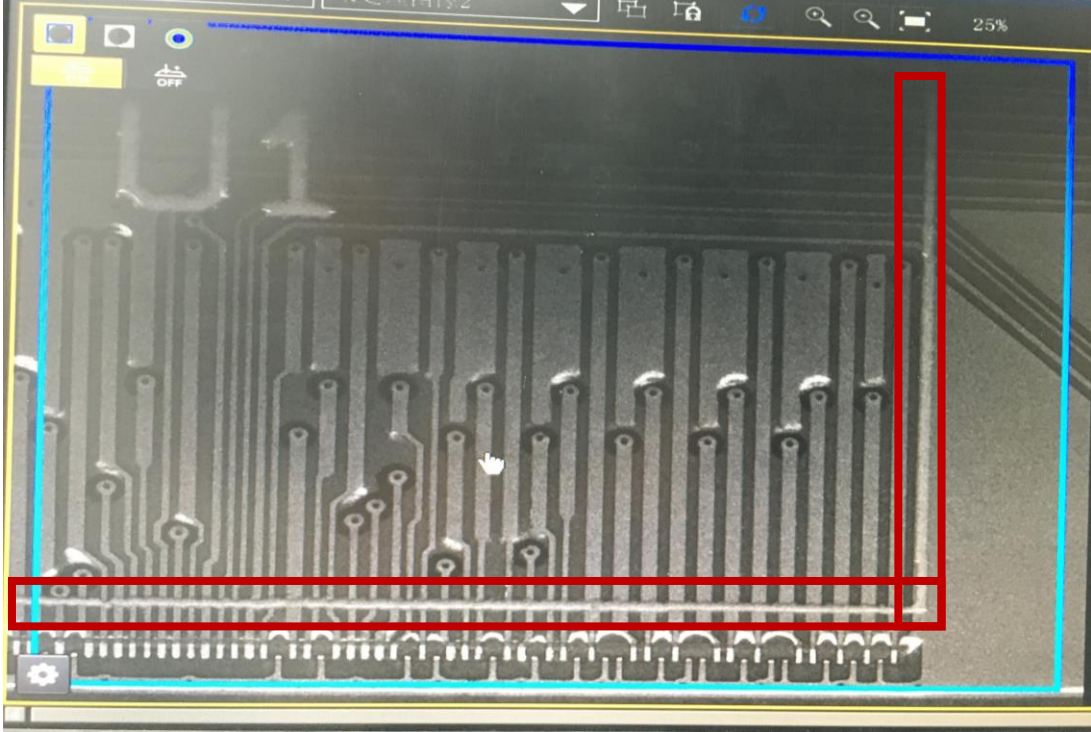
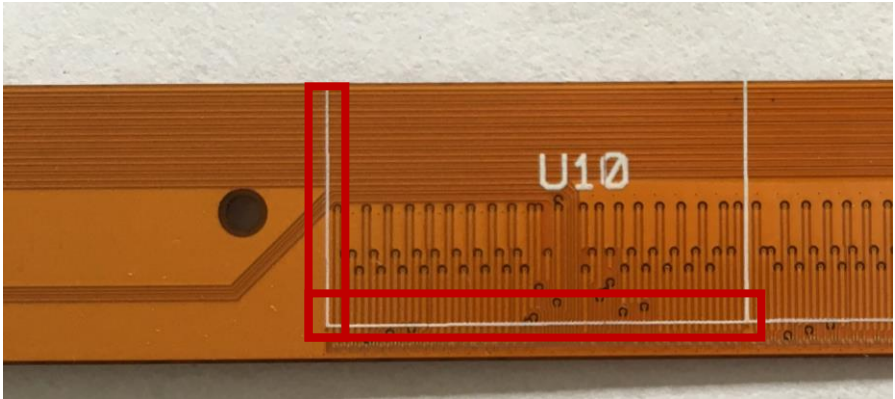
Flex cable

