A LabLogic Company

Gamma Cameras

www.southernscientific.co.uk

southern scientific
EXPERIENCE & EXPERTISE

Contents

MiE Gamma Cameras and Software

Digirad Gamma Cameras and Software

Imaging Tables

About Southern Scientific

Southern Scientific are a manufactuer and supplier of radiation detection equipment with over 30 years experience and expertise.

We provide solutions across various industries including Medical, Veterinary, Nuclear, Industrial, Defence, Security and CBRNe.

The LabLogic Group

Southern Scientific are part of the LabLogic Group.

LabLogic – A manufacturer and supplier of instruments and software to the Life Science, Nuclear Medicine / PET and Radiation Safety sectors.

Knight Imaging – A supplier of medical imaging products to radiology departments of UK hospitals for over 30 years (see page 10 for more details).

Our Values

A Customer for Life – We aim to create long term sucessfull relationships with our customers, helping them achieve their goals.

Service – It is of utmost importance that we provide the best possible service to our customers. We believe this philosophy is the main reason behind our long term sucess.

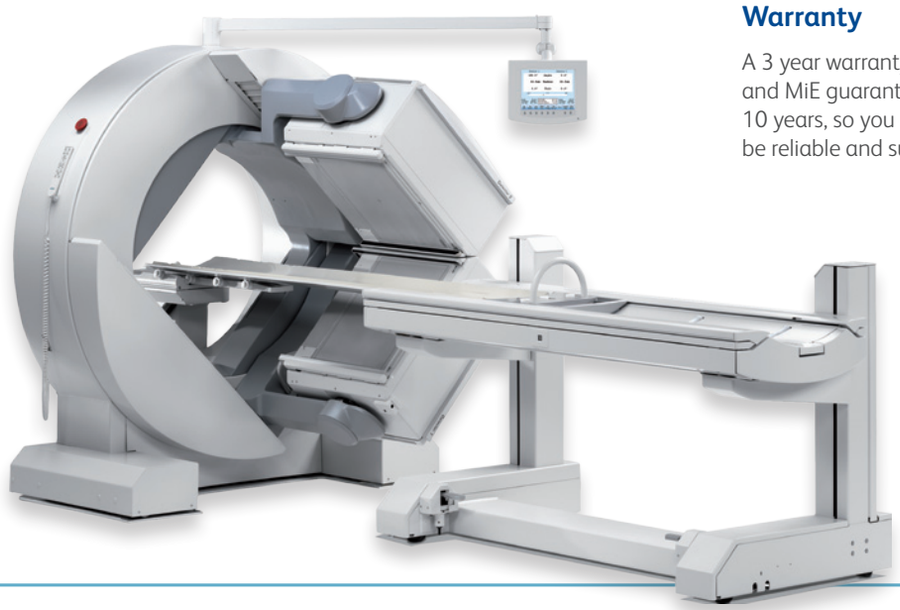
Quality – We aim for high quality throughout our business. From the internal standards, to the products and service we provide our customers.

Innovation – We are constantly developing our products and expanding our product portfolio. We aim to exceed the needs of our customers and the marketplace.

About MiE

A new Gamma Camera at a fraction of the cost

Drawing on many years of manufacturing experience since 1981, MiE have developed a system of remanufacturing to deliver cost effective imaging solutions you can rely on.



Manufacturing and Remanufacturing

An economical and ecological approach to gamma camera manufacture, closing the gap between shortened development cycles and more durable mechanics and electronics.

It is important to understand these cameras are not second hand. Whilst MiE are utilising pre-existing gamma camera frames which meet strict quality standards criteria, the detector crystals are brand new. The production process is also CE certifed and FDA registered.

Warranty

A 3 year warranty is offered on the new detector crystals, and MiE guarantee parts availability for a minimum of 10 years, so you can feel assured that your camera will be reliable and supported for years to come.

Philosophy

- A family owned company now in its second generation.
- All work is carried out in the company's production facility close to Hamburg.

Picola – Scintron®

Compact SFOV gamma camera system with optimal image resolution and minimum space requirements.

Key Features

- Motorised positioning of the detector (tilt and height) via hand controller with integrated acquisition start and anatomical marker function.
- Selection of collimators available.
- Shielding for isotopes with energies up to 400 keV.
- User friendly, intuitive software applications for all needs and requirements including connectivity via DICOM.

