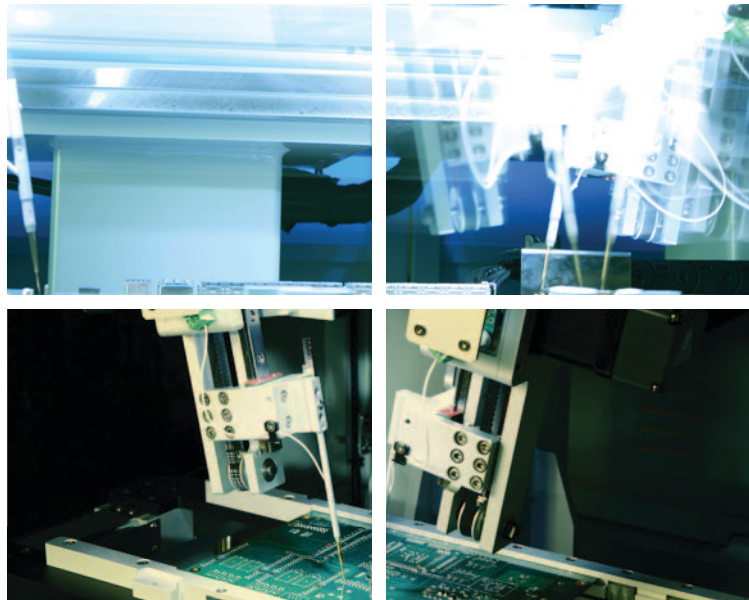
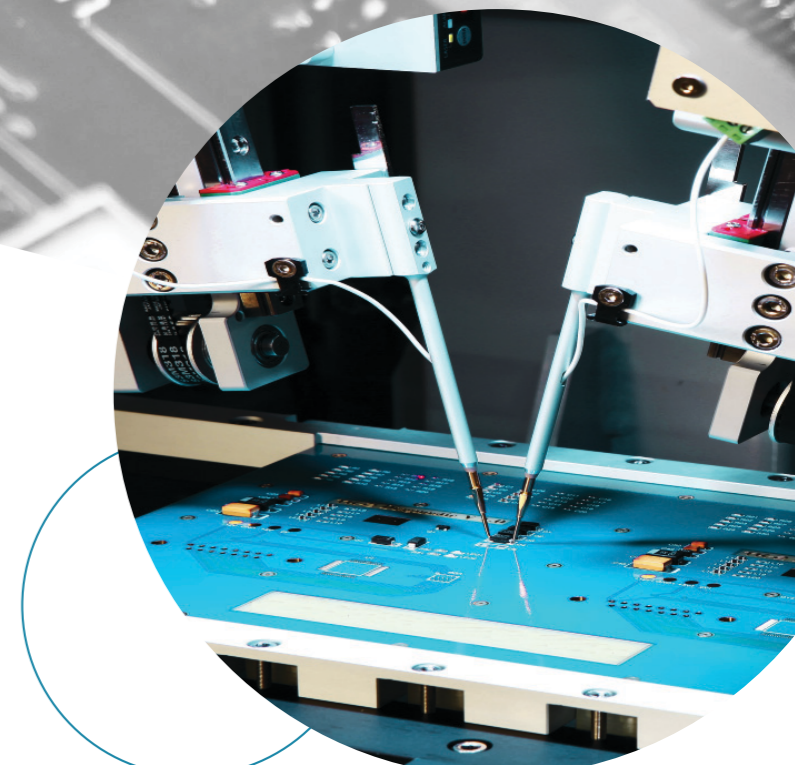
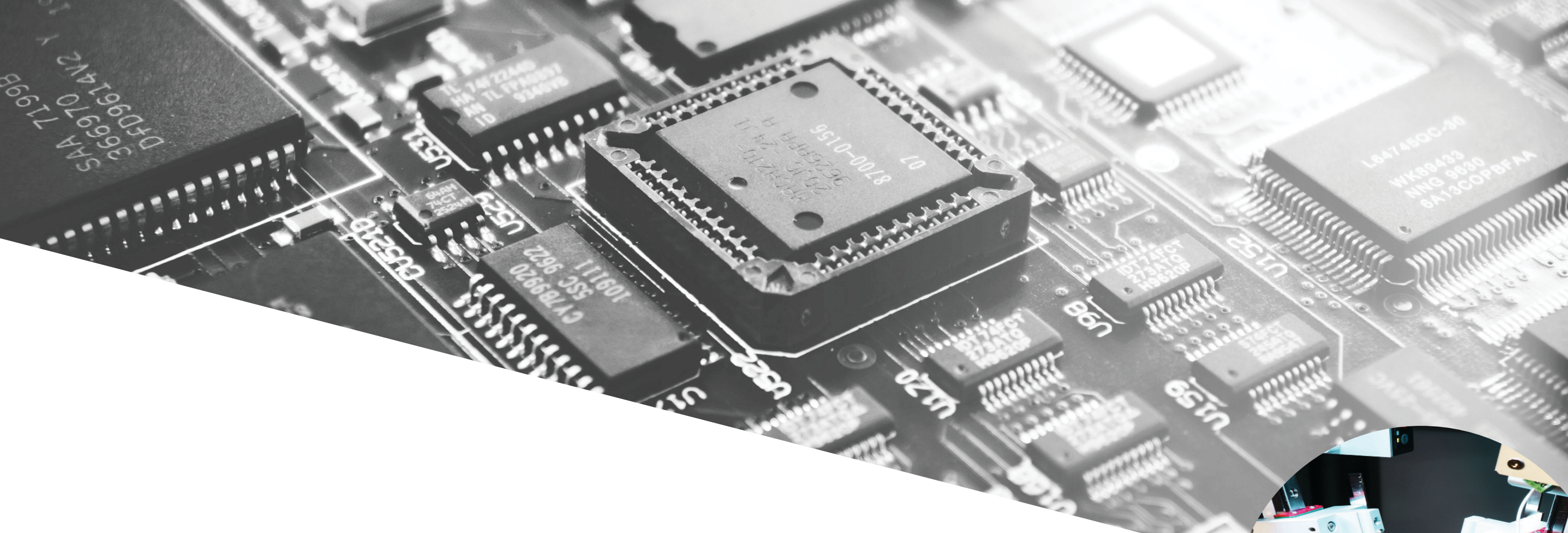


