

# XD7800

Superior X-ray Performance

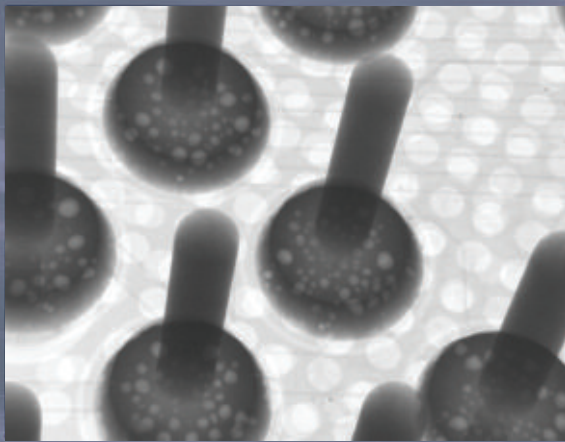
Real Time Digital X-ray  
Inspection (1.3 or 2.0 Mpixel)

Inspection area with oblique  
views over 610 x 762 mm  
(24" x 30")

70° isocentric oblique views

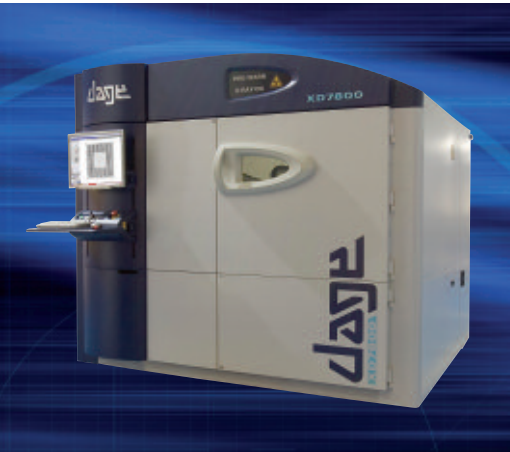
Sub-micron Feature Recognition  
(0.95  $\mu\text{m}$  or 0.25  $\mu\text{m}$ )

Up to 9200 X System  
Magnification



**dage**

DAGE XD7800



# XD7800

## Superior X-ray Performance

The Dage XiDAT XD7800 provides the optimum resolution for large PCB and device X-ray failure analysis with oblique angle views of up to 70°

This performance is available with the ease of use for which Dage systems have become world renowned, providing superior functionality within the production environment

### Dage X-ray systems provide

- The easiest to use X-ray systems in the industry
- No complicated joystick controls
- Intuitive Point-and-Click operation
- Oblique angle views without compromising the high magnification
- Collision-free sample movement
- Dage Image Wizard
- Real-time digital X-ray inspection
- Dage XiDAT1.3 imaging chain
- 16-bit image processing with live images at 25fps
- Enhanced resolution X-ray images – 1.3M pixels
- > 65,000 greyscale levels
- Enhanced automated inspection routines
- Automatic BGA and die-void measurements
- Comprehensive data logging and reporting facilities
- Uninterrupted rotating live oblique views 360° around any point in the sample
- Windows XP operating system

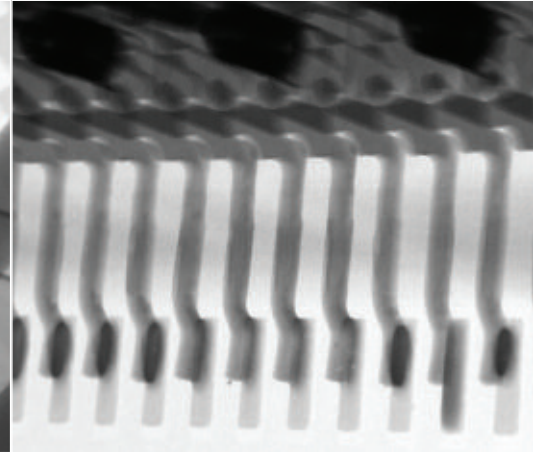
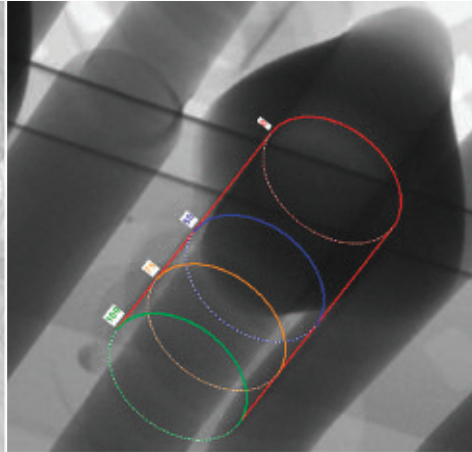
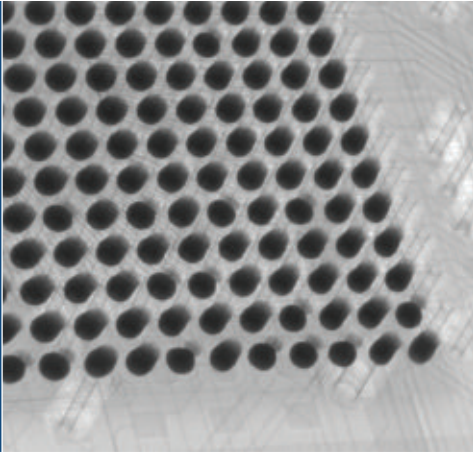
### XD7800 FEATURES:

