

# XD7500

Superior X-ray Performance

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

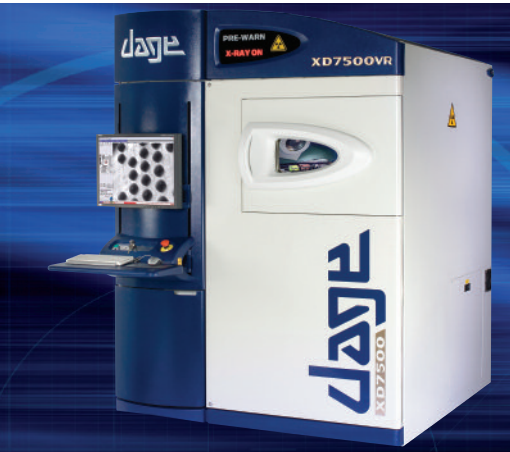
Sub-Micron Feature  
Recognition (0.95  $\mu\text{m}$ )

Cost Free Choice of Open  
or Sealed-Transmissive  
X-ray Tube

Up to 7400 X System  
Magnification

70° Isocentric Oblique Views

**dage**  
A NORDSON COMPANY



# XD7500

## Superior Performance

The Dage XiDAT XD7500VR and XD7500NT provide the optimum image quality for PCB and device X-ray failure analysis with a cost free choice of using either an open or a sealed-transmissive X-ray tube

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

### Dage X-ray systems already 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 (at high magnification without needing to disable any anti-collision feature)
- 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 – 1.3 Mpixels full-size on-screen during inspection
- > 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

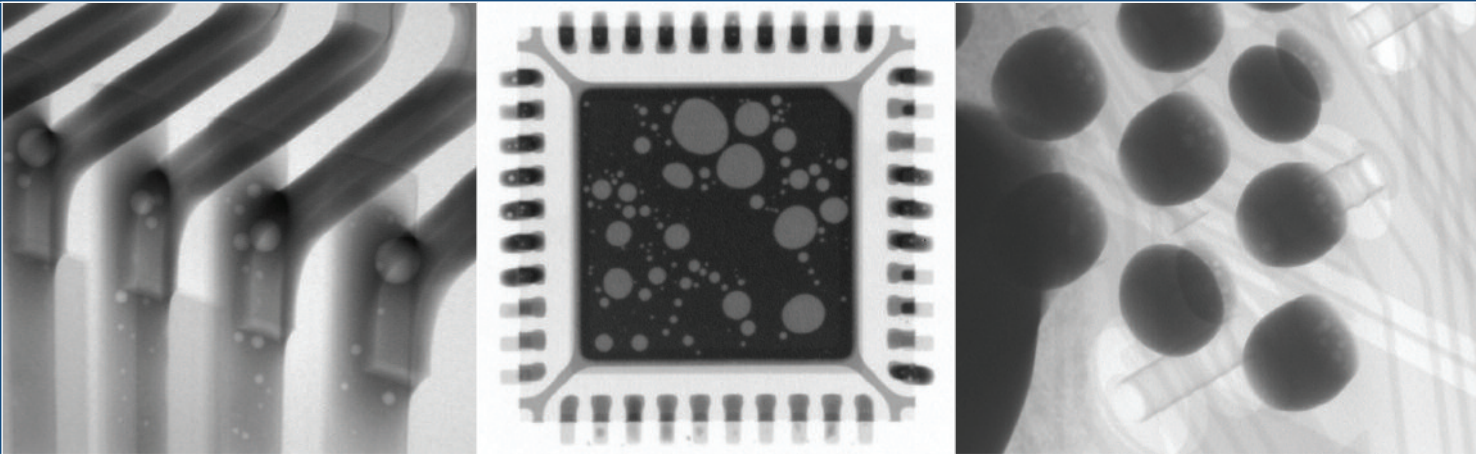
### XD7500VR & XD7500NT FEATURES:

- 950 nanometer (0.95 micron) feature recognition
- 1200 X geometric magnification (5650 X system)
- Up to 70° oblique angle views over the entire inspection area
- 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 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 full-size on-screen during inspection
- XiDAT 2.0 option increases system magnification to 7400 X





Achieving the best X-ray image quality for current and future needs within the PCB industry continuously challenges Dage to improve all aspects of our X-ray inspection systems. Our initial research and development focus resulted in the hugely successful range of XiDAT digital X-ray systems. Their 16-bit greyscale resolution, 1.3 Mpixel images and industry-acknowledged ease of use, provided the best image quality in the industry, as standard, and opened up entirely new levels of inspection, not only within failure analysis laboratories but also within the production environment. This is because they offer enhanced analytical quality, at a faster throughput, and all achievable with less skilled operators.