YOUR TEST  
SOLUTION  
PARTNER

# TK *Flying Probe Tester*







# EMERIX | (주)에머릭스

Emerix is a leading provider of flying probe tester in electronic testing industry. We have developed the first flying probe tester ever in Korea to provide the best test solution for PCBAs. We will not be afraid of challenges and will continue to strive to meet the needs of consumers with products and quality that fit the times through continuous development and innovative spirit.

(주)에머릭스는 전자 산업 테스트 시험장비인 플라잉 프로브(Flying Probe Tester)선두주자로 국내최초 플라잉 프로브 시험장비를 개발하여 PCBA에 대한 최고의 솔루션을 제공해드리고 있습니다. 도전을 두려워 하지 않고 지속적인 개발과 혁신적인 정신을 통해 시대에 맞는 제품과 품질로서 소비자의 needs에 부응하도록 지속적으로 노력하겠습니다.

## YOUR FLYING PROBE SOLUTION PARTNER

ONE STEP EASIER FOR YOUR TESTING



## Highlights

- Partial Area Test
- Array Test
- Universal Fixture Platform
- Faulty Locator Map
- Probing Speed Controls
- Soft Touch Technology
- Automated Target Board Image DWG
- Automated Test Program Generate from CAD Data
- Automated Teaching, Optimization Route and Debugging
- Full Test Data Stored in CSV format for Off-Line Analysis
- Easy Installation – No Air Compressor Required
- Easy Programing of Emerix Flying Probe Software
- Barcode Reading 1D and 2D Code
- Auto Laser Height Sensor
- Full Safety Guards for the Operator
- Build In Self-Test
- Testable SMD Types Up to 0201/0603
- User Friendly GUI
- Accuracy and Precision
- No Need for Expert Technician to Operate
- CAD Converter (Optional)
- The Most Remarkable Price Offered in Current Flying Probe Market

## Key Features

- Vision Test
- VI Impedance Test
- Open and Short Test
- In-Circuit Measurement
- Voltage Test (Power On)
- Current Test (Power On)

# TK FLYING PROBE TESTERS

## » Vision Test

The testers are equipped with high resolution vision camera which it will detects target board components of presence, absence and missing using a pattern matching algorithm.

