

TOTAL CUSTOMER SATISFACTION

EXCEED SERIES INFO



**JHT EXCEED SERIES HANDLER
RUN QFN2X2 REPORT**

Sample PICS

Exceed series

Sample Type: QFN

Sample Size: 2mmX2mm

Tray Type: UBoT UL02021.01435XBU (JEDEC)

Conversion KIT: Quad Site 2X2

Handler Model: JHT EXCEED6000/EXCEED8000

Handler Speed: 100%



Sample & Tray



Quad Site KIT



Octal Site KIT

SETUP

Exceed series

SETUP Steps (Total Time: Approx 4 Hours)

- 1.Install Conversion KIT
- 2.Adjust Shuttle Sensor
- 3.Setting Device Information (As Below DEVS)
- 4.Calibrate Contact Height
- 5.Dummy Run to Adjust Offset & Sensor



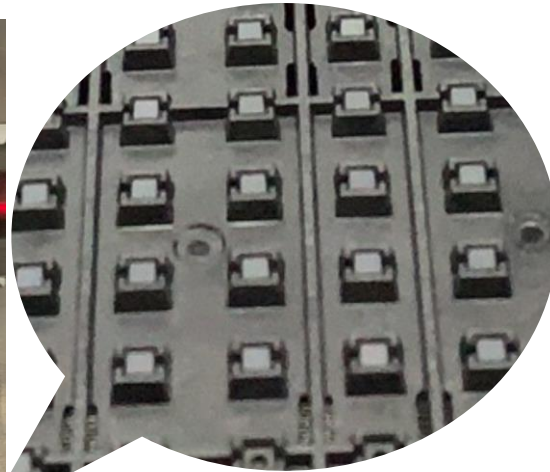
QFN2X2(2X2)-backup(20181026093727).devs

Dummy Run Pics

Exceed series



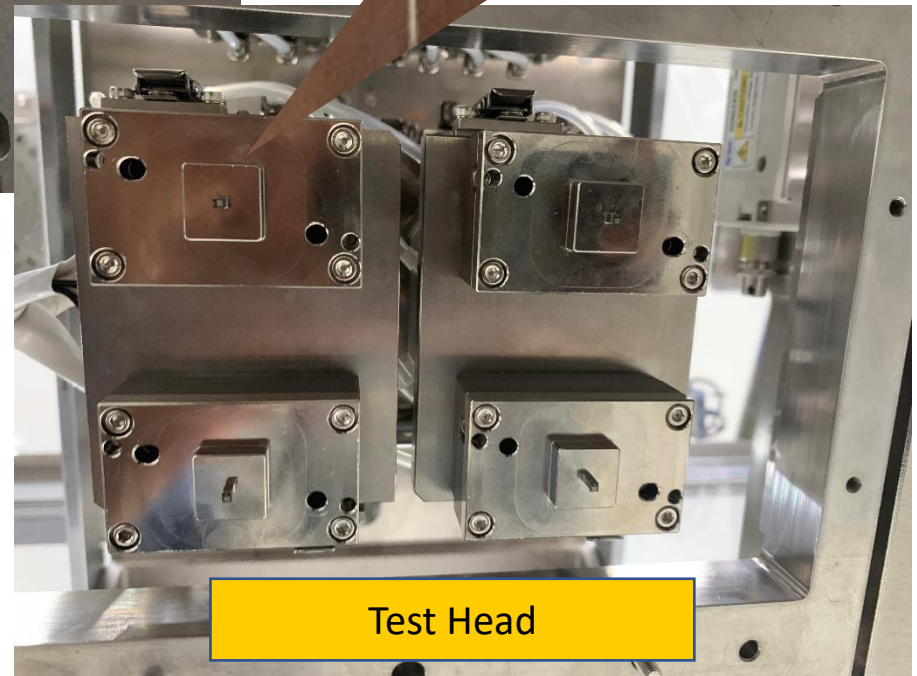
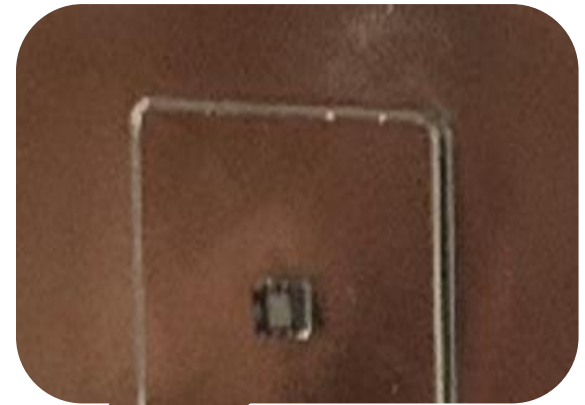
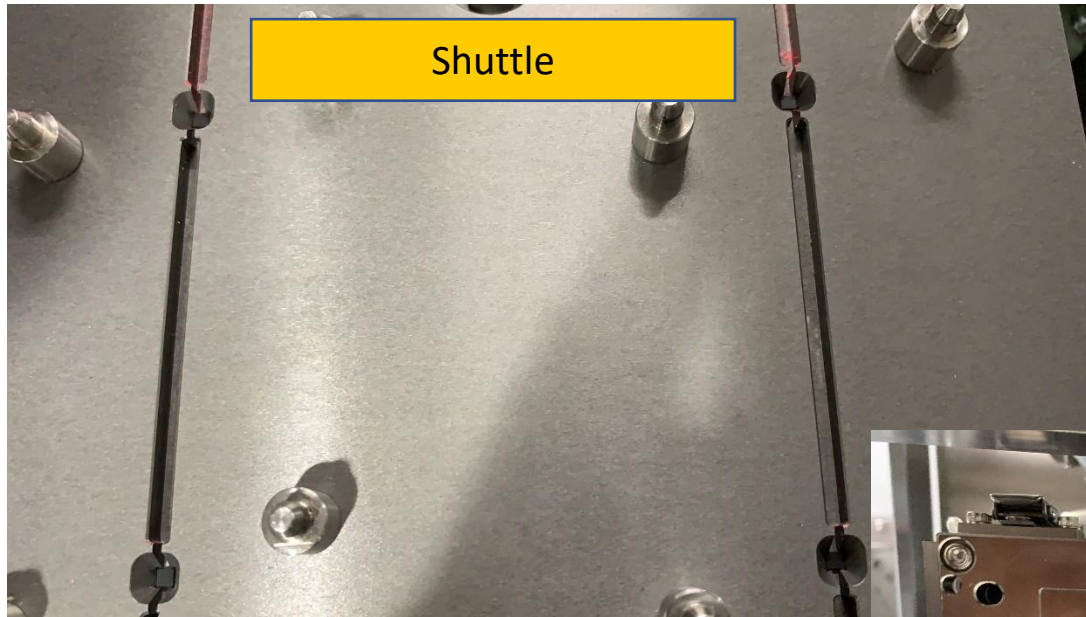
Loader Tray



