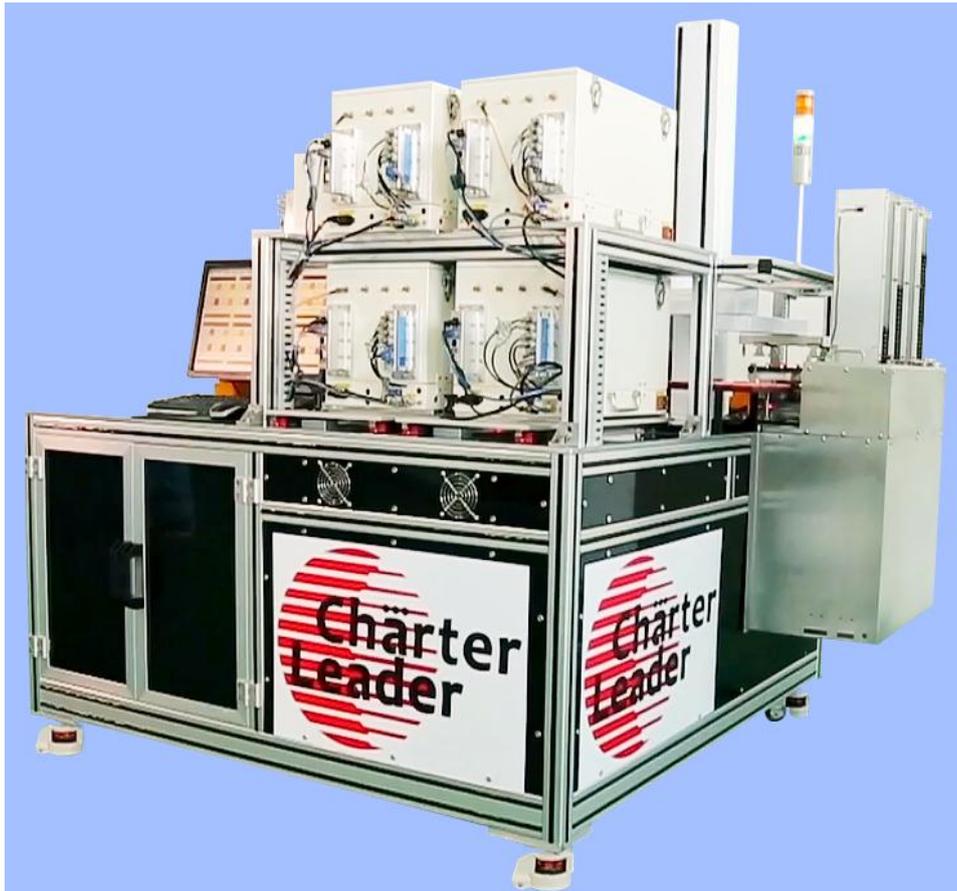




Datasheet- Model: MTS-8400



Features

1. Automatic test system for wireless products
2. Maximum UPH: 1500
3. Modular design: Enable to test various products
4. Safety: Adopting collaborative robotic arm and installing anti-pinched sensor on every shielding box

Brief introduction

We designed this automatic solution for customer to save manpower and upgrade the quality in test process. The hardware, mechanics, fixture and software were all self-developed, which means we are highly capable for customization for different demand, including the requirement from software and hardware. Below are some of the specialty

Saving space: The compact MTS-8400 only takes 2 m² and is mobile with wheel.

Saving tester: It takes only one tester, one computer, 8 shielding boxes and self-developed software and hardware to enable 1 to 8 parallel testing.

Saving manpower: Equipped with scanner, smart camera and feeder, MTS-8400 realize truly automation in whole process without operator.

Great output: MTS-8400 have maximum UPH about 1400 even though the compact space and less instruments it takes.

