Luminos dRF Max

The smart way to invest in remote fluoroscopy

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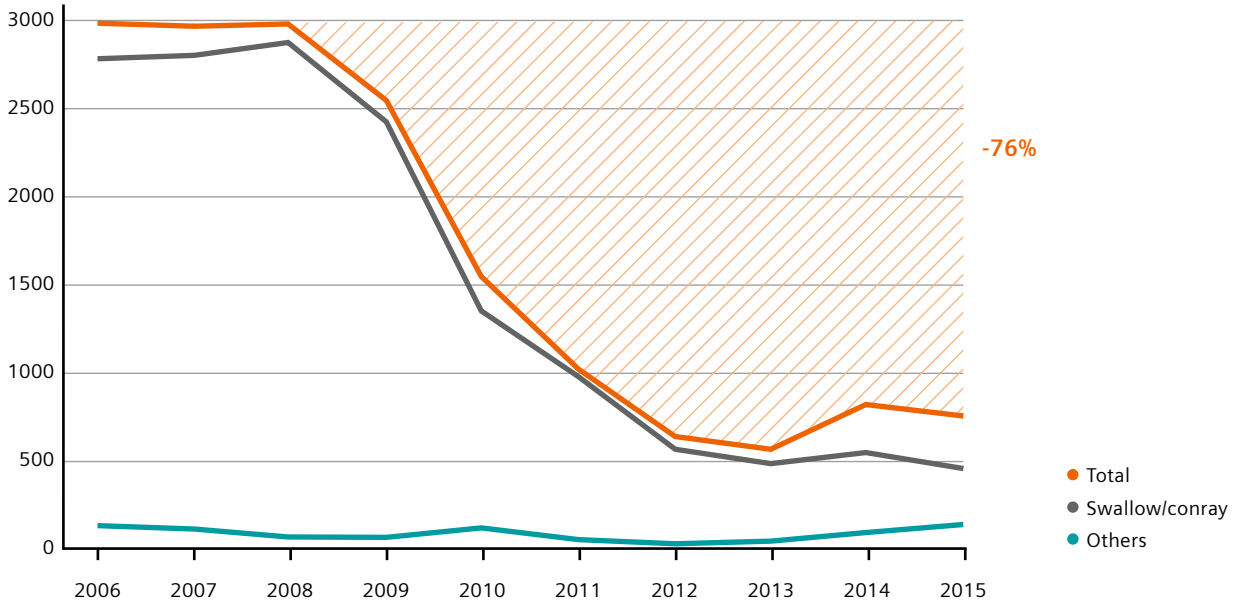
SIEMENS Healthineers

Manage discrepancies between demand and supply

Over the last few years, fluoroscopy examinations like barium studies were increasingly replaced by sonography, endoscopy, computed tomography, and magnetic resonance imaging. Even though the number of fluoroscopy examinations is dwindling, clinical institutions have to offer fluoroscopy examinations.

For healthcare providers, the pressing question is: How can they improve the return on investment of a potentially underutilized fluoroscopy system?

Trend of gastrointestinal contrast studies over the last 10 years[1]



[1] *Trends of barium studies performed at the Tata Memorial Hospital, Mumbai, Maharashtra, India over the past 10 years. Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5234156/ last accessed on 09/25/2017*

Enhance system utilization with Luminos dRF Max

By combining remote fluoroscopy and unlimited[1] radiography, our proven Luminos dRF Max lets you increase system utilization and save on costs for an additional system and room. It delivers high-quality, low-dose dynamic and static images on all types of patients – from small children to obese adults.

The system also offers smart design features, pediatric accessories, and a high level of cyber-security to keep both patients and their data safe. Benefit from stronger synergies, sharper imaging, and safer use with our 2-in-1 Luminos dRF Max – a smart investment in fluoroscopy.

Discover Luminos dRF Max

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[1] *Unlimited within the technical specification of the respective system*

Luminos dRF Max at a glance

Cover your case mix

Luminos dRF Max can be easily adapted to match your individual case mix. You can add as much radiography as you need – whenever you need it. This makes our Luminos dRF Max a future-proof choice.

Offer low-dose imaging

Luminos dRF Max makes it easy to follow the ALARA[1] principle. Special applications and DiamondView MAX help you keep dose as low as possible, while you can see all anatomical details in clear images to make confident diagnostic decisions for all patients.

Improve your workflows

With its smart design features and automated workflow, Luminos dRF Max supports you in your daily work: Benefit from safe system operation and efficient workflows and focus on what really matters – your patients.

