

**i-PULSE**



Fine Art Workshop  
i-PULSE

# KX2

HYBRID (X-RAY+OPTICAL) INSPECTOR



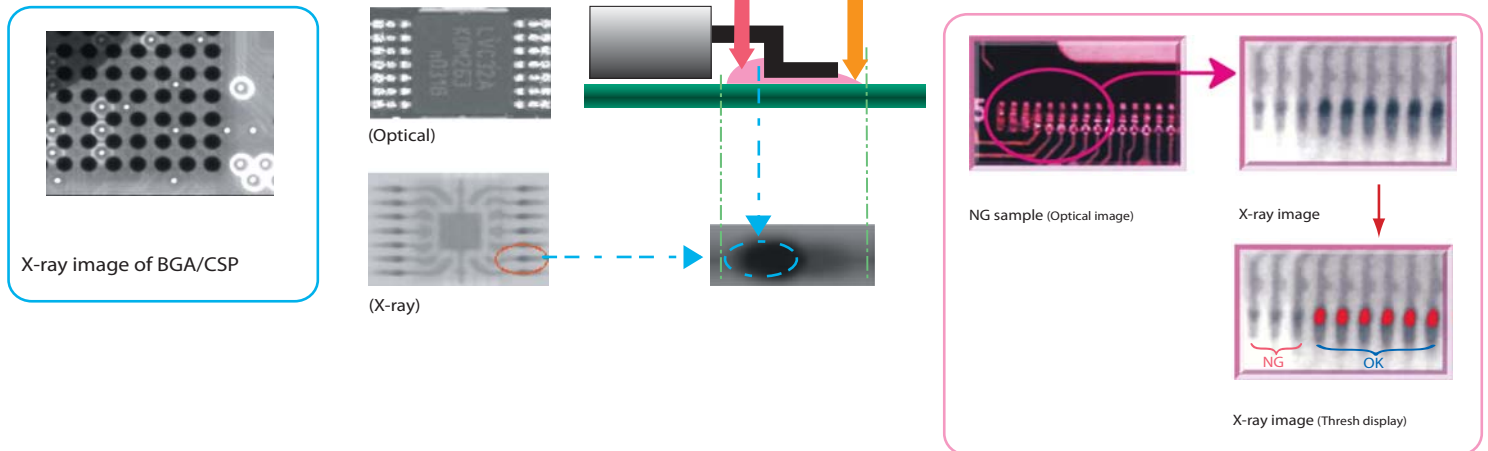
**i-PULSE CO., LTD.**

### FEATURES

#### Highly precise inspection of solder joint

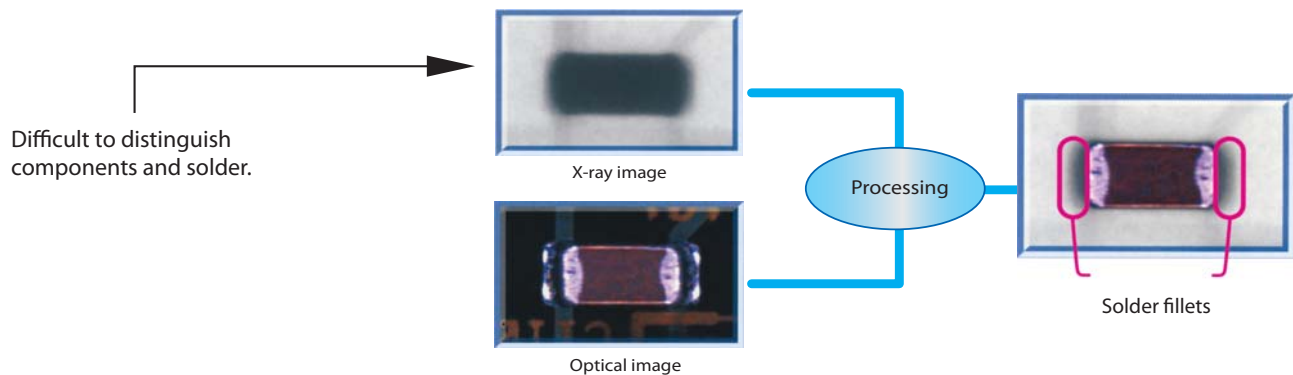
The Model KX2 can inspect solder of BGA/CSP which cannot be done by AOI systems. In addition KX2 can inspect back fillet of IC leads, which is difficult for AOI systems, and can inspect lead floating and soldering defects at high precision.

#### Advantage of X-ray system



#### X-ray + Optical Effect

Solder fillet can be highlighted by using the same view size and resolution in X-Ray picture and optical picture.