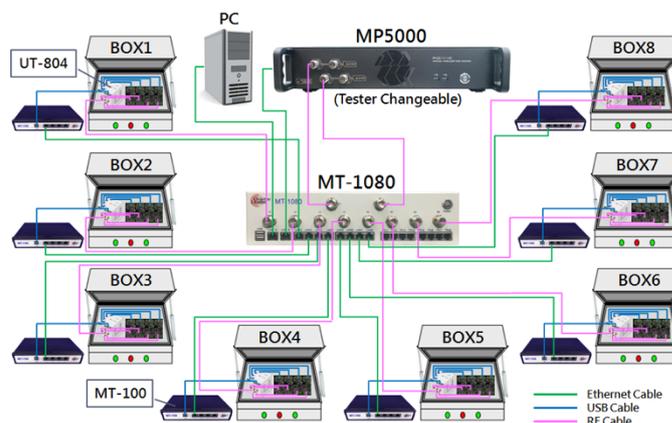
Safety concerned: Robotic arm is collaborative and there's anti-pinch sensors on every shielding box.

Core of testing system

The core of MTS-8400 is RF Tester which is changeable. We support many kinds of tester to make sure customer can keep their original tester. (Supported equipment: Litepoint IQxel, IQFlex....., Agilent N4010A, E6640A, Aeroflex PXI3000, Advicv MP5000)

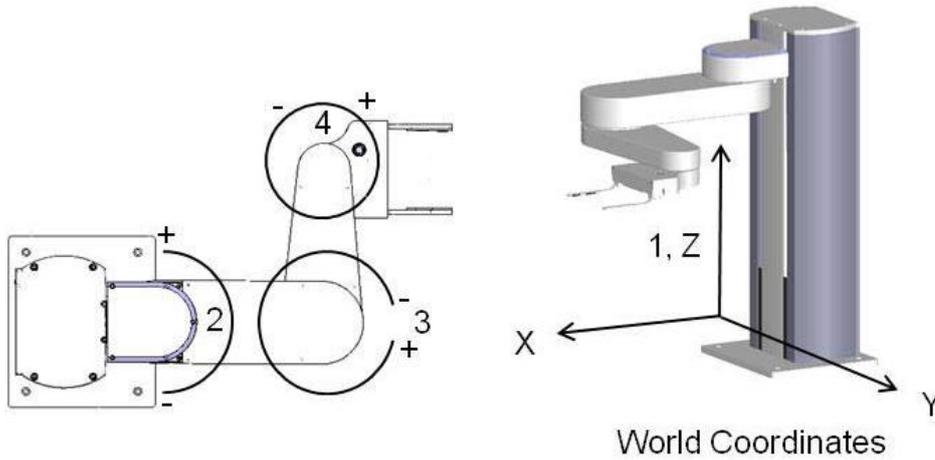
Tester would connect to one PC and one MT-1080 which is a self-developed equipment. By connecting with MT-1080, tester can expand its capacity to parallel test 8 DUT simultaneously.

The robotic arm places 4 DUTs a time into one shielding box. There is a small cube called UT-804 which is a 1 to 4 RF and USB switch. It switches 4 DUTs to do serial testing. Therefore, once robotic arm places a tray with 4 DUTs into shielding box, it only need to pick the DUT after 4 rounds of test which save a lot of time of placing DUT.



Robotic arms

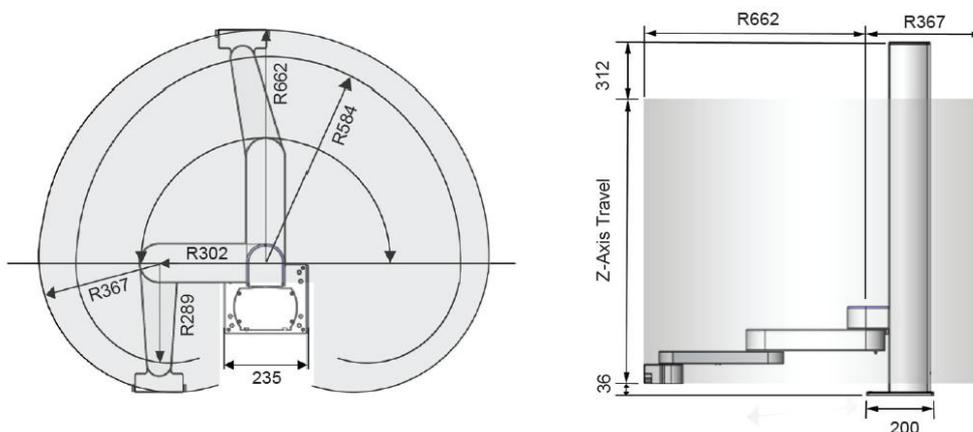
MTS-8400 is equipped with a collaborative 4-axis SCARA robotic arm. Because of special algorithm, this arm can prevent hurting people even it is activated with full speed and resume working very easily.