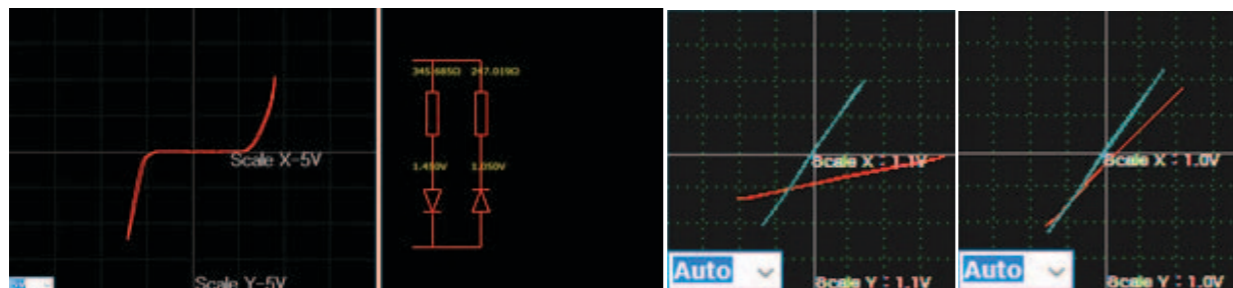
비전 패턴매칭 알고리즘을 이용하여 부품의 역삽, 오삽 및 미삽 유무를 검출 한다.



## » VI Impedance Test

The measurement and faults are detected through the VI impedance signature that combined of VCF (Voltage, Current, and Frequency) with no power applied.

전원을 인가하지 않은 상태에서 VCF(Voltage, Current, Frequency)조합의 VI 인피던스를 측정, 불량률 검출한다.



## » Open and Short Test

Find an open or short circuit from the target board

시험대상 보드의 단락과 단선을 측정하여 불량 여부를 검출한다.

## » In-Circuit Measurement

It measures the value of R, L, C, D, TR and detects the fault of each component values.

시험대상 보드에 실장 된 부품 용량 (Value - R, L, C, D, TR) 값을 측정하여, 양품과 불량여부를 검출한다.

## » Voltage Test (Power On)

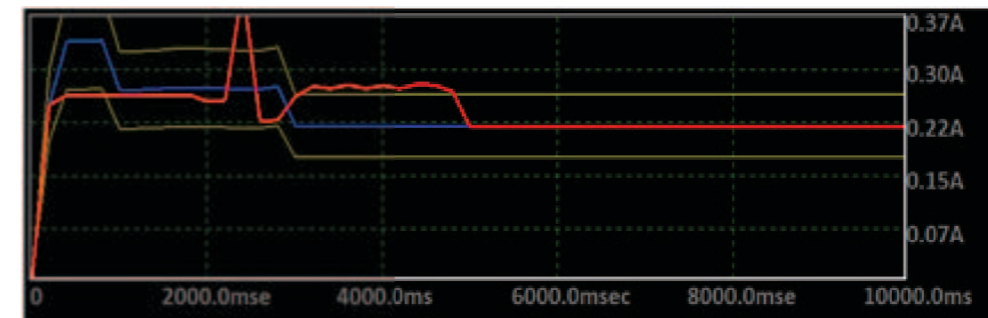
The power failure will detected by measuring the voltage between the test point (Net) and GND when the power is applied through the power supply and connector of the target board.

제품의 전원부와 커넥팅 방식을 통하여 전원을 인가하고, 각 Test Point와 GND간의 전압측정을 통하여 전원 불량을 검출한다.

## » Current Test (Power on)

The power failure will detected by measuring the voltage between the test points (NET) to points (NET)

인가된 전원의 전류 변화량을 모니터링 하여 전원불량을 식별한다.



## » Barcode Reading

The tester equipped with 1D and 2D code reading system

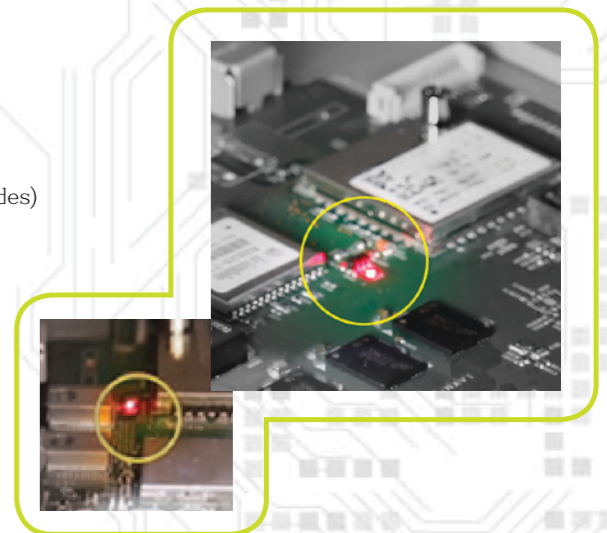
바코드 스캔 기능으로 표준규격 1D 와 2D 스캔이 가능하다.