- 950 nanometer (0.95 micron) feature recognition
- 1200 X geometric magnification (5650 X system)
- Up to 70° oblique angle views
- Industry leading 610 x 762 mm (24" x 30") inspection area with oblique views
- Dage XiDAT operating software providing all of the necessary features for the easiest and highest quality X-ray inspection
- 20" digital LCD monitor
- Vibrational isolation for the production environment

### Optional upgrade to Dage NT X-ray tube and XiDAT 2.0 providing:

- 2 Mpixel camera with 16-bit image processing with live images at 30fps
- 24" digital LCD monitor displaying 2 Mpixel X-ray images at full resolution
- Dage NT X-ray tube and XiDAT 2.0 option increases system magnification to 9200 X
- 250 nanometer (0.25 micron) feature recognition

DAGE XD7800



Achieving the best X-ray image quality for current and future needs within the PCB electronics industry has challenged Dage to consider and continue to improve all aspects of the X-ray inspection system. Initially, our research and development focus resulted in the launch of our range of XiDAT 1.3 digital X-ray systems, which have provided the best image quality in the industry, as standard.

Their 16-bit greyscale resolution, with 1.3 Mpixel images acquired at 25 frames per second, has opened up entirely new levels of inspection, not only within failure analysis laboratories but also within the production environment. The ease of use of the Dage operating software has enabled enhanced analytical quality at a faster throughput, all achievable with less skilled operators.

The Dage XD7800 now drives these developments still further to provide the best X-ray image quality for inspecting the continuously shrinking, and most demanding features, affecting PCB and device product quality even when they are located within the largest boards being produced. This is achieved through the improved feature recognition of the new Dage VR X-ray tube and oblique angle views of up to 70° so that the joint interface can be investigated more easily.

The Dage VR X-ray tube is the latest development from Dage's innovative, proven and continuous X-ray tube development program. This, together with the ease of use and sophistication of the Dage Image Wizard operating software, takes X-ray inspection to the next level.

The Dage VR X-ray tube, the heart of the Dage XD7800 X-ray inspection system, provides for today's and tomorrow's production X-ray inspection needs through sub-micron minimum feature recognition. All the functions of the Dage XD7800 have been developed and integrated together to provide superb image quality for BGA, flip chip and chip scale package inspection on PCBs as well as semiconductor devices.

The XD7800 has one of the largest inspection areas in the industry covering oblique angle views over 24" x 30" and taking boards up to 24.3" x 33" in size. The XD7800 also offers the flexibility to be configured to include the revolutionary Dage NT X-ray tube and the XiDAT 2.0, real time 2 Mpixel imaging system for when superior resolution is required even with the largest boards.

The easy to use operation of the XD7800 provides expert analytical quality that is not compromised by its low cost of ownership or the lowering of the required operator skill level, which can be maintained for the most demanding of applications and working environments.

**When you need the best, the XD7800 provides it. Always. As standard.**



DAGE XD7800



## XD7800 | Specifications

| Systems                          | XD7800VR  | XD7800NT  |
|----------------------------------|---|---|
| System footprint (W x D x H)     | 2400 x 1975 x 2060 mm   | 2400 x 1975 x 2060 mm   |
| Gross weight                     | 3000 kg   | 3000 kg   |
| Minimum feature recognition      | 950 nm (0.95 micron)  | 250 nm (0.25 micron)  |
| Tube voltage                     | 30 – 160kV  | 30 – 160kV  |
| Maximum board size               | 24.3" x 33" (617 x 838 mm)  | 24.3" x 33" (617 x 838 mm)  |
| Maximum inspection area          | 24" x 30" (610 x 762 mm)  | 24" x 30" (610 x 762 mm)  |
| Maximum sample weight            | 10kg  | 10kg  |
| Facilities requirements          | Power: Single phase, 200 – 230V AC, 16A max.                                      | Power: Single phase, 200 – 230V AC, 16A max.                                      |
| Oblique angle view               | 0 – 70° for any view, 360 degrees around any position over entire inspection area | 0 – 70° for any view, 360 degrees around any position over entire inspection area |
| Geometric magnification (system) | 1200 X (5650 X)   | 1600 X (9200 X)   |
| Image capture                    | XiDAT 1.3 – 1.3 Mpixel images at 25 fps   | XiDAT 2.0 – 2 Mpixel images at 30 fps   |
| System monitor                   | 20" digital LCD flat panel (1600 x 1200 pixels)                                   | 24" digital LCD flat panel (1920 x 1200 pixels)                                   |
| Anti-vibration                   | Passive   | Axis – Active X-ray Image Stabilisation   |
| Safety                           | X-ray leakage < 1 µSv/hr  | X-ray leakage < 1 µSv/hr  |

### GLOBAL PRESENCE, GLOBAL SUPPORT, LOCAL CARE

With 6 direct offices and representatives world wide, Dage can support you locally as well as internationally. Please contact your nearest Dage office if you require any further information or would like a demonstration of our XiDAT systems.

Our website: [www.dage-group.com](http://www.dage-group.com) will also give additional details on Dage and its range of products as well as the contact details for your local Dage representative.

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Specifications subject to change without prior notice.