Parameter of robotic arms

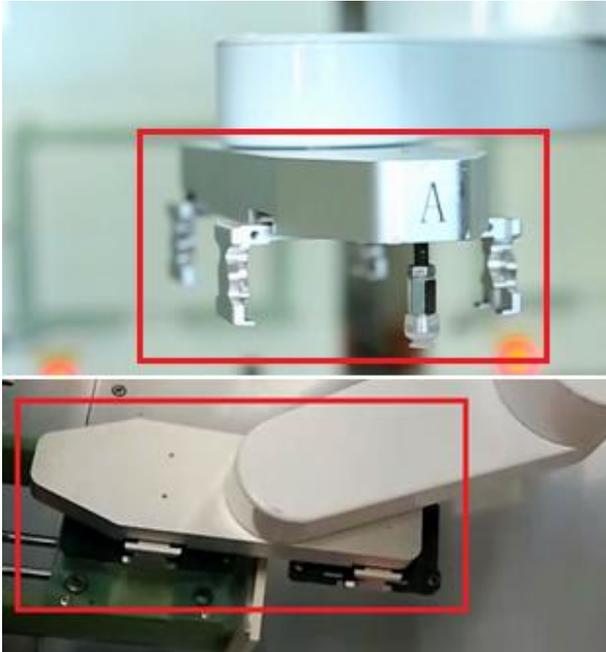
Item	Axis	Description of Motion
1	Z column	Move Up and Down 750mm
2	Shoulder	Rotates ± 90 degrees
3	Elbow	Rotates ± 167 degrees
4	Wrist	Rotates ± 970 degrees with servo gripper , $+100/-470$ with mounting flange

Working area



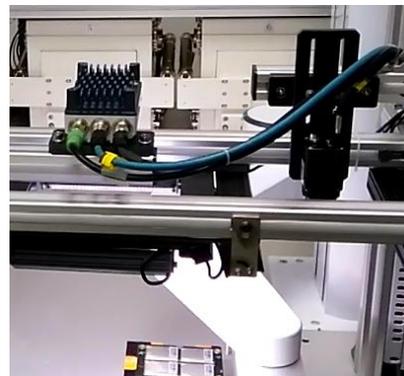
Claw

Claw is changeable for different DUT. We suggested the total loading of claw should not be over 3 kg, otherwise it can't operate with full speed.



Smart Camera

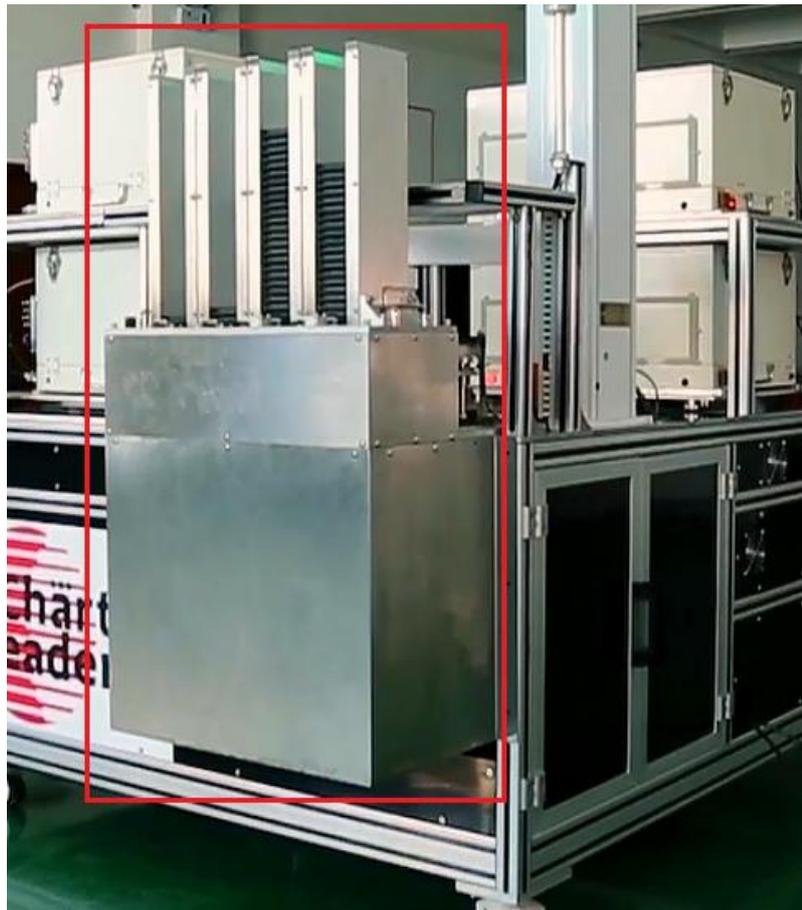
Many wireless products required writing or verifying MAC address in the test process. Therefore, we install smart camera in the system to enable scanning barcode for various uses.