Specifications

Detector	37 PMT's
Crystal	1/4" or 3/8" NaI(Tl)
FOV	25.4 cm / 10"
Energy Range	Up to 400 keV

Syngula – Scintron®

For diagnostic confidence and clinical reliability, the Syngula is the camera of choice; versatile for high quality static, dynamic and gated studies on sitting and lying patients with minimum space requirements.

Key Features

- Electronic detector provides the ultimate in automatic PMT gain stabilisation; this improves long term stability and spatial linearity with automatic energy and linearity correction.
- New 3/8" NaI(Tl) scintillation crystal (thallium-activated sodium iodide).
- Wide selection of collimators are available and shielding for isotopes and energies up to 400 keV.
- User friendly, intuitive software applications for all needs and requirements including connectivity via DICOM.

Specifications

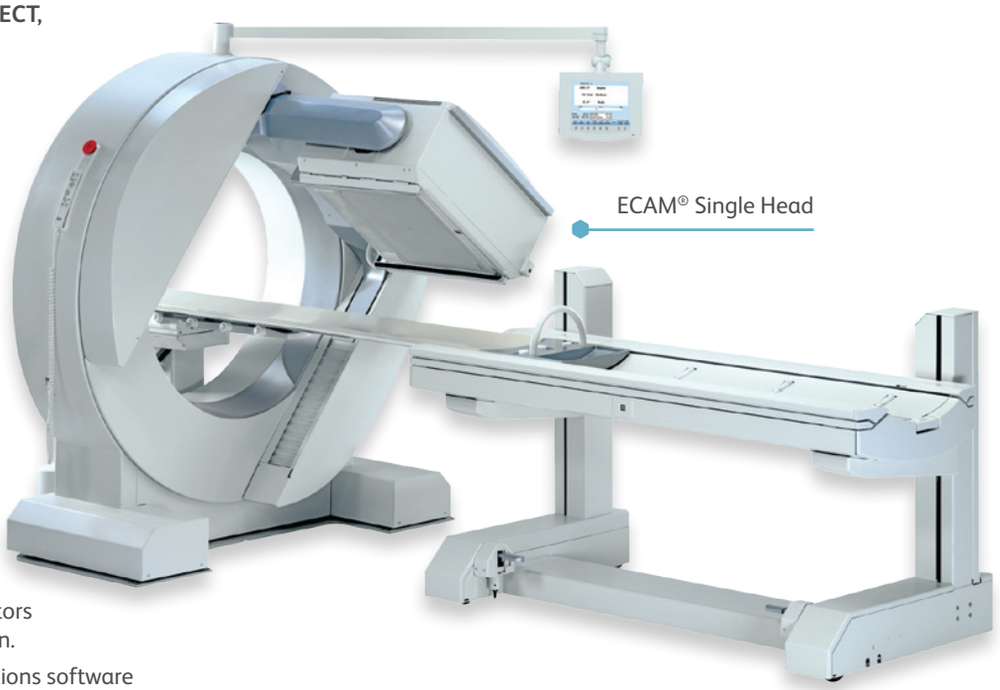
Detector	37 PMT's
Crystal	3/8" NaI(Tl)
FOV	38.7 cm (15.2")
Energy Range	Up to 400 keV

ECAM® – Scintron®

The ECAM® is available as a single or dual head gamma camera system designed for SPECT, whole body and planar imaging.

