Bone & Metabolic Health

Prodigy™
from GE Healthcare

Performance and reliability
with one of the largest
installed base DXA systems
in the world

gehealthcare.com

Prodigy

High performance, efficient and reliable DXA system with the versatility to offer bone density test and body composition analysis. Prodigy systems provide the option to scale up to a wide-range of clinical applications.

Available in
Full or **Compact**[1]
sizes.

Full and compact size DXA systems provide flexibility to meet the unique space requirements of your facility.

Your practice demands dependable dual-energy X-ray absorptiometry (DXA) assessment, and Prodigy delivers with exceptional precision and low-dose radiation. You can depend on Prodigy to provide precise data on bone and soft tissue composition, including bone-mineral density (BMD), lean- and fat-tissue mass, and percentage of fat. At the same time, Prodigy helps streamline your patient care and practice workflow.

Prodigy software packages – Customized to suit your needs

Prodigy Primo

Package includes:
- Basic Skeletal Assessment
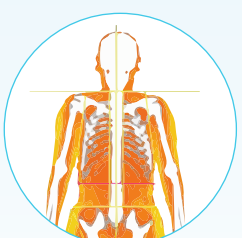- Basic Body Composition

Prodigy Pro

Package includes:
- Essential Skeletal Assessment
- Essential Body Composition Assessment
- Pediatric Measurements

Prodigy Advance

Package includes:
- Advanced Skeletal Assessment
- Advanced Body Composition Assessment
- Pediatric Measurements
- Multi-User Database

Solid performance makes Prodigy chosen worldwide

Prodigy is our proven and dependable DXA product with a large global installed base across 120+ countries.

Clinicians, Researchers and Practitioners have trusted the Prodigy DXA system for more than 20 years making it one of the largest selling DXA systems in the world.

Prodigy with enCORE v18 software enables you to meet ISCD testing guidelines

ISCD indications for Bone Mineral Density (BMD) testing:

• Women 65 and older

• Men 70 and older

• Post-menopausal women with a risk factor:

– Low body weight

– Prior fracture

– High risk medication use

• Adults taking medications associated with low bone mass or bone loss

• Adults with disease or condition associated with low bone mass or bone loss
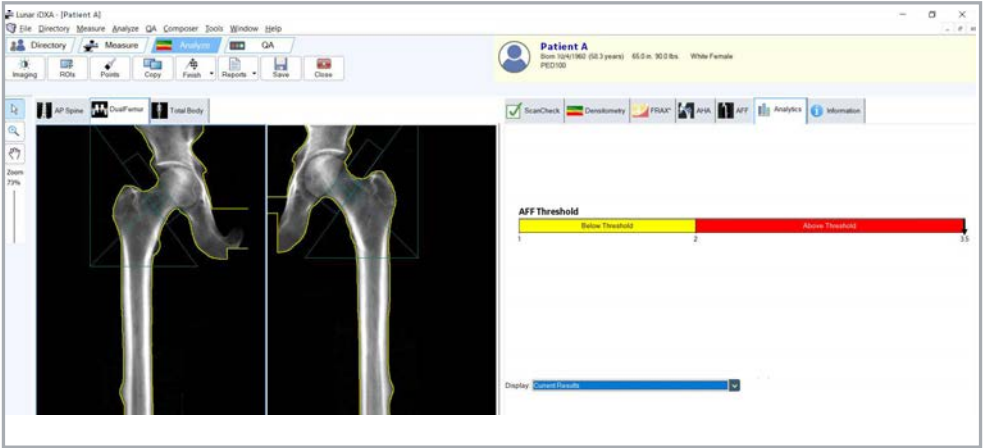
ISCD guidelines for BMD testing available at ISCD.org

Prodigy for Bone Health

Prodigy's reliable design and robust technology platform supports a comprehensive portfolio of clinical applications for bone health.

• Bone Mineral Density

• FRAX

• Trabecular Bone Score (TBS)

• DVA (includes LVA, APVA and Lateral BMD)

• Atypical Femur Fracture and more

BMD Insights using AFF User Customizable Threshold

Prodigy for Metabolic Health

Prodigy offers a wide range of clinical applications for metabolic health needs.