Tray feeder

For different DUT, we could customize not only tray for loading DUT but also the feeder which feed tray into input area. Operator can start the system with fully loaded tray feeder and come back hours ago to feed the trays again. This feeder makes factory easy to save the operator.

The customization means if customer needs test tray, then we made tray for router, if they want Bluetooth earphone, then we made tray for earphone. We are highly capable and experienced at making fixture and shielding box, therefore we can achieve whatever customer's want.

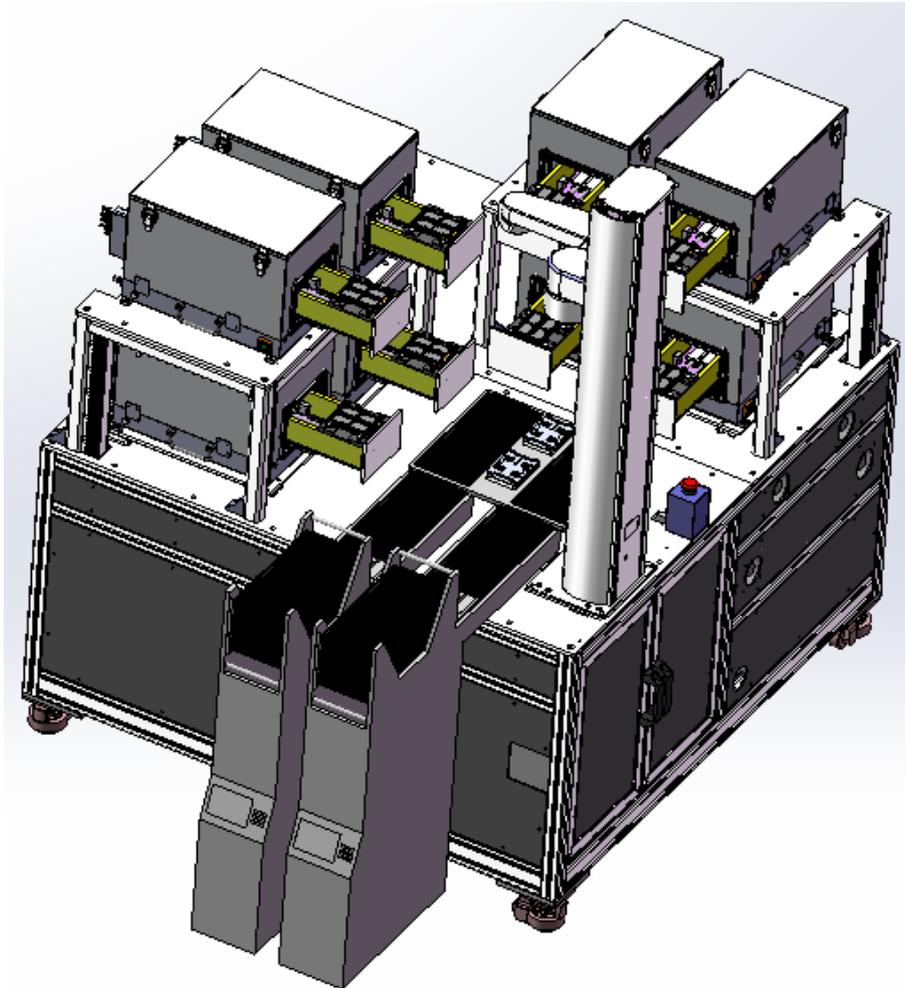


Experienced solution provider

Scenario 1: two type of module in one test system

For the small-batch production of two different modules, MTS-8400 can achieve testing two model in one system by adding one tray feeder for module-type product. Using software to control the robotic arm and testing function, two model can be tested at the same time without mixture.