Key Features

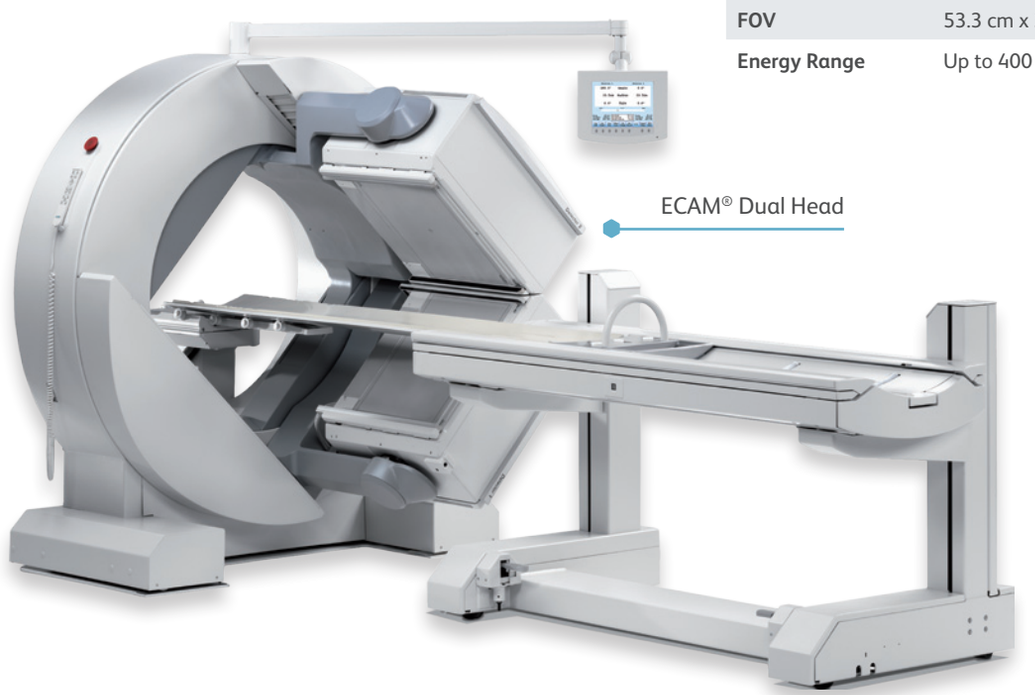
- 1 or 2 large rectangular detectors.
- 59 high efficiency PMT's.
- Caudal, cephalic and external rotation versatility.
- Variable-angle model offering 90° to 180° configurability.
- Automatic PMT tuning.
- Real-Time Infrared Bodycontur System minimises patient-to-detector distance for all whole body and SPECT studies.
- Motorised Patient Handling System.
- Special ultra thin imaging pallet improving image resolution.
- A comprehensive selection of collimators for general and specialised application.
- User friendly intuitive clinical applications software with easy to use applications protocols.
- Network ready communication and printing capabilities allow for smooth connectivity with HIS/RIS and PACS.



ECAM® Single Head

Specifications

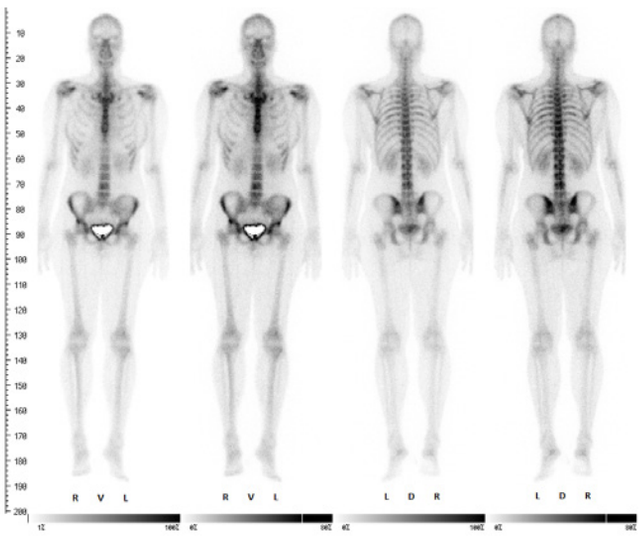
Detector	59 PMT's
Crystal	Thickness of 3/8" NaI(Tl)
FOV	53.3 cm x 38.7 cm
Energy Range	Up to 400 keV



ECAM® Dual Head

MiE Scintron Software

All MiE gamma cameras are linked to a Scintron® workstation for data acquisition, image processing and display and data archive.



Key Features

- Scintron® provides a system that is easy and intuitive to use and has been designed to allow reproducible analysis.
- Provides quick and simple adaptation of acquisition protocols ensuring that examinations can be tailored to individual patient requirements.
- Can link to any patient information system to enable work lists to be displayed and prevent error from manual input of patient.
- Extensive image manipulation tools including smoothing, filtering, interpolation and zoom.
- Multiple ROI tool as well as left/right comparison and ratios.
- Quick intuitive analysis for SPECT and cardiac work.
- Thyroid Uptake analysis programme.
- Renal analysis programmes for static and dynamic studies.
- On-the-fly sequence display for dynamic studies.
- Invia's Corridor4DM also available.
- Multi modality Image Fusion available.