• Total Body Composition

• CoreScan

• Sarcopenia

• Fat Color Coding

• Custom Reference Population

• Option to Integrate Hydration Levels from BIA/BIS (TBW, ECW, ICW) to have 5 compartment models (LM, FM, BMC, ECW, ICW) and more
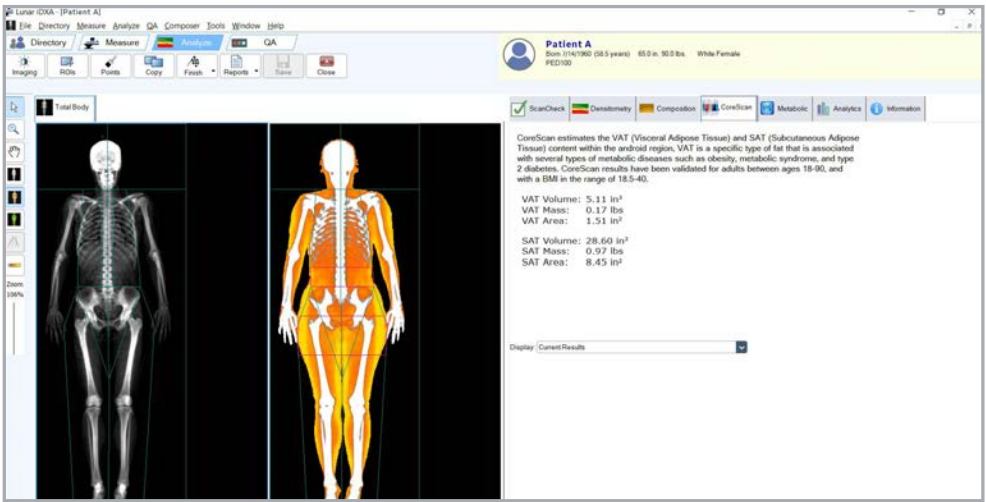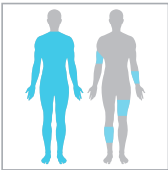
Newly Available: VAT Area and SAT Results
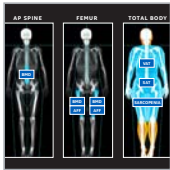
A Few of our Newest Applications

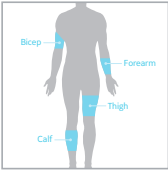## A wide breadth of applications and features
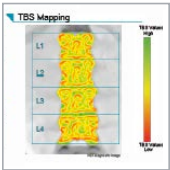
Trabecular Bone Score – Integrated TBS[1]
Provides TBS score based on assessment of trabecular region of bone, including FRAX-adjusted TBS. Includes TBS license. Complimentary 60-day TBS software trial program available for new TBS customers.
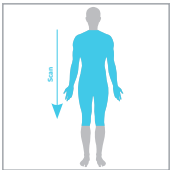
DXAVision™
Provides one unified workflow and comprehensive reporting for BMD, AFF, VAT and SAT.[2] Designed to improve operator efficiency with a scan time up to 40% faster.[3] Includes Total Body and Smaller Body (ROI) Composition, Total Body Less Head (TBLH) and Neck-to-Knee for Adults.

Neck-to-Knee for Adults[4]
Performs a faster scan by omitting head and lower legs, providing an estimate of total body composition.

Total Body Less Head (TBLH) for Adults[5]
Including the skull can mask changes occurring in other areas of the skeleton; this tool automatically performs a scan from the neck down. Can also get TBLH results for scans with the head included.

CoreScan with VAT and SAT Results
CoreScan estimates Visceral and Subcutaneous Adipose Tissue (VAT and SAT) mass, volume and area within the android region. Values can be displayed in user-defined statistical formats and trends.