[1] *ALARA = As Low As Reasonably Achievable*

Fleet Level Benefits

Siemens Healthineers offers specific solutions across the entire X-ray portfolio that let you standardize, analyze and secure your fleet. This let you obtain valuable Fleet Level Benefits: consistency, transparency and confidence for improved efficiency and greater staff and patient satisfaction.

Keep your IT secure

In modern healthcare, digitalization supports patient-centered care from chronic disease to population health management. Being connected, however, can also bear risks like data theft or cyberattacks. Luminos dRF Max comes with a high level of cybersecurity to support you in safeguarding your IT and sensitive patient data.

Personalize when it matters

Children have different imaging needs than adult patients. From a very low table height and dedicated low-dose organ programs to special positioning aids, Luminos dRF Max provides all you need to image children safely and efficiently.

Stronger synergies – with a true 2-in-1 solution

In times of decreasing fluoroscopy examinations, a solution is required to secure a positive return on investment. With our 2-in-1 Luminos dRF Max, you decide how much radiography you want to perform – thus maximizing system and room utilization.

Cover your clinical needs
Our Luminos dRF Max is a highly flexible 2-in-1 system. With the main unit, you can perform fluoroscopy without limitation and unlimited[1] radiography examinations.

Expand your system setup at any time
You can always enhance your efficiency and clinical versatility in radiography, for example if you need to perform a higher number of standardized chest exams or cross-table images. Simply add an optionally available bucky wall stand, wireless detectors[2], and a ceilingmounted tube[1] for optimized operations. You can add them right from the start or anytime later.

Benefit from a high level of integration and a small footprint
Since all components are fully integrated, they are controlled from the same control console and share the same workflow. You also save space because you need just one system cabinet with a small footprint for both generator and power supply.

[1] unlimited within the technical specification of the respective system
[2] Option

Improve your TCO with detector swapping
With our 2-in-1 Luminos dRF Max, you save an additional system and room. You can further reduce investment costs and increase system availability by swapping our wireless detectors MAX wi-D[1] and MAX mini[1] between your multiple MAX systems. After an easy one-click registration, the detectors are ready to be used. The Max wi-D[1] also features innovative automatic charging. And because they share the same battery type, you can simply swap the battery if one is running low.

"I didn't expect the system would be capable of doing everything it can, the Luminos dRF Max is truly an all in one machine."

Leon Smith
SKG Radiology, Duncraig, Australia

[1] *Option*

Sharper imaging – for fast, confident diagnoses

To make reliable diagnoses, you need excellent visualization of all anatomical structures. Luminos dRF Max delivers clear images at the lowest possible dose. Furthermore, intelligent image acquisition and DiamondView MAX, our unique image processing engine, help keep examination and reading times short.

See the anatomical details you need to see
Whether for dynamic imaging like swallow without bolus chase or static radiographic imaging, the large, flat detector of Luminos dRF Max offers excellent coverage. This also allows you to reduce examination time and dose even for challenging examinations. In addition, all components of the image chain are perfectly compatible because they are all from one source: Siemens Healthineers.

Standardize your imaging workflow
Support your team in confidently acquiring consistent, high-quality images regardless of the complexity of the examination and the knowledge level of the technologist: You can quickly and easily set up the system with your standard settings for radiography and fluoroscopy thanks to the one-click registration. In addition, exposure and post-processing parameters, collimation, and system positions can be predefined in dedicated organ programs. Even for free examinations, the positioning of the tube takes no more guesswork, since the detector angle is displayed directly on the color touchscreen with MAXalign.[1]

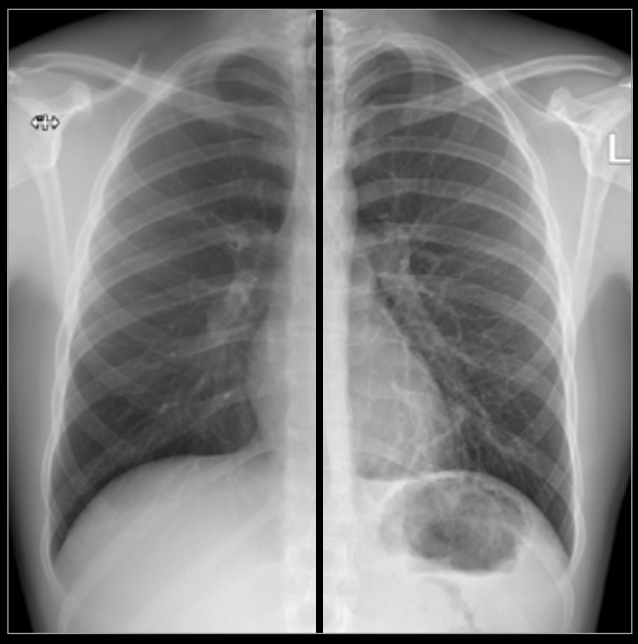
Benefit from advanced post-processing with DiamondView MAX
For easy reading and comparison, Luminos dRF Max delivers excellent image quality – always in your preferred image flavor. See improved bone detail and soft tissue contrast in both static low-dose and gridless images. In dynamic imaging, you benefit from enhanced contrast and optimized noise reduction for a high level of detail visibility, even in very bright or dark areas. And when patients only partially cover the image, two semitransparent filters[1] can help you reduce both examination time and dose.

