



PiX Rainier CT

Next Level Imaging.

Designed in the Pacific Northwest.
Built in the USA.

Contact us via email or phone to find
out more or schedule an in-person demo.

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OVERVIEW

PiX Rainier CT

Developed and manufactured by Pacific NDT, the PiX Rainier CT system brings together cutting-edge detector technology and a powerful microfocus X-ray source with a 5 μm focal spot to deliver unmatched clarity and precision. By combining true micron-level resolution, rapid scan capability, and flexible system design, PiX Rainier CT is built to exceed the expectations of modern research labs, engineering teams, and production quality control environments.

Whether you are analyzing complex materials, inspecting electronic assemblies, or ensuring product integrity, PiX Rainier CT provides the clarity, speed, and reliability you need to make confident decisions. Designed in the Pacific Northwest and fully assembled in the United States, ensuring the highest standards of engineering excellence and long-term support.



Why Choose PiX Rainier CT?

With PiX Rainier CT, you don't have to compromise:

- Delivers high-definition imaging — with a 5 μm focal spot X-ray source
- Run scans quickly without sacrificing image quality
- Adapt to diverse applications with customizable system options
- Depend on a platform designed for performance, serviceability, and longevity

TECHNICAL HIGHLIGHTS & FEATURES

PiX Rainier CT

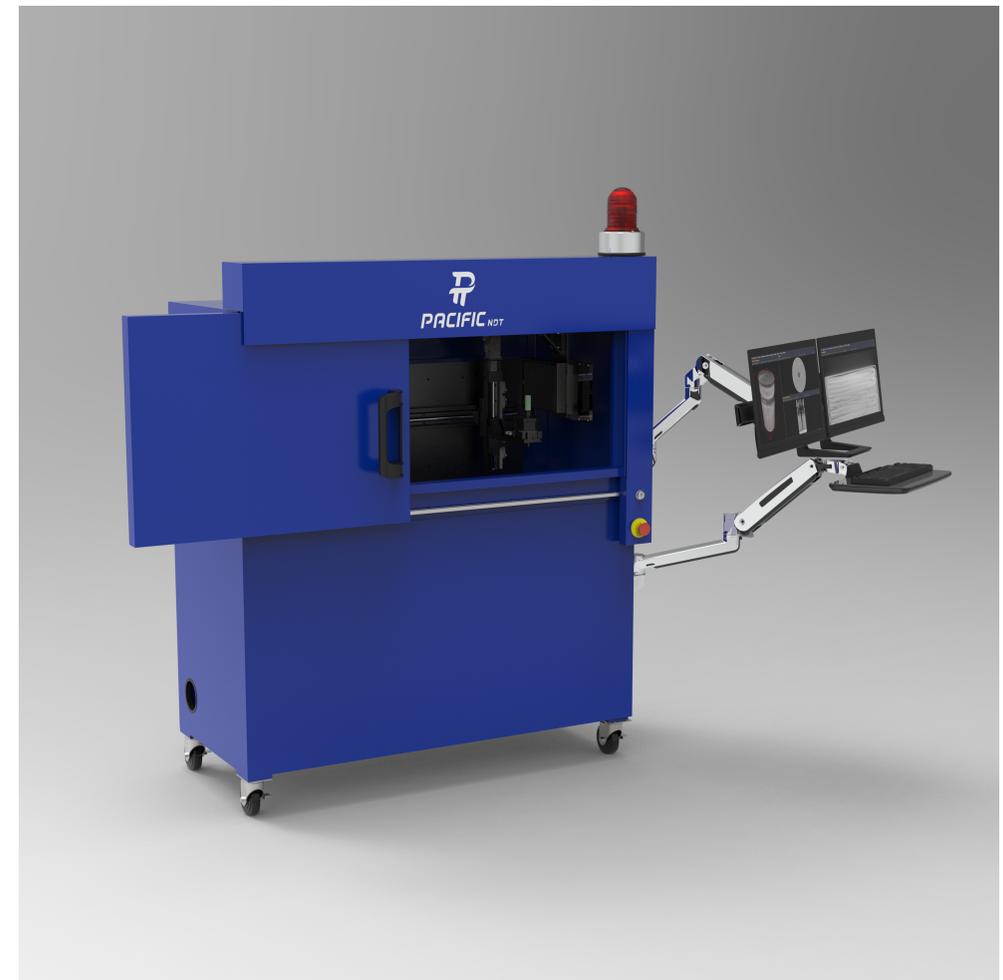
KEY IMAGING PERFORMANCE

High-Resolution CMOS Detector

- 50 μm pixel pitch CMOS detector optimized for industrial CT
- High frame rates enable rapid data acquisition for time-sensitive workflows
- Flexible 2x2 binning mode enhances throughput when needed