Sports Athletics Package
Includes TBLH (Total Body Less Head) for Adults and Smaller Body Comp – ROI to easily scan and report on specific Regions of Interest. Facilitates study of localized changes in body composition.
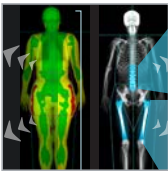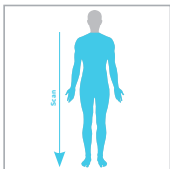
Smaller Body Composition (Regions of Interest)[5]
Monitor and report on Regions of Interest (ROI) including upper arm, lower arm, upper leg and lower leg, to study changes in body composition in these regions.
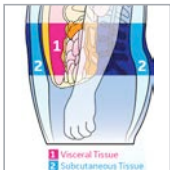
Advanced Analytics
Provides deep BMD and Body Composition insights with custom equations, metrics and ratios based on 200+ DXA bone and body composition parameters. User-defined classification thresholds, trending and reporting.

Customizable Thresholds (AFF and VAT)[6,7,8]
Enables setting of custom thresholds to search for correlations: between "beaking" and the probability of AFF, and between VAT and the probability of metabolic disorders.
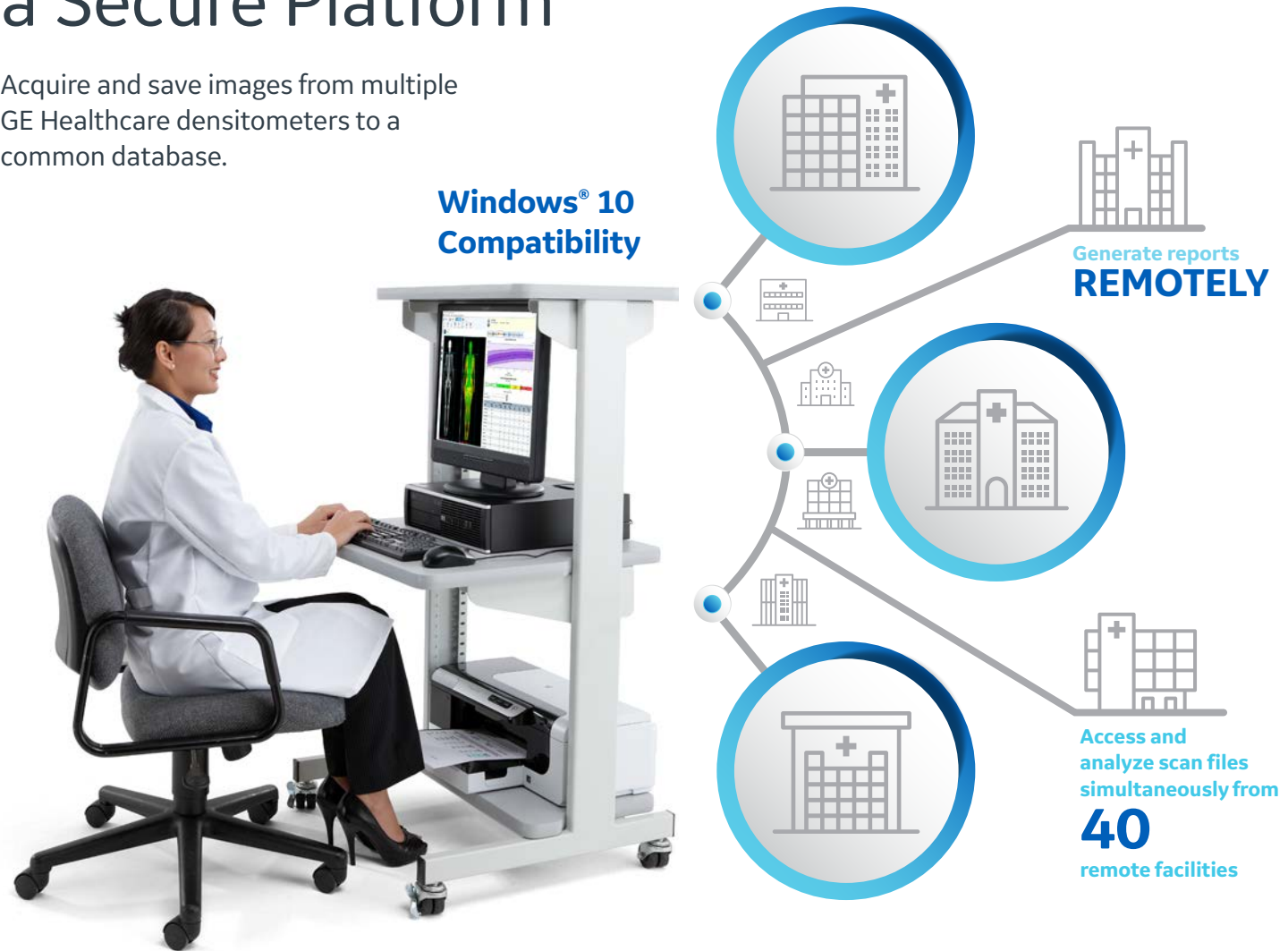
Composer Reporting
Provides default style sheets, which can be edited using an intuitive WYSIWYG interface to quickly produce customized reports and templates.