Offer safe imaging of children
Children have a much greater sensitivity to radiation than adults. Luminos dRF Max supports you in performing fast, safe and correct pediatric imaging – assisted by radiation-free positioning[1] and dedicated pediatric organ programs for low-dose. With DiamondView MAX for pediatrics, you can even perform low dose-swallow studies for neonates and see anatomical details in high contrast.

"In addition to the noticeably optimized workflows, image quality is of particular interest for us radiologists. And I have to say that compared to the previous systems, we saw a quantum leap in this regard."

M.D. Gunther Schütze
Private Imaging Center Bethanien-Hospital,
Frankfurt, Germany

[1] *Option*



Easy and accurate stitching with Smart Ortho[1]
SmartOrtho[1] gives you a single patient coverage solution for full-spine and long-leg exams. It helps you accommodate a diverse patient mix with fast automated image acquisition. The SmartOrtho[1] tilting technique acquires up to four consecutive images in a single automatic image acquisition in the Bucky wall stand and/or on the patient table while being able to manage any patient size.
In addition you benefit from automatic image composition into one large image and excellent image quality with integrated DiamondView MAX image processing.

Gridless imaging
DiamondView MAX was also specifically developed to deliver optimized image quality for gridless free exposures. The software optimizes images acquired without a grid by reducing the appearance of noise with a special dose-adaptive algorithm based on multi-frequency processing. Gridless imaging boosts your workflow efficiency and delivers MAX image quality at low dose.

[1] Option
Clinical images are courtesy of University Hospital Basel, Switzerland, and Hospital Barmherzige Schwestern Linz, Austria

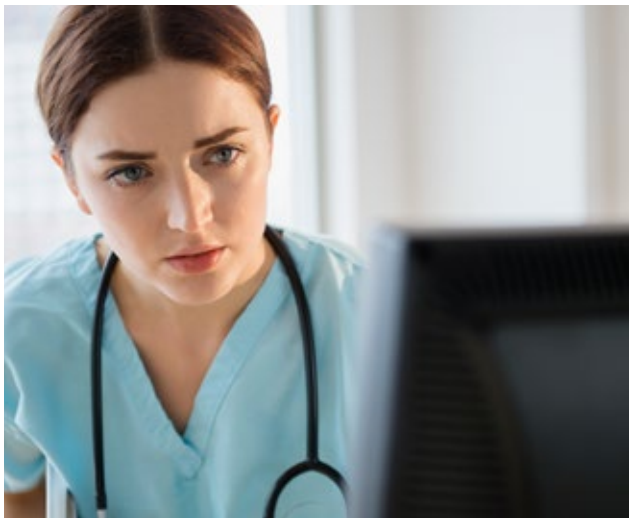
Safer use – to protect patients and technologists

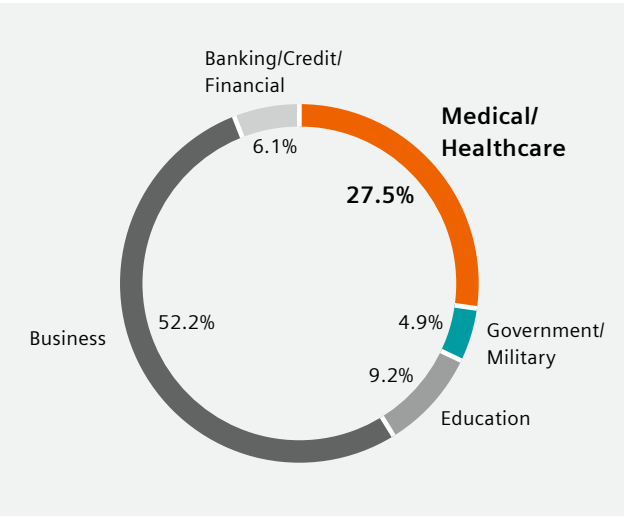
The safety of patients and staff is especially at risk during patient transfers to and from the system. Luminos dRF Max offers smart design features and intuitive system operation to keep both patients and technologists safe.