Microfocus X-ray Source Options

- Configurable from 90 kV up to 240 kV, adaptable to a wide range of materials and applications
- 5 μm focal spot size for high-definition, micron-scale imaging
- Stable, high-brightness output for crisp, distortion-free imaging
- Geometric Magnification up to 30x



TECHNICAL HIGHLIGHTS & FEATURES

PiX Rainier CT

CUSTOMIZATION OPTIONS

- High-speed digital radiography (DR) upgrades available for faster imaging workflows
- Large-area DR panels for accommodating oversized samples or broader field-of-view coverage
- Configurable design allows tailoring to both advanced R&D environments and high-throughput industrial applications. Custom fixtures and sample holders available upon request
- Customized cabinet sizes to support unique customer imaging needs

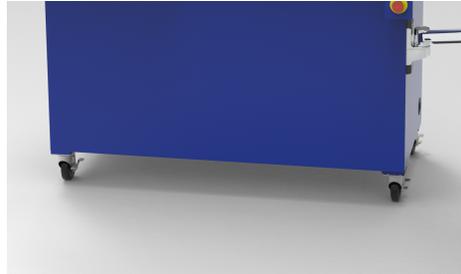
DESIGN & SAFETY FEATURES

Large sliding access door for easy loading and unloading of samples

Industrial-grade castor wheels with locking mechanism for safe, secure, and mobile deployment

Modular design for maintenance accessibility and reduced downtime

Integrated door interlock system ensures safe operation at all times

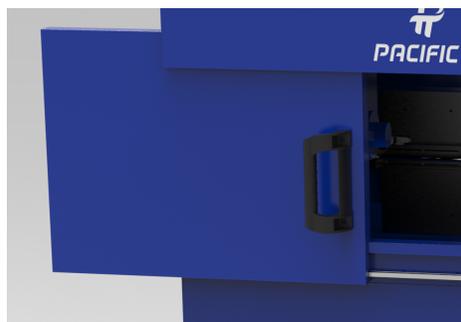


4K interior camera enables real-time visual monitoring of samples during scans

Visual and audible alarms provide immediate safety feedback to operators

Cabinet airflow management ensures temperature control and extends component life

Constructed with lead-free shielding materials, offering an environmentally friendly alternative to traditional CT shielding



TECHNICAL HIGHLIGHTS & FEATURES

PiX Rainier CT

PIX CT SOFTWARE CAPABILITIES

The PiX Rainier CT is powered by a robust reconstruction and visualization suite, enabling deeper insights and streamlined workflows:

01 3D Reconstruction Engine

- Converts 2D X-ray projections into high-fidelity 3D volumes
- Supports filtered back projection (FBP) and advanced iterative reconstruction methods
- Built-in artifact correction (beam hardening, ring suppression) and noise reduction filters

02 Visualization & Display Modes

- Volume rendering, surface models, and orthoslices (axial / coronal)
- Multi-volume support and wide-screen reference views

03 Interactive Slice Tools

- XY-XZ-YZ reslicer, ROI based Dynamic reslicer
- Radial reslicer and slice remover utilities
- 2D slice-to-3D surface plot capability

04 Object Control & Attributes

- Customizable color maps, transparency, and thresholds
- Show/hide coordinate systems, scalebars, and annotations

05 Animation & Export

- Record full 360° rotations or freehand views
- Export animations as MP4, GIF, or AVI for reports and presentations
- Support of Large file Exports
- Export of CAD support files like STL, ASCII and STL Binary

06 View Management

- Intuitive GUI that lets users maneuver and orient the 3D volume, all while displaying live data to help with sample evaluations

TECHNICAL HIGHLIGHTS & FEATURES

PiX Rainier CT

KEY APPLICATIONS

Electronics & Semiconductors

- Inspection of solder joints, PCB assemblies, and microelectronics

Aerospace & Defense

- Evaluation of composite materials, turbine blades, and mission-critical components

Automotive

- Analysis of castings, additive manufactured parts, and safety-critical assemblies

Medical Devices & Implants

- Non-destructive testing of implants, surgical tools, and micro-components

Materials Science & R&D

- Characterization of novel materials, nanostructures, and material failure analysis

Additive Manufacturing (AM)

- Verifying internal structures, porosity, and dimensional accuracy

AMERICAN INNOVATION

The PiX Rainier CT system—developed by Pacific NDT—is a reflection of American engineering at its best:

- Designed in the Pacific Northwest with an emphasis on precision, versatility, and reliability
- Fully assembled in the USA with strict quality control and craftsmanship standards
- Supported by a team dedicated to advancing imaging technology while delivering reliable service and customer confidence

PiX Rainier CT is built not just for today's challenges, but for the future of industrial imaging.