Multi-User Database with a Secure Platform

Acquire and save images from multiple GE Healthcare densitometers to a common database.

Windows® 10 Compatibility

Generate reports **REMOTELY**

Access and analyze scan files simultaneously from **40** remote facilities

Advanced security features protect your data.

Security Feature	Provided Benefit
IPv6 for DICOM and HL7	Communication protocol integrating IPSec for better security during data exchange
FIPS 140-2 Encryption	Federally compliant encryption standard that protects patient exam files using 256-bit encryption
Audit Trails	Logs information related to: • Software configuration and user access changes, destination IP addresses • Database events including authentication, patient modification/deletion • Events supported by the DICOM Audit Trail Profile
TLS for DICOM®	Provides security at the transport layer of a DICOM transaction by using encryption and node authentication. TLS is an updated, more secure, version of the SSL protocol.

Detailed assessment in just a few clicks
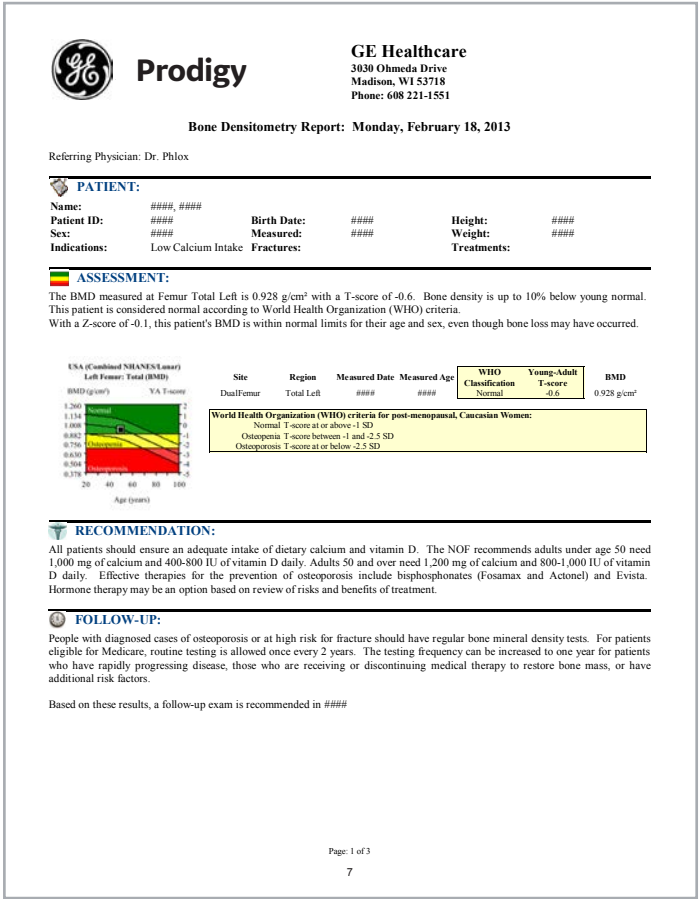
Fully customizable reports can be made as concise or as detailed as needed.