Auto Unloader Tray

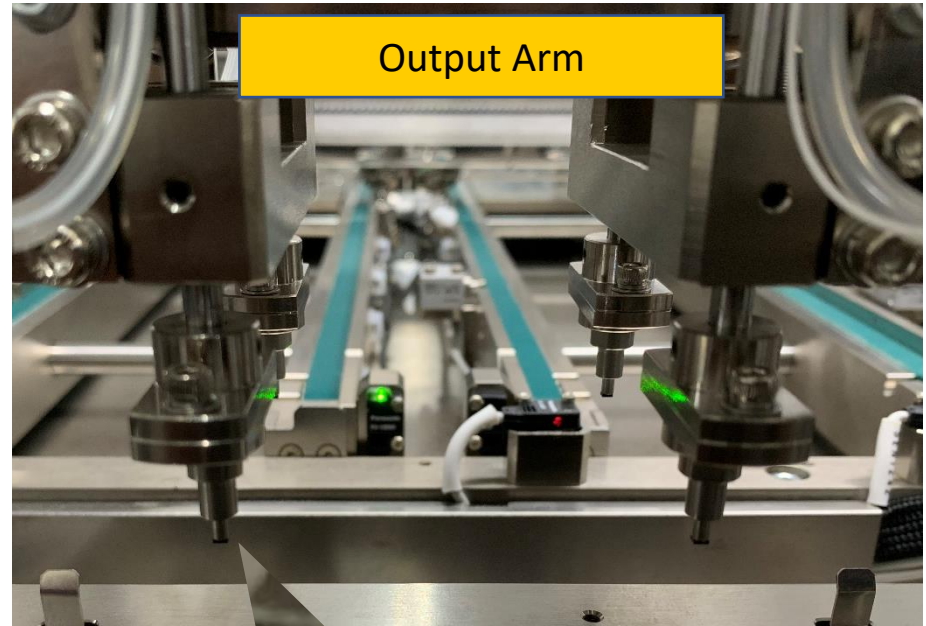
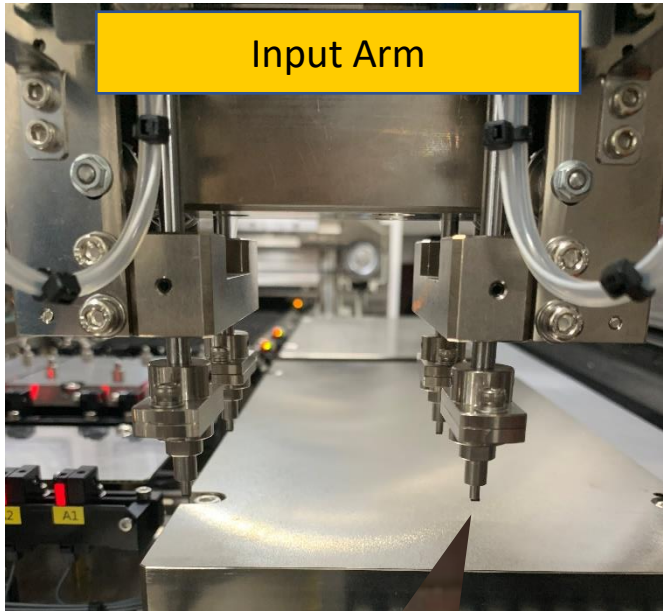
Dummy Run Pics (EXCEED6000)