## » Laser Auto Height Sensor

The laser auto height sensor will automatically measures the height of all each component and avoid from the collision with probe.

Auto Height Sensor를 통해, 부품의 높이를 자동 측정하여 position generate 에 정보를 입력하면 테스트 플랜 생성시 충돌 여부를 체크 한다.

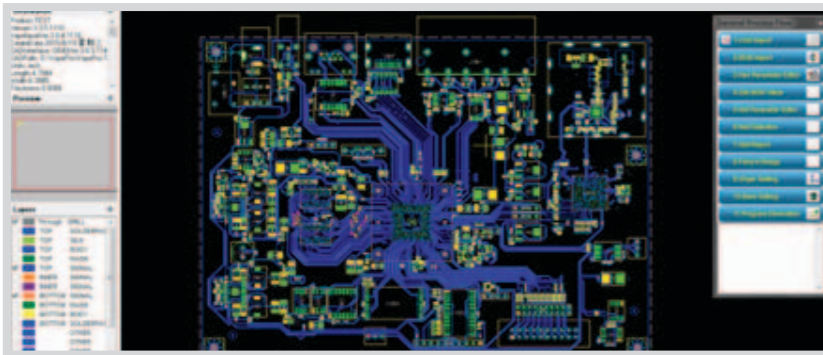




# TK FLYING PROBE TESTERS

## » CAD Data Converter (Optional)

The converter program has ability to convert 25 different types of CADs data.  
총 25가지 종류의 CAD Output 컨버팅 적용이 가능하다.



## » Probing Speed Control

The tester offers different types of speed control unit for probe touch.  
총 5가지 속도 조절로 시험에 적합한 프로빙 속도 제어가 가능하다.

Low  slow  Middle  Fast  Extreme

## » Fast Soft-Touch Technology

The soft touch technology is probe lands on the test point with less energy to allow testing components almost no visible mark.  
소프트 터치 기능은 프로브가 테스트 포인트에 도달할 때 감속하여 실장 된 소자의 테스트 포인트 면에 접촉 흔적을 최소화 한다.

## » Testable on 0201/0603 SMD Type

The specialized test probe can be tested up to size of 0201/0603 SMD type with long life cycle.  
테스트 프로브는 0201/0603 SMD 소자까지 시험이 가능하며 롱라이프 사이클로 수명 주기가 높다.

## » Test Plan by CAD Conversion

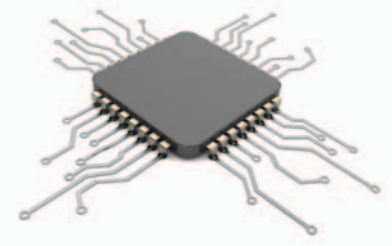
Test plan can be generated by importing CAD data.  
제품의 CAD 데이터 기반으로 자동 테스트플랜을 지원한다.

## » Test Plan by Digitizer

Test plan can be generated by digitizer which don't have CAD  
CAD 데이터가 없을 경우 디지털라이저 방식으로 데이터 입력 후 자동 테스트플랜을 지원한다.

## » Partial Area Test

Tests can be done by selecting only the desired part of the board.  
대상 시험보드의 영역(부품) 지정을 통해 부분 테스트 진행이 가능하다.



## » Array Test

Array PCB can be generated and tested within a test area.  
Test Area내의 연배열 PCB 시험프로그램 생성을 지원한다.

## » Faulty Locator Map

After test is completed, all suspected faulty component location and name will be appears on target board image map for easy access of result review.

시험 완료 후 보드 불량 부품 위치를 표기하여 불량 부분 및 소자가 불량이 발생 하였는지 위치 확인이 가능하다.



## » Full Test Data Stored in CSV Format

After completing the test, the result report can be viewed as a CSV format for offline analysis.  
테스트 완료 후 결과 리포트는 CSV 파일로 확인 이 가능하며 상세한 테스트 보드에 대한 리포트가 생성된다.