Treatment recommendations designated by the physician are automatically added and can include society guidelines.

OneScan performs spine and dual femur BMD measurements in a single protocol without repositioning.[9] Results print in a one-page report.

General purpose business reporting tools help you manage your practice. Prodigy will automatically:

- Generate referring physician letters
- Analyze populations and trends
- Export data to tab-delimited text files for use in Microsoft Excel®

Robust Technology Foundation

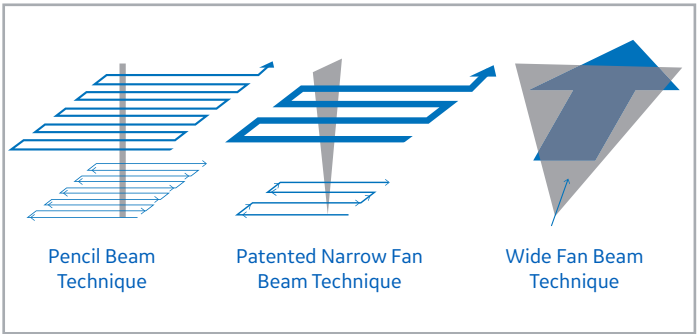## Third generation DXA technology – with over 30 years of innovations

Patented Narrow Fan Beam Scan
Combining the features of pencil beams and wide fan beams, Narrow Fan Beam technology offers a shorter scan time with reduced magnification error (inherent to wide-angle fan beam scans).

Innovative SmartScan™
Our SmartScan technology reduces scan time and X-ray dosage by identifying bone regions after each transverse sweep and estimating where to begin scanning on the subsequent sweep.

K-edge Filter
An exceptional "K-edge filter" that creates a dual energy beam and absorbs the X-rays in the middle energy range and protects the patient against unnecessary exposure.

Pencil Beam Technique   Patented Narrow Fan Beam Technique   Wide Fan Beam Technique

Multi-View Image Reconstruction (MVIR)
By performing multiple transverse sweeps across the site of interest, MVIR accurately determines bone-height above the tabletop, minimizes magnification errors and provides excellent precision and accuracy.

Low-Dose Photon Counting Technology
Dose-efficient photon counting detector technology more efficiently counts X-ray photons, lowering dosage to the patient.

Low Scattered Radiation
Narrow-fan beam technology results in low scatter radiation in comparison to wide-angle fan beam systems.[10]

Performance comparison of DXA beam types

	Pencil Beam	Narrow Fan Beam	Wide Fan Beam
Scan time	Long	Short	Short
Bone height measured	No	Yes	No
Magnification effects	No	No	Yes
Off-center distortions	No	No	Yes
Scattered radiation	Lowest	Low	High

✔ Standard   **● Optional**   **✕ Not Available**

CLINICAL APPLICATION

	Primo**	Pro	Advance
AP Spine	✔	✔	✔
Femur/Dual Femur	✔	✔	✔
Forearm/Non-seated Forearm	✔	✔	✔
Total Body BMD*	✔	✔	✔
FRAX® Fracture Risk Tool	✔	✔	✔
DVO Fracture Risk Tool[11]	✔	✔	✔
Multi-User Database (1-3)	✔	✔	✔
ScanCheck	✔	✔	✔
Practice Management	✔	✔	✔
Composer Report Tool	✔	✔	✔
OneScan	✔	✔	✔
OneVision	✔	✔	✔
Pediatric – AP Spine	●	✔	✔
Pediatric – Femur*	●	✔	✔
Pediatric – TB (Birth to 20 YO)*	●	✔	✔
Total Body Composition*	●	✔	✔
DVA (Includes: LVA, APVA, Lateral BMD)	●	●	✔
CoreScan™*	●	●	✔
Advanced Body Composition[12]*	✕	●	✔
Orthopedic Hip	✕	●	✔
Advanced Hip Assessment	✕	●	✔
Orthopedic Knee	✕	●	✔
Hand	✕	●	✔
Multi-User Database (Up to 40)	✕	●	✔
Atypical Femur Fracture	✕	●	●
Sarcopenia*	✕	●	●
Small Animal	✕	●	●
Quick View (10 second scan)	✕	✕	✔