Efficiency and safety – no contradiction
Intelligent automation and comprehensive control elements exceptionally accelerate and simplify the positioning of Luminos dRF Max. Its industry-leading safety concept includes joysticks that are only activated by the touch of a human hand, preventing unintentional system movement. Gain fast access to all table movements and imaging parameters – so you can concentrate on your patient.

Enhance the experience of your patients
Accessing or leaving a system can be cumbersome or painful, especially for elderly or disabled patients. Luminos dRF Max helps increase comfort and safety with a low minimum table and stepping height. For the transfer of patients from a trolley onto the system, your staff benefit from the height-adjustable table, longitudinal tabletop movement, and excellent accessibility – even from the back of the system where all mechanical parts are fully covered. The open system design grants full access to the patient without repositioning, even in small rooms.

Luminos dRF Max helps you enhance safety in all respects:





Comprehensive cybersecurity risk management for the entire product lifecycle

Luminos dRF Max delivers a high standard of cybersecurity. In addition to a secure development lifecycle, it also offers whitelisting to protect against modern malware. Encryption keeps patient data safe during transfer and in storage, and 90-day hotfixes[1] provide you with patches and updates remotely. Luminos dRF Max uses Windows 10 and provides centralized role-based access control that allows you to configure access to data and settings according to user roles. And with the audit trail functionality, you can log all user activities, protect them from alteration, and transfer them to a central location for easy evaluation.

Data breaches by sector in 2017[2]

Security breaches affecting patient data and system IT can cost money and reputation. Did you know that statistically, four new cybersecurity threats emerge every second?

[1] *A connection to our SRS infrastructure is a prerequisite.*

[2] *"At Mid-Year, U.S. Data Breaches Increase at Record Pace," July 18, 2017, Identity Theft Resource Center.*

Fleet Level Benefits

Unlock your potential – and increase the efficiency across your imaging fleet

As healthcare provider you are forced to do more with less, you have to run your radiology department more efficiently. A high level of complexity makes it challenging for you to reach the desired efficiency. Siemens Healthineers offers specific solutions across the entire X-ray portfolio that let you standardize, analyze, and secure your fleet. Experience consistency, transparency, and confidence as valuable Fleet Level Benefits and improve outcomes, increase efficiency – and achieve greater staff and patient satisfaction.

Standardize
for consistency

Analyze
for transparency

Secure
for confidence

Standardize
for consistency

- Systems with highly intuitive user interfaces and common workflows
- Staff with consistent knowledge level
- Unified image quality and same image impression

Analyze
for transparency

- Consolidated data in one place
- Analyzed and evaluated data turned into valuable information

Secure
for confidence

- Protect large IT network and imaging fleet with one cybersecurity philosophy
- Same maintenance cycles and update strategies for the whole fleet

See anatomical details in high image quality

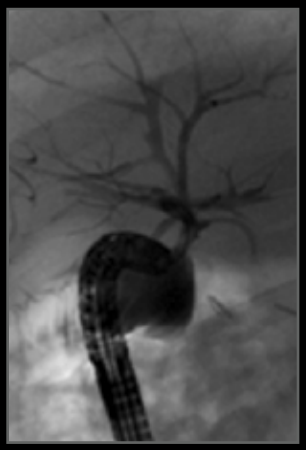
To make fast and confident diagnostic decisions, you need high image quality. Luminos dRF Max offers DiamondView MAX – our unique image processing engine and a large field of view.

Excellence in fluoroscopy applications

Enhanced contrast contrast at low dose for gastrointestinal examinations

Swallow studies with high frame rates

Digital subtraction angiography (DSA) and road-mapping[1]



Excellent patient access for ERCP examinations

Excellence in radiography applications

High throughput for chest X-rays with clear details

Easy positioning and standardization with predefined organ programs

Wide coverage on the table with 43 x 43 flat panel detector

Fully automatic ortho imaging

[1] *Option*

Benefit from innovative services

Increasing value by partnering throughout the entire lifetime of your equipment

Continuously adding value and caring for your equipment, your workforce, and your entire institution.

Equipment Maintenance & Monitoring
Designed for quality and availability, UpTime Services allow you to increase your equipment's uptime by safely managing planned and unplanned downtime – for optimized equipment performance.