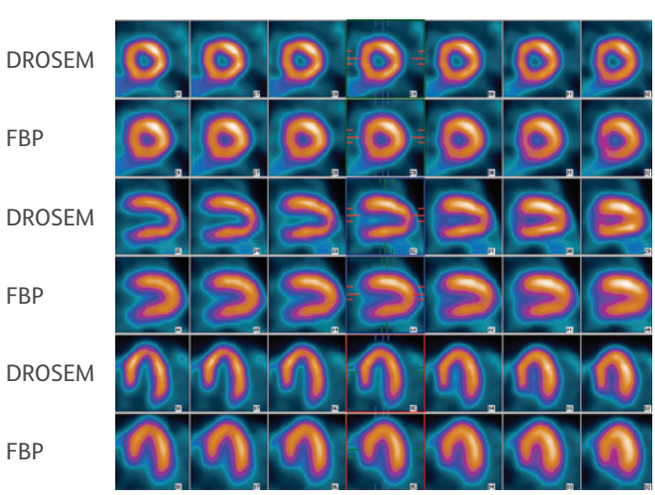
DROSEM Reconstruction Software

DROSEM – Depth Response Ordered Subsets Expectation Maximisation.

- Significant quality improvement compared to conventional reconstructions.
- Shortened scan time.
- High quality images even with poor acquisition statistics.
- Improved signal to noise ratio.
- Reconstruction of any SPECT studies by DICOM import possible.

The benefits of shorter acquisition time include:

- Efficiency through high patient throughput and cost optimisation.
- Improved patient comfort.
- Better image quality by significantly reduced motion artifacts.



About Digirad

Leader in solid-state imaging solutions

Digirad was the first to design and commercialise solid-state detector technology for nuclear medicine, and continues to be a leader in the development, manufacture and distribution of solid-state gamma cameras for use in general nuclear medicine, cardiology, women's health, pediatrics and other applications.

ERGO – Solid-State General Purpose Imaging System

Utilising powerful new solid-state technology, the Ergo is a large field of view camera that provides unprecedented image quality and unparalleled clinical flexibility both in the department and on the ward.

Applications include: Bone Spots, Lung, Liver, HIDA, Gastric Emptying, GI Bleed, Renal, Thyroid, Parathyroid, Brain Flow, MUGA, Breast (MBI), Gallium, Indium, 3 Phase Bone, Sentinel Node, Lymphoscintigraphy and Animal Studies.

Key Features

- Compact and open design.
- Large field of view.
- Swivel acquisition and viewing station.
- Multiple compound motions.
- Detachable hand control.
- Portable.
- Range of collimators available.

Specifications

Detector	Solid-state
Crystal	CsI (Tl)/photodiode
FOV	12.2" x 15.6"
Energy Range	50 - 350 keV

Cardius® X-ACT – Fully Integrated SPECT and VCT Imaging System

A fully integrated SPECT.VCT approach that offers superb quality, high speed and unmatched clinical precision.

The X-ACT high speed solid-state detectors have the ability to collect both the emission and the CT transmission data, eliminating the need to move the patient between the data collections.

Key Features

- Compact design.
- Upright imaging for greater separation of heart from liver, gallbladder and bowel.
- Triple-head camera.
- Saddle-like seat minimising patient motion.
- Attenuation correction using mono-energetic fluorescent X-ray line source, with low patient dose (~5 µSv).
- Ideal for bariatric patients (up to 225 kg).
- Can perform a 7 minute stress acquisition study.

Specifications

Detector	Solid-state
Crystal	CsI (Tl)/photodiode
FOV	6.2" x 8.3" (15.8 cm x 21.2 cm)
Energy Range	50 - 170 keV

Cardius® 3 XPO

Up to 38% imaging acquisition efficiency advantage over other industry-leading cameras whilst maintaining comparable image quality.

