Increased regulations, growing competition, and concerns about radiation exposure are just a sampling of the current challenges facing the nuclear medicine industry. At the same time, there’s a clear, commanding call to raise quality, improve efficiencies, and reduce costs. X-ACT+ is the camera to help you meet the demands of the modern healthcare market.

The future of nuclear imaging is clear.

- Less space, less labor, and less power requirement
- No site modifications required
- No need to lead-line rooms
- Reduced costs per procedure
- Comfortably image bariatric, claustrophobic, or COPD patients
- Improved patient satisfaction
- Raised clinical confidence and accuracy
- Ability to perform stress-only imaging protocols

Answer today’s challenges and raise clinical performance in nuclear cardiology to an unprecedented level.
The Cardius® X-ACT+ Imaging System

Why settle for low specificity SPECT or the high costs of other imaging methods? **Now you have a choice.**

Digirad has taken the X-ACT camera to the next level with a complete redesign, new features and new benefits. X-ACT+ is a groundbreaking, SPECT/FAC camera that offers more accurate test results, less radiation dose to the patient, and does this while reducing the cost burden to the healthcare system.

**The X-ACT+ is the world’s first and only solid-state SPECT system that features:**

- Solid-state detectors
- Rapid imaging detector geometry
- A fully integrated low dose fluorescence x-ray attenuation correction approach
- 3D-OSEM reconstruction techniques
- Upright imaging

With a high-speed, solid-state, triple-head design, the X-ACT+ can complete emission and transmission data acquisitions without repositioning the patient.

Digirad
Setting the standard for SPECT system performance.

With its breakthrough technology, unrivaled precision, and unmatched performance, the X-ACT+ imaging system is not only tackling the industry’s challenges, it’s leading the way into a new era of nuclear cardiac imaging.

**Easy To Operate and Site**
With its compact, lightweight design of less than 1,000 lbs., the system can be installed in as small as an 8’ x 9’ room.

**27” Wide-Beam Field of View**
With a wide 27” transverse beam and the use of a novel mono-energetic fluorescent X-ray line source, transmission images are free of truncation or beam hardening artifacts.

**Modern Solid-State Detectors**
Digirad’s proprietary solid state, high definition detectors offer superior clinical performance and reliability.

**Rapid Imaging System**
The high efficiency, solid-state triple-head design with nSPEED™ 3D-OSEM reconstruction, and integrated attenuation correction reduces total imaging time.
A new generation of imaging excellence.

Uniquely designed for the modern healthcare market, the Digirad X-ACT+ delivers a new level of SPECT imaging. Powered by Digirad’s proprietary solid-state technology, X-ACT+ produces images with unparalleled clinical accuracy – all while lowering the radiation dose and improving patient ergonomics.

HIGH SPECIFICITY

Without movement of the patient between emission and transmission acquisitions, the co-registration accuracy is substantially improved.

LOW DOSE

The system affords high statistical precision with up to 1,000 times less patient radiation exposure than other commercially-available CT-based AC approaches.

IMPROVED PATIENT ERGONOMICS

The X-ACT+ improves upon Digirad’s revolutionary patient-friendly, open, and upright design. The new design makes imaging easy for patients weighing up to 500 lbs.

Attenuation Correction

The Cardius X-ACT+ imaging system makes it possible to perform cardiac SPECT/FAC studies by employing new low dose fluorescence attenuation correction techniques.

Upgrade to X-ACT+ and take your imaging to the next level
800.947.6134  |  www.digirad.com
Technical Specifications

DETECTORS

detector technology: solid state, segmented CsI (Tl)/silicon photodiode

field-of-view (rectangular): 15.8 x 21.2 cm [6.2 x 8.3 in]
pixel size (voxel): 6.1 x 6.1 mm

reconstructed spatial resolution
FWHM (typical value): 15.6 mm @ 20 cm orbit radius
energy resolution: < 10.5 %
energy range: 50 - 170 keV
sensitivity: 225 cpm/uCi

GANTRY

type: upright chair
length: 264 cm [104 in]
width: 73 cm [29 in]
height (from floor to top of arm rest): 160 cm [63 in]
system weight: 435 Kg [960 lbs]

ACQUISITION/PROCESSING STATION [A/PS]

acquisition console: flexible positioning
height [work surface]: 99 cm [39 in]
acquisition matrix: 32 x 32
count rate (max.): > 3.5 million counts / sec
multitasking: simultaneous acquisition & processing
isotopes imaged: Ti-201, Tc-99m, Co-57

CARDIAC IMAGING

applications: MUGA, SPECT, Gated SPECT, Attenuation Correction

heart orientation: cardiocentric imaging, heart in axis of rotation
tomographic acquisition range: 202.5°
start angle: ~45 or ~38° LAO
orbit radius: 21 - 38 cm [8.3 - 15 in]
acquisition frames: 30 or 60

ENVIRONMENTAL/OPERATION REQUIREMENTS

minimum room size: 2.7 m x 2.4 [9 x 8 ft]
recommended room size: 3.0 m x 2.4 [10 x 8 ft]
power requirements: 20A [dedicated line] @ 120 VAC, 60 Hz
10A [dedicated line] @ 240 VAC, 50/60 Hz
operating temperature: 18 - 27°C [65-80°F]
relative humidity: 30 - 75%
architectural modifications: not required
environmental storage: 0 - 50°C [32 - 122°F]
patient weight limit: 227 kg [500 lbs]

X-RAY SPECIFICATIONS

scan time: 60 seconds
X-ray beam energy: 40 - 160 keV
(lead fluorescent x-ray): avg 77.3 keV

RADIATION EXPOSURE SURVEY

location description: operator’s station
measured exposure rates: 0.36 mR/hr
limit: ≤ 0.50 mR/hr

Note: specifications are subject to change. All photos and images may vary slightly from actual product.

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