Education Management
Within UpSkill Services we share the latest technical and clinical knowledge to continuously and strategically build job-specific skill-sets – for better patient care.

Fleet Management
teamplay Fleet enables you to streamline the management of your fleet from Siemens Healthineers 24/7.

Performance Management
An intelligible overview of your radiography performance data helps you make prompt and well-informed decisions.

Asset Management & Planning
Access to innovative medical technology and equipment throughout the entire contract life-time allows you to maximize focus on patient care.

Accessory Solutions
Products from our partner companies complement your use of our equipment in your daily workflow.

Business Modelling & Financing
Customized business and financial models address your budgetary and enterprise needs enabling you to remain more competitive.

Departmental Layout Optimization
3D-Visualization and digital twin analysis create more efficient workflows and a more enjoyable working environment.

Technical specifications

Optional in-room console
- with touch-sensitive joysticks and touch user interface

Table
- Height: min. 48 cm (19”), max. 98 cm (39”)
- Weight capacity: up to 300 kg (661 lbs.)
- Tabletop width: 80 cm (31.5”)

MAX image chain
- MAX dynamic detector with Cesium iodide scintillator
- 43 cm x 43 cm (17” x 17”)

MAX wi-D detector[1]
- Wireless
- Size: 35 cm x 43 cm (14” x 17”)
- Weight: 3.3 kg (7.3 lbs.)
- Thickness: 19 mm (0.7”)

MAX mini detector[1]
- Wireless
- Size: 24 cm x 30 cm (10” x 12”)
- Weight: 1.6 kg (3.5 lbs.)
- Thickness: 16 mm (0.6”)

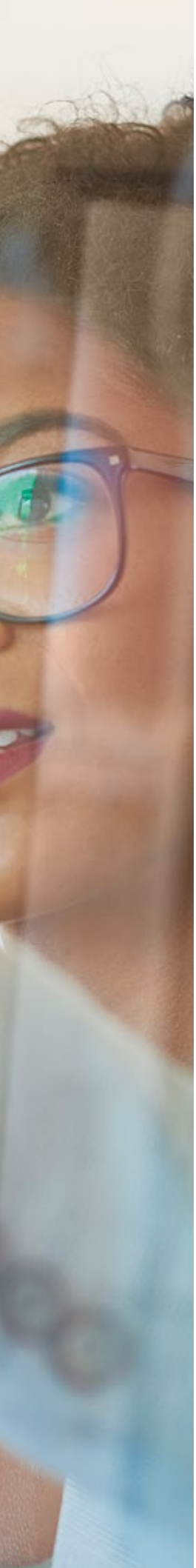
Tube
- Anode heat capacity: 820 kHU
- Collimator with semitransparent filters[1]

Remote control console
- with touch-sensitive joysticks and touch user interface

Bucky wall stand[1]
- Vertical travel range: 140 cm (55”)
- Minimal central beam height: 33 cm (13”)
- Tilting: +90°/-20°

Ceiling-mounted tube[1]
- with large color touchscreen offering access to key image parameters

[1] *Option*



Why Siemens Healthineers

At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. By constantly bringing breakthrough innovations to market, we enable healthcare professionals to deliver high-quality care, leading to the best possible outcome for patients. Our portfolio, spanning from in-vitro and in-vivo diagnostics to image-guided therapy and innovative cancer care, is crucial for clinical decision-making and treatment pathways.

Built on a history of innovation going back more than 125 years and with unique strengths in patient twinning, precision therapy, as well as digital, data, and artificial intelligence (AI), we are well positioned to take on the biggest challenges in healthcare. We will continue to build on these strengths to help fight the world's most threatening diseases, improving the quality of outcomes, and enabling access to care.

As a leader in the industry, we aspire to create better outcomes and experiences for patients no matter where they live or what health issues they are facing. We innovate sustainably to develop scalable solutions that can be tailored to the needs of healthcare providers, and the local health infrastructures.

Motivated by our purpose and guided by our values, we are building an inclusive culture, where we embrace diversity in all its forms. We are a team of 66,000 highly dedicated employees across more than 70 countries passionately pushing the boundaries of what's possible in healthcare to help improve people's lives around the world.

Luminos dRF Max is not commercially available in all countries. Due to regulatory reasons its future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details.

The outcomes achieved by the Siemens Healthineers customer described herein are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g. hospital size, case mix, level of IT adoption) there can be no guarantee that other customers will achieve the same results.

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