Exceed series



Dummy Run Pics (EXCEED6000)

Exceed series



Dummy Run Data(EXCEED6000)

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The screenshot displays the JHT software interface with several key windows:

- 运行模式 (Run Mode):** Shows '练习模式' (Practice Mode) and 'Offline' status. The heater is set to '室温模式' (Room Temperature Mode).
- 加热器 (Heater):** Displays '5.00/5.00' and '5.00/5.00'.
- 统计数据 (Statistics):** Shows 'UPH: 7948' and '数量: 0'.
- 计数器 (Counter):** Shows 'Load in: 5176' and 'Jam Rate: 0/5176'.
- 加热盘-室温 (Heating Tray - Room Temp):** Shows '模式: 室温模式' and '状态: 室温'.
- 测试区域状态显示 (Test Area Status):** Shows '测试位 A (100.00%)' and '测试位 B (100.00%)'.
- UPH of last 10 Trays - AvgUPH: 6837:** A table showing UPH values for the last 10 trays.
- Socket Last 24 Result(SOT delay 0ms):** A table showing socket test results.

UPH 7948

UPH: 7948

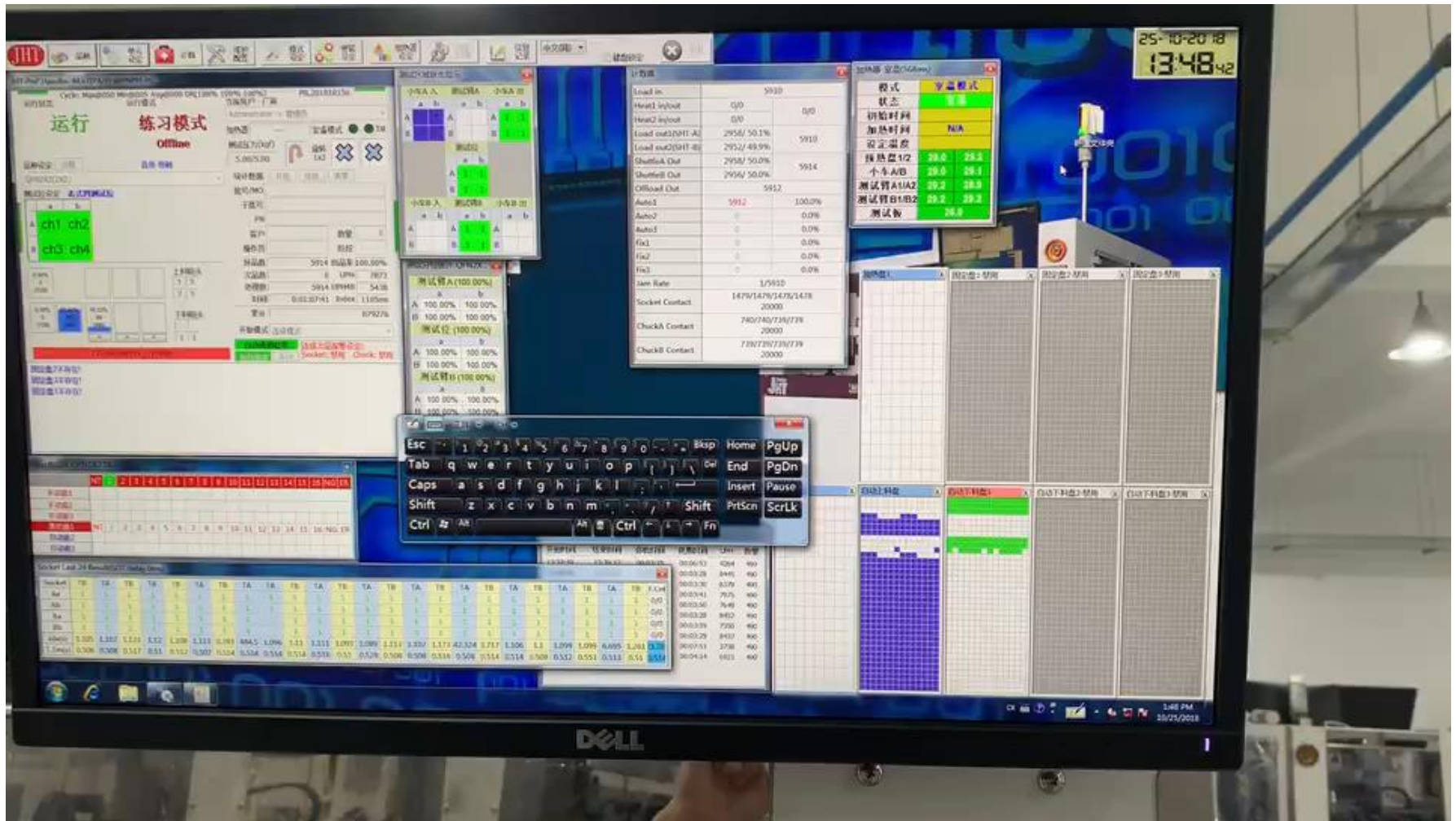
Jam Rate: 0/5176

Jam Rate

0/5176

Dummy Run Video (EXCEED6000)