This solution is very suit for the factory which manufactures many kinds of products but low quantity. The utilization rate can remain efficient. This one station can be very efficiently to solve the testing problem.



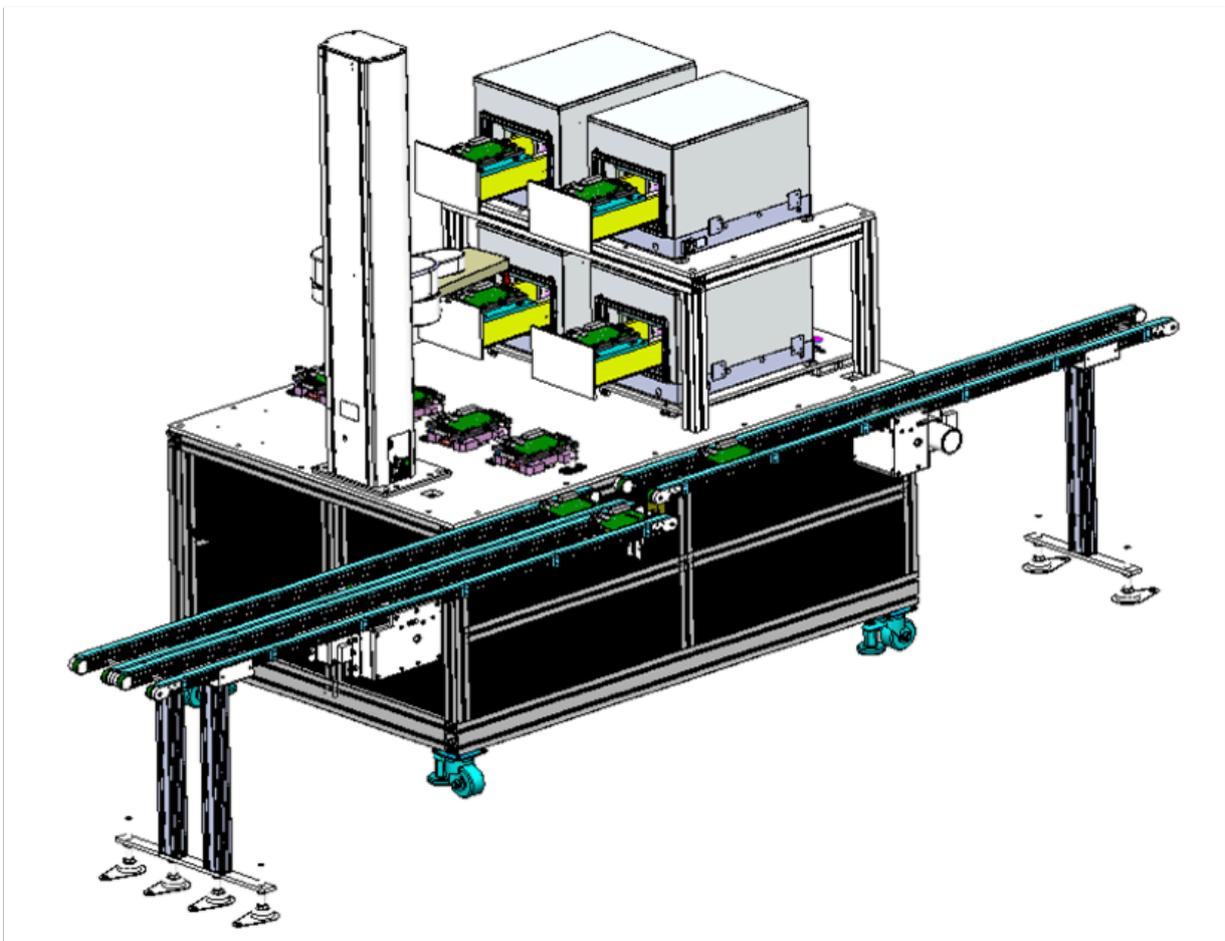
Scenario 2: Test of router

In this case, it shows how easily can MTS-8400 be integrated into customers' pipeline production.