TAG	Part-Head1	Part-Head2	Net-Head 1	Net-Head 2	Mode	Bom	Low	High	Expected	Measured	Result
P	R8.1	R8.2	GND	GND	Resistor	3.3K	10	10	3.3K	3.233K	Pass
*	R11.1	R11.2	S1.1	R3.2	Resistor	6.8K	10	10	6.8K	6.728K	Pass
P	C27.2	C27.1	S1.1	S1.2	Capacitor	0.01u	20	20	0.01u	9.957n	Pass
*	C3.1	C3.2	S1.2	S1.3	Capacitor	47n	20	20	44n	43.658n	Pass
P	C28.1	C28.2	R3.1	R3.2	Capacitor	0.01u	20	20	9.75n	9.452n	Pass
P	R23.2	R23.1	R3.1	C20.2	Resistor	2.2K	10	10	2.2K	2.182K	Pass
*	R21.2	R21.1	C20.1	C20.2	Resistor	10K	10	10	10K	9.949K	Pass
P	R12.2	R12.1	C20.1	R16.2	Resistor	6.8K	10	10	6.8K	6.769K	Pass
P	C2.1	C2.2	R16.1	R16.2	Capacitor	220u	20	20	220u	257.992n	Pass
P	R20.1	R20.2	R14.1	R14.2	Resistor	0	-1	10	5	0.505	Pass
P	R14.1	R14.2	Q3.1	LED1.4	Resistor	200	10	10	220	199.709	Pass
P	R16.1	R16.2	Q3.2	Q3.3	Resistor	200	10	10	220	201.086	Pass
P	C20.1	C20.2	Q3.2	Q3.1	Capacitor	100n	20	20	100n	93.455n	Pass
P	R3.1	R3.2	LED1.4	LED1.3	Resistor	270	10	10	270	274.794	Pass
P	R24.1	R24.2	LED1.2	LED1.3	Resistor	10K	10	10	10K	9.736k	Pass
P	C22.1	C22.2	LED1.1	LED1.2	Capacitor	0.01u	20	20	0.01u	9.244n	Pass
P	R18.1	R18.2	R14.1	Q2.3	Resistor	6.8K	10	10	6.8K	6.736K	Pass
P	R1.1	R1.2	Q2.2	Q2.1	Resistor	10K	10	20	9.6K	10.589K	Pass
P	C6.2	C6.1	R20.1	C4.2	Capacitor	330u	-1	20	95u	99.350u	Pass
P	R9.2	R9.1	C4.2	C4.1	Resistor	0	-1	10	5	0.142	Pass



# Product Specification

Flying Probe Model Range



## Electrical Requirement

Input Voltage Range	230~240 Vac
Input Frequency Range	50~60Hz

## Measurement Capability

Resistor	YES	Range 100Ω ~ 100MΩ
Capacitor	YES	Range 300pF ~ 10mF
Inductance	YES	Range 1mH~5H
Diode	YES	Range 10V
FET	YES	Diode and Resistor Test
Photocoupler	YES	Diode and Resistor Test
DC Voltage	YES	Range 100mV ~ 300V
Output Voltage	YES	Range 0.00 V (Min) ~ 20.0 V (Max)
Output Current	YES	Range 0~8 V/3A or 0~20 V/1.5A)
Component Height Measurement	YES	Maximum 40mm

## Main Characteristics

### Probing Capability

Flying Probe	2 (Dual)
Min Contact Pad	+/- 150 microns (0.15mm)
Min Contact Pitch	+/- 500 microns (0.5mm)
Component Max Height	40mm
Test Re-try	Programmable
Probe Impact Depth	Programmable

### Testable Board Specification

Test Area	TK-2	360x220mm
	TK-2R	650x650mm
Board Thickness	TK-2	Max 4.5mm
	TK-2R	Max 8.0mm

## System Controller

Operating System	Window 10 / 64 bit
Monitor	22 inch
UPS	Yes
PC	Yes
TK Multi-Function Unit	Yes
Motion Controller	Yes

## System Specification

### Footprint and Weight

TK-2	1200x1100x1700mm
Weight	750KG
TK-2R	1600x1500x1750mm
Weight	950KG





“  
The Finest  
Dual Head  
Flying Probe Tester  
”