Exceed series



Dummy Run Pics (EXCEED8000)

Exceed series



Shuttle



Dummy Run Pics (EXCEED8000)

Exceed series



Input Arm Pick-up Head

Dummy Run Pics (EXCEED8000)

Exceed series



Test Head

Dummy Run Data(EXCEED8000)

Exceed series

The screenshot displays the JHT software interface with the following components:

- Main Control Panel:** Shows '运行' (Run) status, '练习模式' (Practice Mode), and 'Offline' indicator. It includes settings for '品种' (QFN2x2(2X4)), '测试位' (ch1-ch8), and '测试压力' (6.98/7.00 kgf).
- 测试区域状态显示:** Displays '测试臂A' and '测试臂B' status with color-coded grids (green for pass, red for fail).
- 计数器:** Shows 'Load in' (5264) and 'Load out' (5264) counts, along with 'ShuttleA Out' and 'ShuttleB Out' counts.
- UPH of last 10 Trays:** A table showing production metrics for the last 10 trays.
- 速度设定-QFN2x2(2X4):** A window for setting speed and acceleration ratios for different components.
- Socket Last 25 Result(SOT delay Oms):** A detailed table of socket test results.
- 料盘分类信息-QFN2x2(2X4):** A window for tray classification, showing counts for manual and automatic trays.

UPH: 10557

Jam Rate: 0/5264

Dummy Run Video (EXCEED8000)

Exceed series



Buyoff data on customer site – ChipMOS Taiwan

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The screenshot displays the JHT software interface with several key windows:

- Speed Setting Window (速度設定-QFN2X2(2X4px)H-Dummy):** Shows speed ratios set to 100% for all components (Upper Arm, Lower Arm, Test Arm, Transport Cart, and All).
- Counting Window (計數器):** Shows a Jam Rate of 1/50400.
- UPH of last 10 Trays:** Shows an average UPH of 8668.
- Test Area Status Display (測試區域狀態顯示):** Shows test results for various components.
- Material Classification (料盤分類資訊-QFN2X2(2X4px)H-Du...):** Shows manual and automatic tray counts.

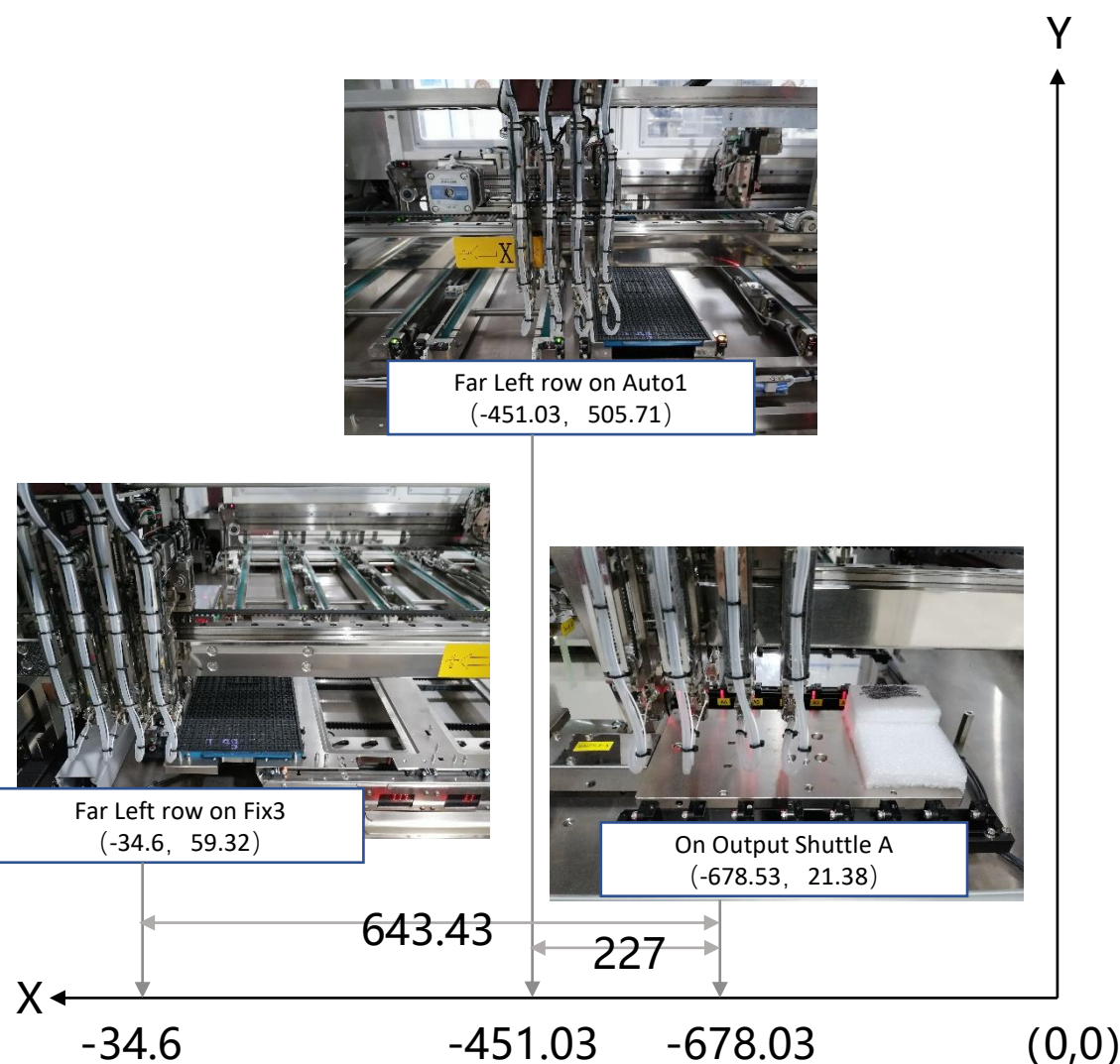
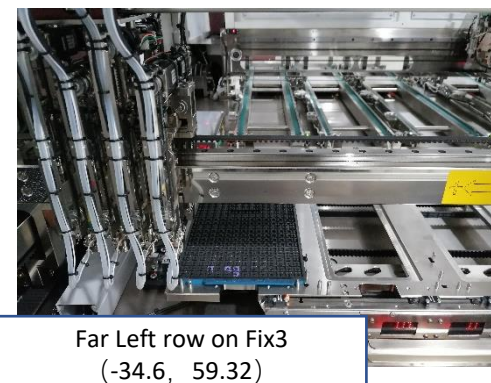
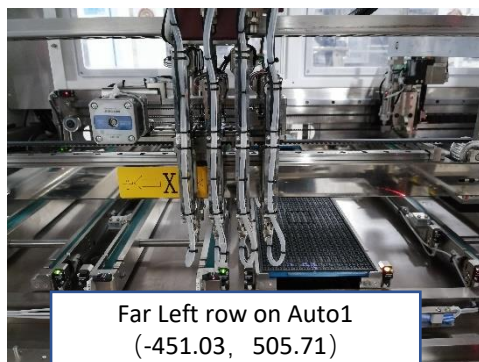
100% Full speed