Contour recognition



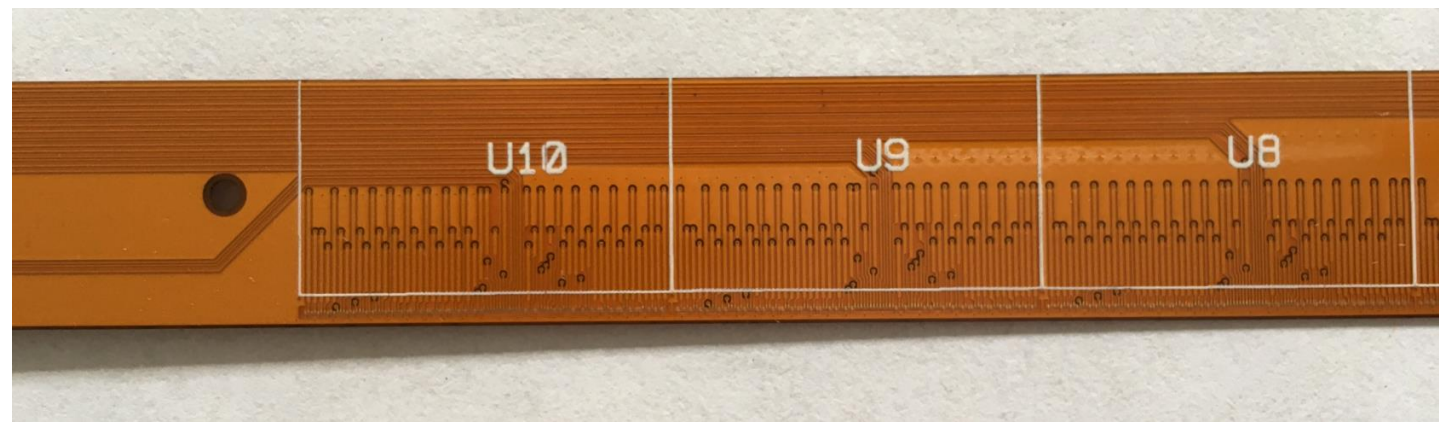
Boundary recognition

Recognize the white boundary printed on the flex cables



Summary

- High precision pattern recognition



Summary

- Appropriate to use the white boundary for recognition?
- Other markers for pattern recognition?

Backup

边缘数

1 位置X
位置Y

2025.619
1524.500

123.4 ?

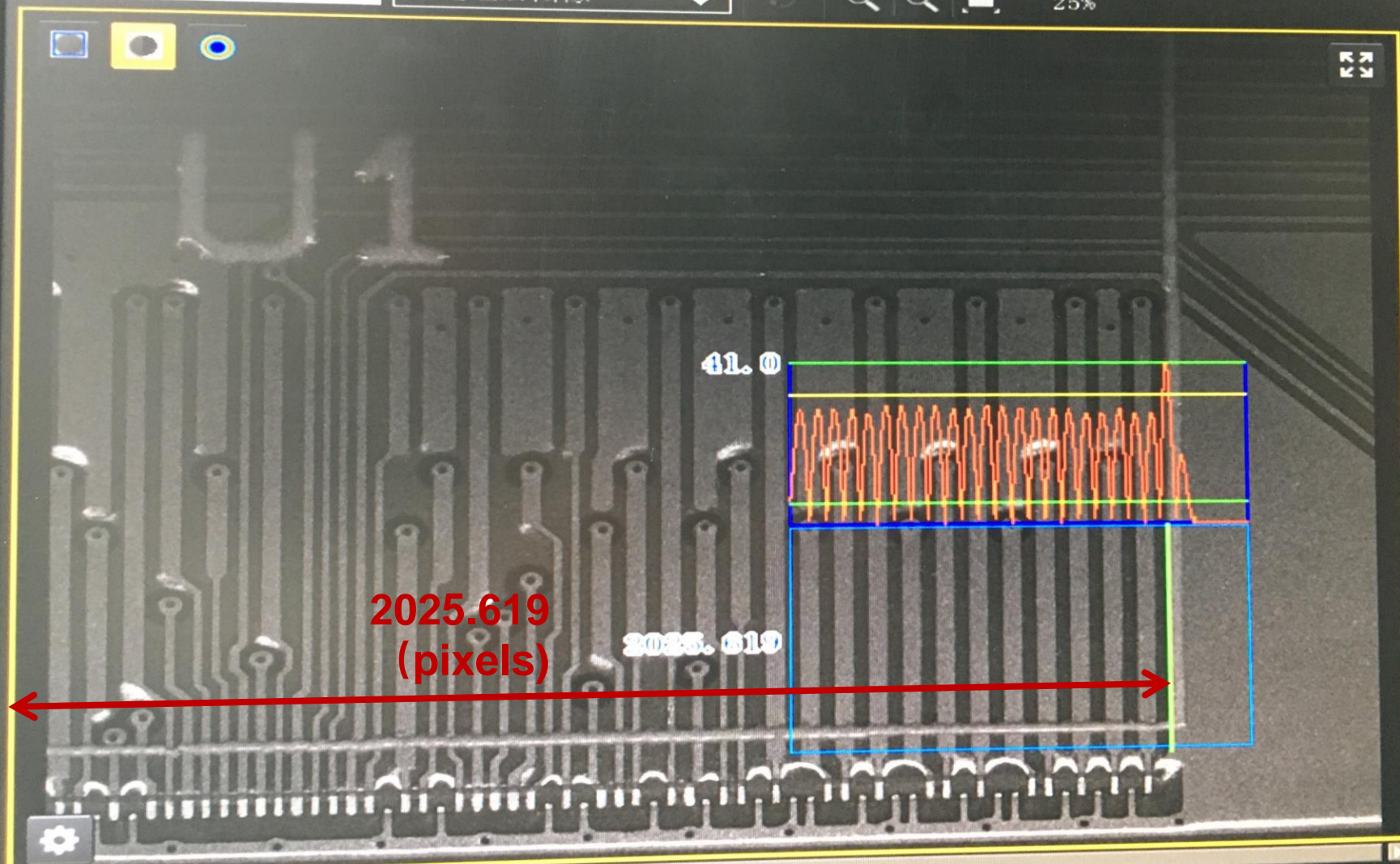
T104

1/2

基准图像

预处理后图像

25%



2025.619
(pixels)

2025.619

41.0

执行时间

0.7ms

边缘数

判定标准

1 位置X

1452.500

123.4 ?

T10

位置Y

1758.259

1/2

基准图像

预处理后图像

25%

22.3

1758.259

1758.259
(pixels)

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