# New Standard of Inspection

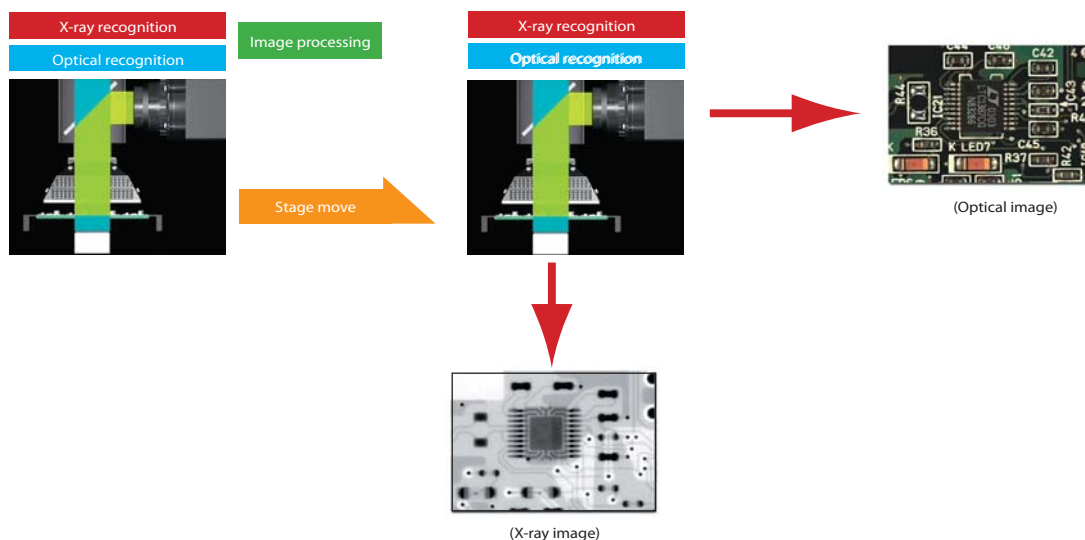
- Super inspection performance.
- Advanced mechanical structure.

## PERFORMANCE COMPARISON

	Optical system (AOI)	X-ray system (AXI)	<b>KX2</b>
Missing components. Position shift	○		○
Wrong components. Polarity check	○		○
Solder quantity		○	○
BGA, CSP		○	○

## SIMULTANEOUS X-RAY AND OPTICAL INSPECTION

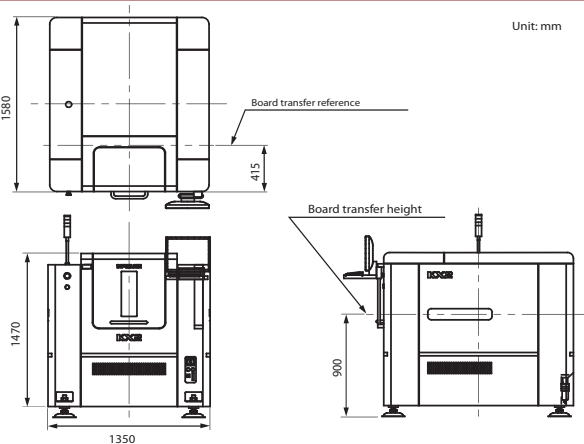
The Model KX2 achieves the same inspection time as conventional AOI systems, by taking the X-Ray and optical images simultaneously with no loss of time for stage move, or consecutive recognition and by executing parallel processing of X-Ray and optical images.



## SPECIFICATIONS

Board	Board dimensions (L x W)	50 x 50mm – 460 x 410mm
	Board thickness	0.4 – 3.0mm
	Board warp	Max. 0.5mm upward. Max. 1.0mm downward
	Component height	Top: Max. 28mm. Bottom: Max. 25mm (Standard; Max. 8mm (Option)
	Transfer direction	Left to right. Right-to-left (changeable by setting)
	Board positioning	Two-side edge clamping method, front reference
Inspection	Inspection method	CCD camera plus LED lighting plus X-Ray
	View size	25 x 17mm (standard; 27 x 18mm (option)
	Resolution	Approx. 20µm
	Lighting	Auto-adjust 3-stage LED dome lighting (Upper: IR; Middle: WH; Lower: WH)
	Inspection time	0.25 sec/screen (optical inspection, under optimum conditions) 0.69 sec/screen (X-Ray + Optical, under optimum conditions)
X-Ray generator	Tube voltage	Max. 90kV
	Tube current	Max. 800µA (Max. 50W)
	Focus size	20 - 130µm
	X-Ray detector	CCD sensor View size: Approx. 25 x 17mm (standard) Approx 27 x 18mm (option) Resolution: Approx 20µm
General	Machine dimensions, weight	L1,350 x D1,580 x H1,470mm Approx. 1,920kg
	Power, consumption, capacity	Single phase AC200/208/220/230/240V (+/-10%), 50/60Hz, 0.6kW, 2.0kVA
	Board transfer height	900 +/- 10mm
	Air pressure, consumption	0.5Mpa, 5L/min (A.N.R.)
	External interface	1,000 BASE-T LAN, USB 2.0 x 2

### EXTERNAL DIMENSIONS



### OPTIONS

Part Number	Description
KXE-CCL2	Custom color, 2 colors
KXE-CCL1	Custom color, 1 color
K2E-MKUN	Marking unit
LE3-M5520-00	Repair station software
KSE-C2SM	C2 System
LE3-M5530-00	CAD/Mounter data converter
LE3-M5500-00	Offline Software
KSE-DVDD	DVD-ROM+CD-R/RW drive
KXE-WDVS	View size 27 x 18mm (bottom clearance 8mm)



1269 Linda Vista Drive

San Marcos, CA 92078-2698

Tel: 760-471-1700 Fax: 760-471-9065

www.amistarautomation.com

### i-PULSE CO., LTD.

1-9-3 Shinmiyakoda, Kita-ku, Hamamatsu

Shizuoka 431-2103, Japan

TEL (81) 53-484-1876 Fax (81) 53-484-1870

www.ipulse.co.jp