Jam Rate: 1/50400

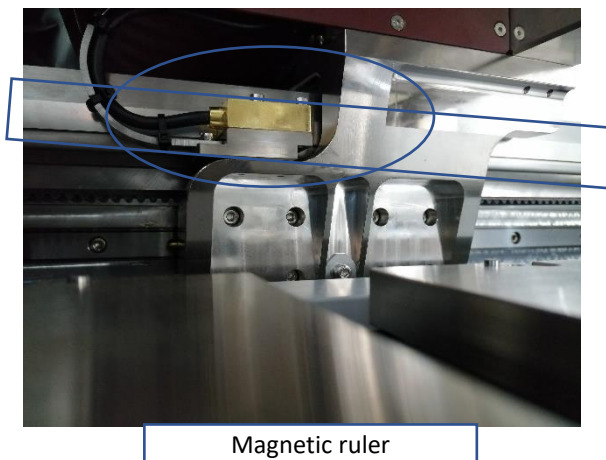
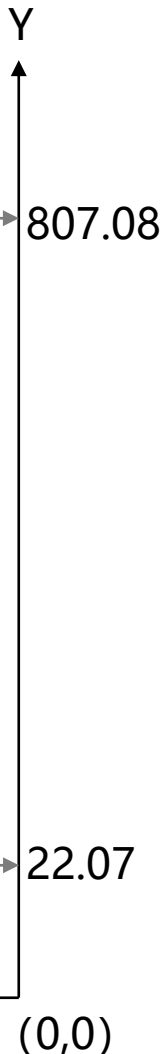
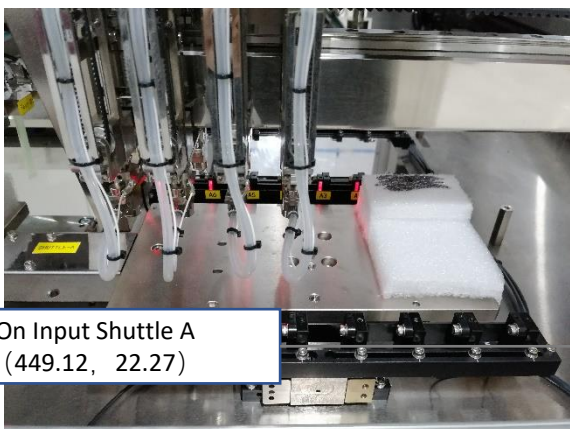
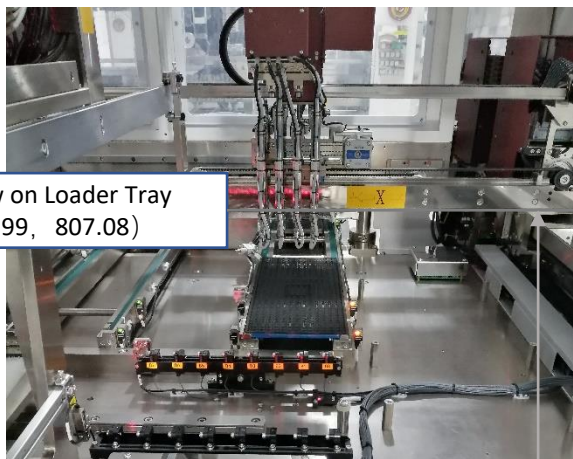
Avg UPH >8.5K