Key Features

- Can perform a 7 minute stress acquisition study.
- High quality, consistent and reliable HDSD solid-state detectors.
- Open and upright, with the ability to image patients up to 225 kg.
- Compact and lightweight, requiring a room size of just 2.1 x 2.4 m.

SeeQuanta™ Software with TruACQ

Revolutionary nuclear medicine acquisition software with heavy emphasis on nuclear cardiology

SeeQuanta™ software combines an advanced user interface with cardiac tools resulting in unique patient independent imaging capability. This innovative introduction demonstrates enhanced workflow and increased flexibility with high throughput.

Fast and easy acquisition setup, easy pull down menus

- Pull-down menu for dedicated cardiac protocols.
- Seamless database access.
- Automated post acquisition displays (cine or frame mode).
- Bi-directional acquisition setup.

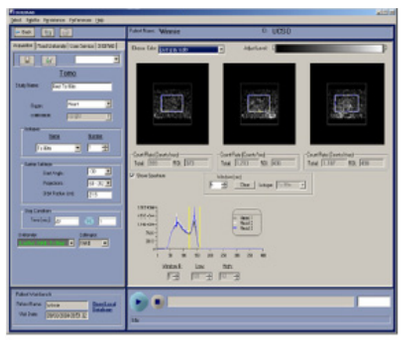
Enhanced workflow with Windows.net technology

- Intuitive one click acquisition workflow.
- Simultaneous acquisition and processing capability.
- Live p-scope and ECG displays.

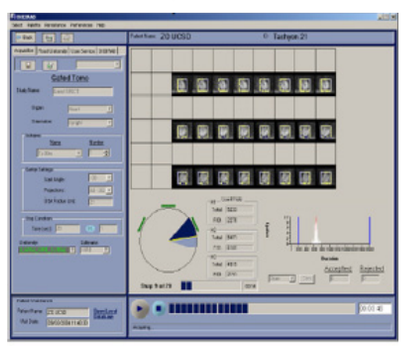
Patient independent cardiac imaging with revolutionary tools

- TruACQ Count Based Imaging™ technology with ability to recommend patient specific acquisition times.
- Count rate capability within an ROI and entire frame.
- Count density information from the heart after each acquired frame.
- Sequential acquisition display mode with ROI overlay over the heart optimising the ability to detect patient motion.

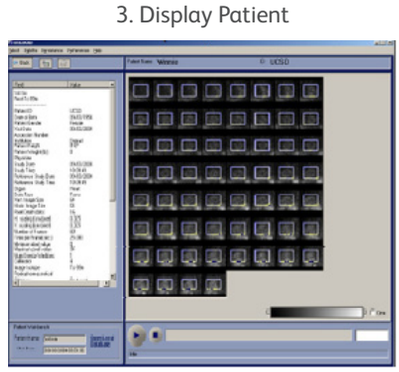
1. Setup Patient



2. Acquire Patient



3. Display Patient



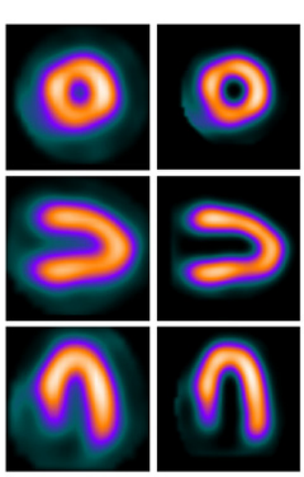
nSPEED™

3D-OSEM rapid image acquisition – clearer images in less time

nSPEED™, 3D-OSEM reconstruction software from Digirad, provides superior image quality over existing 2D reconstruction techniques, producing sharper, higher contrast images.

nSPEED™ models the depth-dependent point response function in an iterative reconstruction algorithm (OSEM), enabling depth-dependent resolution recovery and improving chamber contrast in cardiac SPECT images.

Due to the significantly improved image resolution provided by use of nSPEED™ acquisition, time or patient dose may be reduced whilst maintaining image quality as compared to conventional reconstruction methods.



Improved resolution using nSPEED (right) compared to 2D OSEM (left)

About Knight Imaging

Knight Imaging are a UK based manufactuer and supplier of medical furniture. Part of the LabLogic group of companies, Knight Imaging prides itself on innovation, service, quality, and customer care.