The Dage XD7500VR system drove these developments further for the best X-ray image quality to inspect the continuously shrinking, and most demanding features, affecting PCB product quality. This was achieved through the improved feature recognition of the Dage VR open X-ray tube, with its minimum feature recognition below 1 micron and providing oblique angle views of up to 70° so that joint interfaces can be investigated more easily.

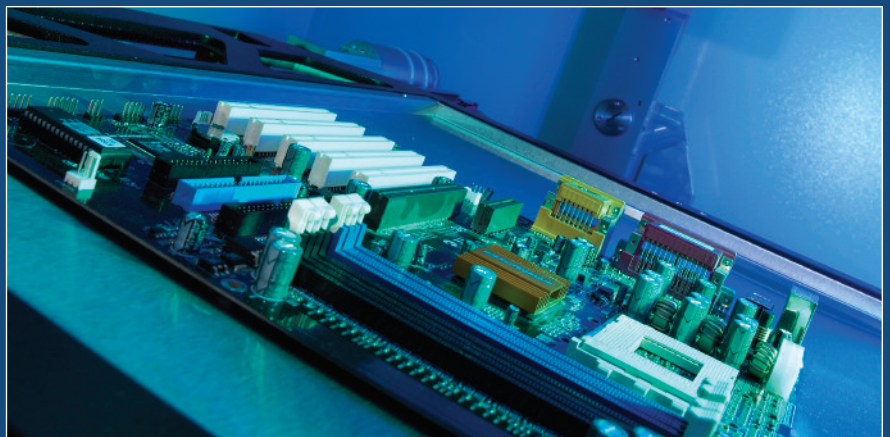
However, using open X-ray tube systems in production has been questioned because sensitive internal tube components must be exposed to the local environment during the necessary and regular filament changes. So Dage now offers its XD7500NT system, with its patented and revolutionary sealed-transmissive NT950 tube technology, for those customers who want to remove this risk completely and benefit from ZERO DOWN TIME compared to filament replacement.

The Dage NT950 X-ray tube is the latest development from Dage's innovative and continuous X-ray tube research program. It is based upon the established and well proven 'fit and forget' tube technology used in Dage's flagship XD7600NT system. So now there is a cost free choice to suit

your needs as to the best X-ray tube you can demand for your X-ray inspection system.

Whether you choose the XD7500VR or XD7500NT, the tube performance together with the ease of use and sophistication of the Dage Image Wizard operating software takes X-ray inspection to the next level to provide superb image quality for BGA, flip chip, QFN and chip scale package inspection on PCBs. Such analytical quality is not compromised by the low cost of ownership and reduction in operator skill level, which can be maintained for the most demanding of applications and working environments.

**When you need the best, the XD7500VR and XD7500NT provide it. Always. As standard.**





## XD7500 | Specifications

**XD7500VR – Dage VR Open X-ray Tube**

**XD7500NT – Dage NT950 Sealed-Transmissive X-ray Tube**

System footprint (W x D x H)	1450 x 1700 x 1970mm
Gross weight	1900kg
Minimum feature recognition	950nm (0.95 micron)
Tube voltage	30 – 160kV
Maximum board size	20" x 17.5" (508 x 444mm) and maximum inspection area without an oblique view
Maximum inspection area	18" x 16" (458 x 407mm) with an oblique view
Maximum sample weight	5kg
Facilities requirements	Power: Single phase, 200 – 230V AC, 16A maximum
Oblique angle view	0 – 70° for any view, 360 degrees around any position over entire inspection area
Geometric magnification (system)	1200 X (5650 X – 7400 X with XiDAT 2.0 option)
Digital image capture	XiDAT 1.3 – 1.3 Mpixel images at 25fps Option XiDAT 2.0 – 2 Mpixel images at 30fps
System monitor	20" digital LCD flat panel (1600 x 1200 pixels) 24" digital LCD flat panel (1900 x 1200 pixels) as standard with XiDAT 2.0 option
Safety	X-ray leakage < 1 $\mu$ Sv/hr

### GLOBAL PRESENCE, GLOBAL SUPPORT, LOCAL CARE

With 6 direct offices and 19 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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