Input/Output Arm X-Direction Control & Accuracy ($\pm 0.01\text{mm}$)

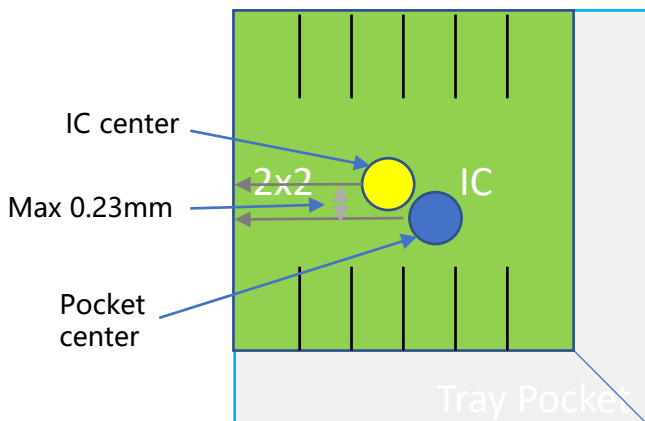
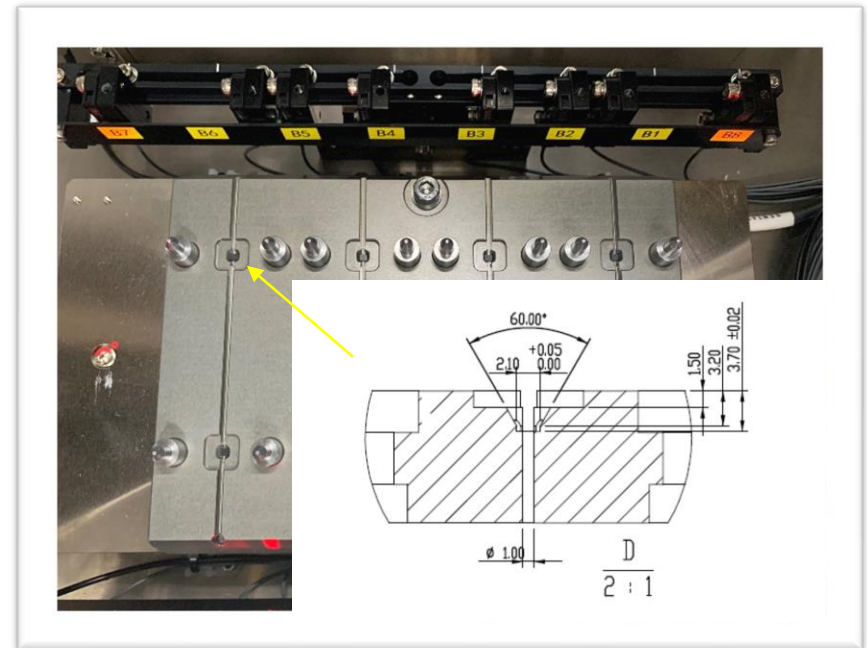
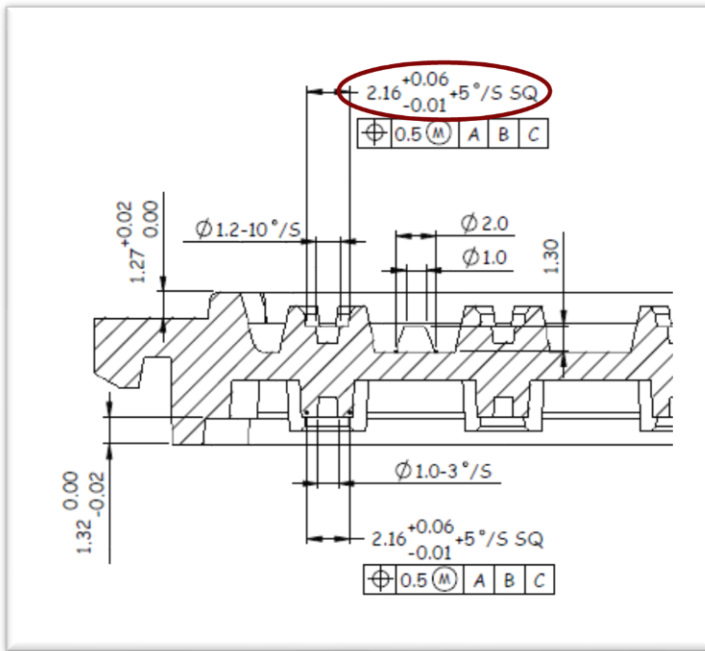
Exceed series



X direction movement distance :
The interval from Shuttle->Auto1 is the most commonly used. The maximum distance is about 230mm. The longest movement distance is from the leftmost side of shuttle->Fix3. The maximum distance is about 650mm. The servo motor is used to drive the pulley, and the real-time position is fed back through the encoder to form a closed loop system. X-direction control accuracy: 9um (0.009mm) X-direction encoder accuracy: 9um (0.009mm) When the Arm needs to move to the target position, it will check whether it matches the encoder position in real time and perform automatic compensation, so the X-direction accuracy can be controlled at 10um (0.01mm).