Taking router testing for example in this case, because the volume of router is too big to put 4 routers into one shielding box, therefore we test one router in each shielding box. (Without UT-804)

The testing time of router is about 30 sec, therefore, 4 shielding boxes would be enough. The bottle neck of production would be on robotic arm if equipped with more than 4 shielding boxes.

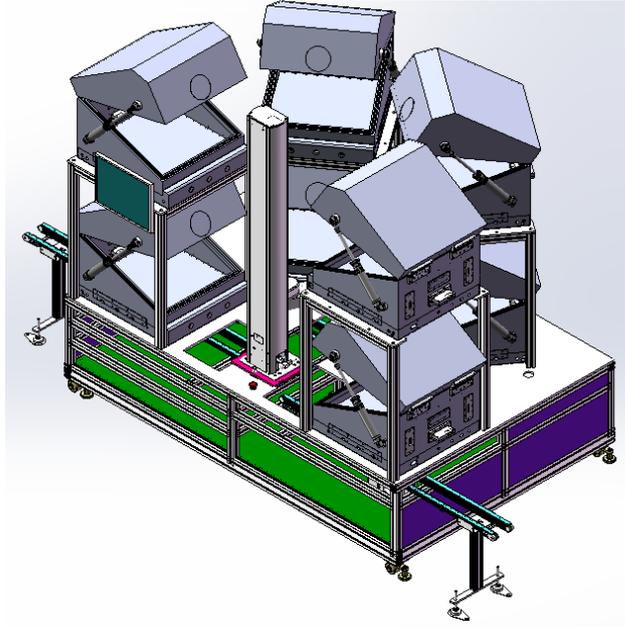
This solution can replace 4 operators, 3 RF tester and have same output rate. This design is very suit for finished product testing. OTA or conductive testing is supported in this solution.



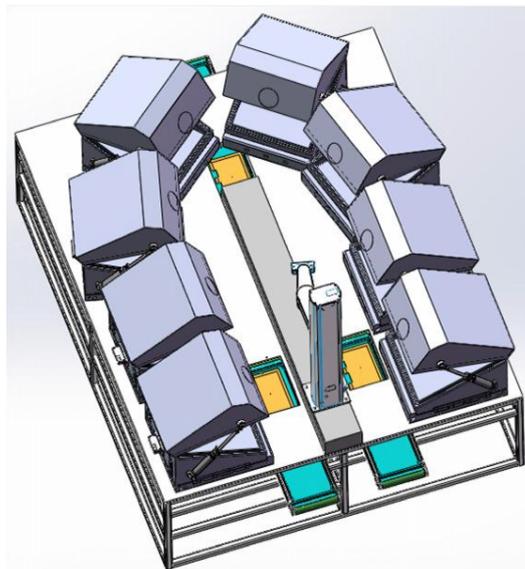
Scenario 3: Reform test station with original shielding box.

Some customers might not have budget to purchase new shielding box. We can integrate our robotic arm, conveyer, software and equipment to reform the test station to become fully automation.

Hatchback shielding boxes are commonly used for finished products testing which is usually an OTA test. In this solution, our modular design thinking makes it very easy to test different model by only changing claw and choose the testing parameters we set up for customers. It's very easy to use and very cheap.