History

Since 1981, Knight Imaging has worked closely with hospitals in the UK providing a range of products to radiology departments.

Following a merger with Southern Scientific in the 1990's the company continued to develop and sell its extensive range of Ultrasound couches, patient chairs and X-ray imaging accessories, but under the Southern Scientific name.

When Lablogic acquired Southern Scientific, Knight Imaging began to operate again under its own name.

Since then the company has continued supplying Ultrasound Couches, developing ever more versatile, motorised models, as well as supplying lead aprons and protective wear, and developing the popular SIGMA motorised patient chairs. Amongst the latest developments are specialist chairs for nuclear medicine and mammography procedures.

Multi-purpose Examination Table

Ideal for use in nuclear medicine applications alongside gamma cameras such as the Ergo.

Key Features

- Battery powered – fully portable and no trip risk.
- Motorised height adjustment from 60 cm to 85 cm.
- Motorised ± 10° Trendelenburg.
- Floating X-ray transparent tabletop with electromagnetic locks.
- X-ray transparent area: 197 cm x 64 cm.
- Flexible control panel on side rail.
- Additional back-up battery with wall charger.
- Weight capacity up to 250 kg.

Optional Fittings

- Carbon fibre tabletop.
- Side rails.
- Drip stand.
- Mattress.
- Positioning handles.

ACITOS (Accident Total Scan) CT Trolley EE

For transportation and delivery of a patient from an accident and emergency environment directly to the PET scanner, Gamma camera or CT scanner.

The **detachable** tabletop allows the aptient to be scanned whilst remaining in a stationary position.

Key Features

- Battery powered – fully portable and no trip risk.
- **Detachable** carbon fibre table with manual table locks: 2015 cm x 56 cm.
- Motorised height from 75 cm to 105 cm.
- 3 programmable heights.
- Outer width: 92 cm. Inner width (between arms): 70 cm.
- 15 cm wheels with central and total lock.
- Additional back-up battery with wall charger.
- Weight capacity up to 250 kg.

Shift CT Trolley

Designed for maximum flexibility allowing all round imaging access. Operatives can switch effortlessly between imaging techniques without moving the patient.

The **detachable** carbon fibre tabletop reduces the moving and handling risk as it allows the patient to be scanned comfortably whilst remaining on the table.

Key Features

- Fully **detachable** tabletop.
- Battery powered – fully portable and trip risk.
- Detachable carbon fibre table with manual table locks: 205 cm x 56 cm.
- Motorised transversal movement of tabletop: 50 cm.
- Motorised transversal movement of columns: 50 cm.
- Motirised up/down movement of tabletop: 10 cm.
- Additional back-up battery with wall charger.
- Weight capacity up to 250 kg.

Service and Support

Southern Scientific and Knight Imaging has a team of fully qualified service engineers, who support customers spanning the length and breadth of the UK. We can provide factory or on-site service as required, based on single visits, planned maintenance or full support under contract. We maintain a high level of spare parts, ensuring lifetime support capability.

Our systems group can offer its service for the larger installed equipment, from initial planning to installation, completion and training. We can provide expert knowledge and experience, gained through involvement in a number of large-scale projects throughout the years.

ISO Certified

Southern Scientific Ltd is certified to ISO9001:2008, ISO 13485:2003 and EN ISO 13485:2012 representing the high level of quality assurance and management that we provide at every stage of the supply process, whether a product is distributed on behalf of our trusted manufacturers or constructed in our UK workshop. This accreditation means that our customers can place an order knowing that the delivered product will be suitable for its intended use, fully compliant with EU legislation and in full working order.

All our products are CE marked.

Southern Scientific Limited

Scientific House, The Henfield Business Park
Shoreham Road, Henfield, BN5 9SL, UK

E-mail: info@southernscientific.co.uk
Tel: +44 (0)1273 497600
Fax: +44 (0)1273 497626

Web: www.southernscientific.co.uk

Knight Imaging Limited

Paradigm House, 3 Melbourne Avenue
Broomhill, Sheffield, S10 2QJ, UK

E-mail: sales@knightimaging.co.uk
Tel: +44 (0)114 267 0482
Fax: +44 (0)114 266 3944

Web: www.knightimaging.co.uk