Y direction movement distance :
Loader Tray last row -> Shuttle A About 785mm, it uses a servo motor to drive the pulley and uses a magnetic scale to feedback the position to form a closed loop system. Y-direction control accuracy: 7.5um (0.0075mm) Y-direction magnetic scale accuracy: 5um (0.005mm) When the Arm needs to move to the target position, it will check whether it matches the position of the magnetic scale in real time and perform automatic compensation, so the Y-direction accuracy can be controlled at 10um (0.01mm)

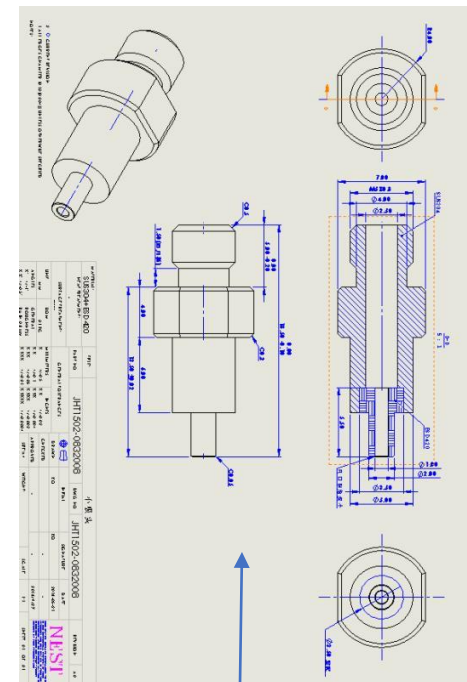
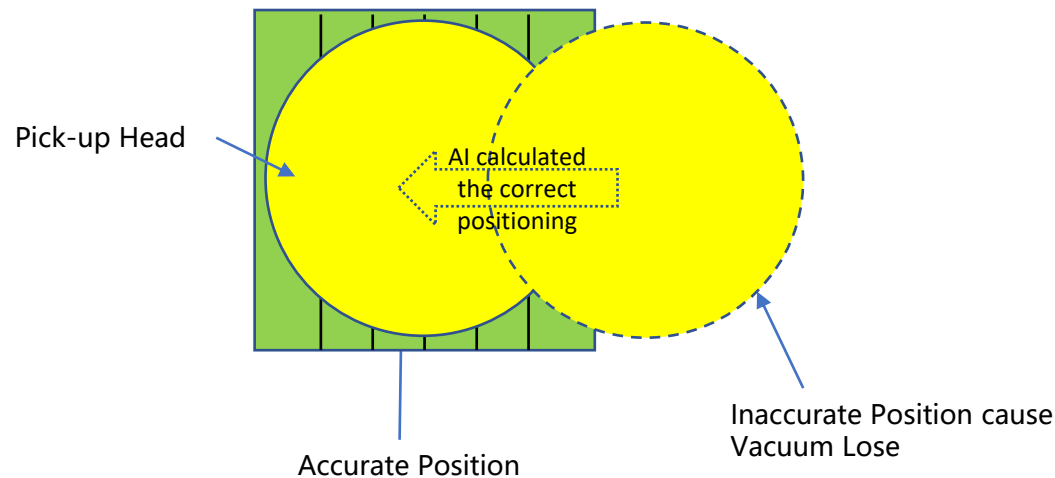


IC Size: $2 \times 2\text{mm} (\pm 0.01\text{mm})$ Tray Pocket Size: $2.15-2.22\text{mm}$
 Shuttle Pocket Size: Top $3.5-3.55$ / Bottom $2.1-2.15\text{mm}$ From Tray to Shuttle tip suction center position deviation is up to 0.23mm , it can be put into the shuttle pocket (Top $3.5-3.55$ and 60° inclination design); From Shuttle to Tray, the center position is even smaller (0.16mm), and there is no problem with putting in Tray. In the same way, the Hotplate Pocket design tolerance is the same as Shuttle, which is also OK.

Input/Output Arm Pick&Place small size IC Stability

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On the benchmark of high-precision positioning, JHT has developed AI operations to further ensure the accuracy of Pick & Place and overcome some larger warpages: When the Pick-up head picks up or place IC on Tray & Shuttle, Step motor will adjust the Pick up speed in multiple stages according to the changes in the Vacuum Generator real-time signal. If the Vacuum Generator signal has ms level fluctuations (Lose), the control system will XY position is fine-tuned, the most accurate position is calculated intelligently, and Pick& Place position is memorized;