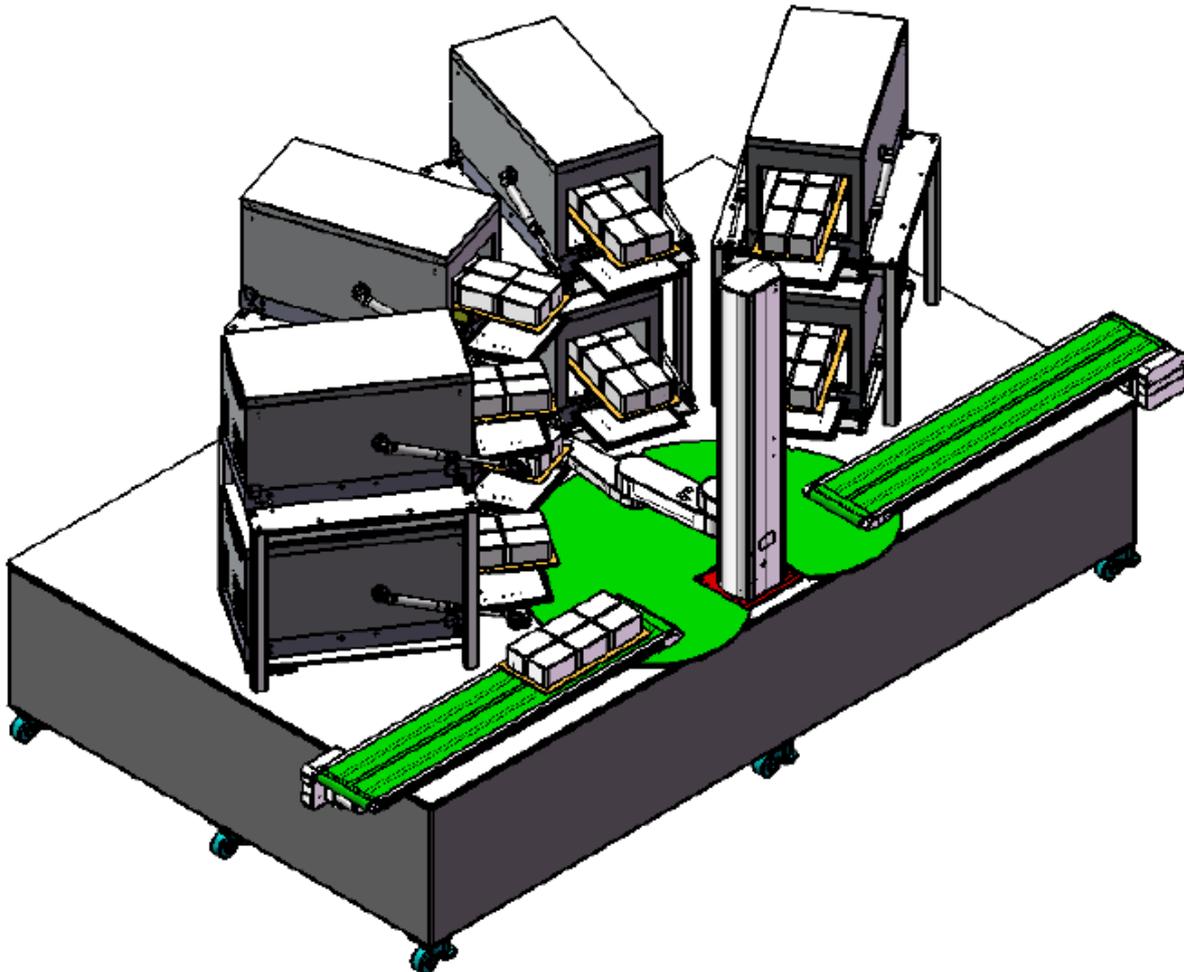


Also if the shielding box is too big to be placed as two-layer structure, we can install the 5th axis of robotic arms. It enables the robotic arm to move horizontally to pick DUT from many shielding boxes.



Scenario 4: 6 finished products in one box

We estimated the testing time of the products and calculate to get the best solution for customers to test these products is 6 DUT in a box. So we customized the tray for loading 6 DUT, fixtures, shielding boxes and claw to solve customer's test issue. The testing time of 6 DUT is about 3 min. Every 20 sec there would be one tray on the conveyer. When robotic arm finished a round that replacing DUT from BOX1-8, there would be still 20 sec buffer before DUT in Box1 are tested. So overall, there would be 8 tray being tested in each 180 sec. UPH can be up to 960.



Specification

Technical term	Description
Air processor	Barometer, pressure relief valve(PRV), dryer.
Air input	6mm, length: 3m, with pneumatic C type connector
Current and voltage meter	Display input voltage, input current, power consumption
Power cable	Length: 3m, with 10A plug
Emergency switch	2 set. Stop all the mechanical movement.
Alert	Green and orange light. Buzzer
Cooling fan	10 8cm-cooling fan. 6 inlet, 4 outlet.
Uninterruptable power system	800W UPS
Dimension(H*W*D)	184*140*135 cm
Weight	Approx. 1000KG
Power supply	AC 100~240V, 50/60Hz, 900W Max.
Temperature range	4°C ~ 40°C
Humidity	20%-80%



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