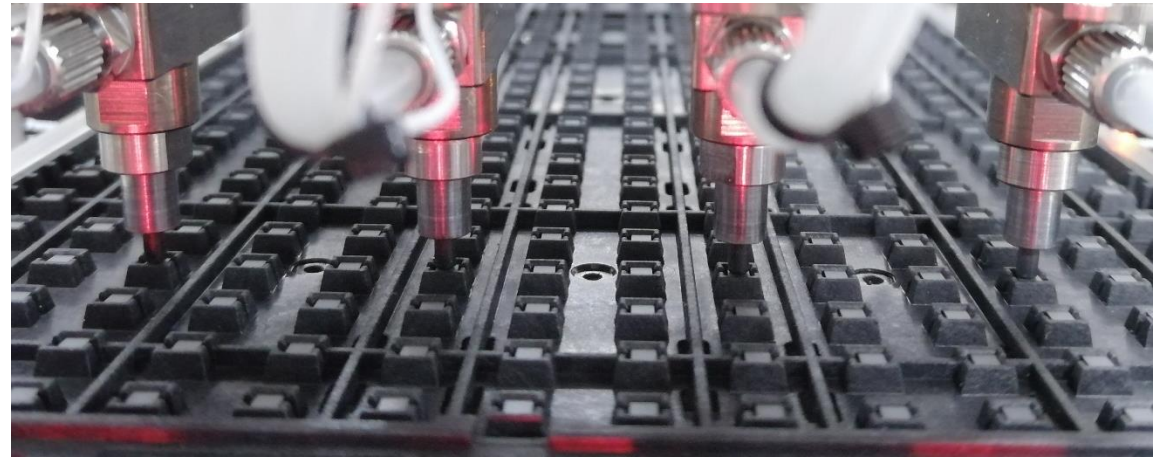


JHT Small Pick up Head $\phi 1.2\text{mm}$

Input/Output Arm Pick&Place small size IC Stability

Exceed series

When the Pick& Place position is correct, the Pick-up head Vacuum action matches the signal. When the Vacuum signal is stable, it automatically enters the next action.



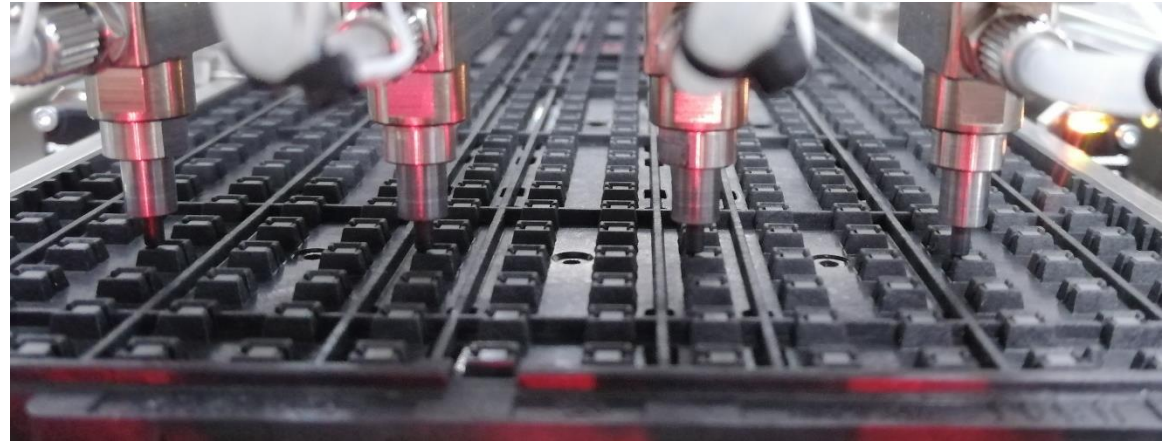
	吸头1	吸头2	吸头3	吸头4	吸头5	吸头6	吸头7	吸头8
高位	20.79	21.97	20.97	22.15	-1.00	-1.00	-1.00	-1.00
高位	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
释放位	16.89	18.07	17.07	18.25	16.99	18.33	17.53	17.67
吸取位	20.79	21.97	20.97	22.15	20.89	22.23	21.43	21.57
真空	●	●	●	●	●	●	●	●
吸取	●	●	●	●	●	●	●	●
释放	●	●	●	●	●	●	●	●

Pick up head 位置准确, Vacuum信号均为On

Input/Output Arm Pick&Place small size IC Stability

Exceed series

When the Pick& Place position and IC position deviate too much, the Pick-up head Vacuum action cannot match the signal normally, and there will be ms-level blinking. At this time, the control system adjusts the XY Serve Motor and Z Step Motor through AI calculations, and monitors the Vacuum in real time. Signal, when the Vacuum signal is stable, it will automatically enter the next action



吸头1	吸头2	吸头3	吸头4
20.79	21.97	20.97	22.15
高位	高位	高位	高位
-1.00	-1.00	-1.00	-1.00
释放位	释放位	释放位	释放位
16.33	18.87	17.07	18.25
吸取位	吸取位	吸取位	吸取位
20.79	21.97	20.97	22.15
真空	●	●	●
吸取	●	●	●
释放	●	●	●

吸头1	吸头2	吸头3	吸头4
20.79	21.97	20.97	22.15
高位	高位	高位	高位
-1.00	-1.00	-1.00	-1.00
释放位	释放位	释放位	释放位
16.33	18.87	17.07	18.25
吸取位	吸取位	吸取位	吸取位
20.79	21.97	20.97	22.15
真空	●	●	●
吸取	●	●	●
释放	●	●	●

Pick up head position deviation is too large, Vacuum signal is unstable

**JHT EXCEED Series
Handler Can Support
2mmx2mm Small Size
Package.**

We aspire to be a leader
in semiconductor
testing equipment



**THANK
YOU**