NEW V18 APPLICATIONS

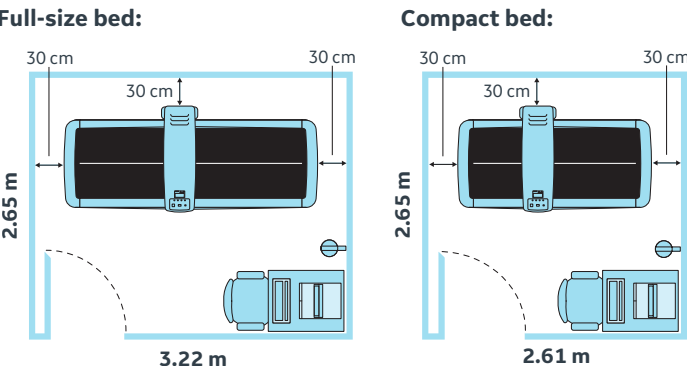|	Primo**	Pro	Advance
Integrated TBS	●	●	●
DXAVision™*	✕	●	●
Sports Athletics Package*	✕	●	●
Advanced Analytics Full*	✕	●	●
Advanced Analytics Bone*	✕	●	●
Advanced Analytics Body Comp*	✕	●	●

*Not available in Compact size
**Prodigy Primo Compact model available in Germany only

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Specifications

Scanner dimensions:

Full-size bed:

Compact bed:

67 cm
25 cm
64 cm
128 cm
109 cm
262 cm
201 cm
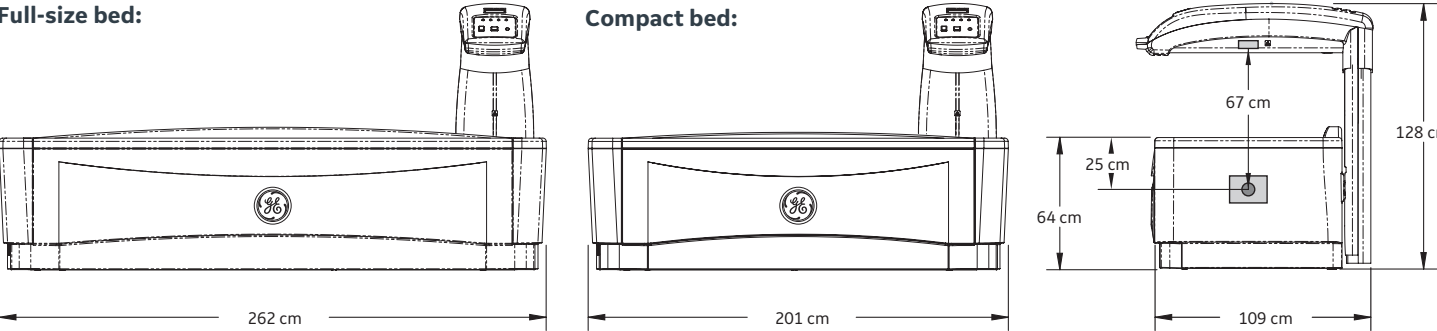
Minimum room dimensions[13]:

Full-size bed:

30 cm   30 cm
30 cm
2.65 m
3.22 m

Compact bed:

30 cm   30 cm
30 cm
2.65 m
2.61 m

Scanner table specifications:

Scanner size (full-size bed) ....262(W) x 109(D) x 128(H) cm
Scanner size (compact bed) ....201(W) x 109(D) x 128(H) cm
Scanner weight (full-size bed) .... 272 kg
Scanner weight (compact bed) .... 254 kg
Patient table top height ....64 cm
Drive system.............. stepper motor with reinforced drive belts
Active scan area (full-size bed) .... 196 cm x 60 cm
Maximum patient weight supported......................... 159 kg
Active scan area (compact bed) .... 134 cm x 60 cm
Start position indicator ....cross laser light (class II, <1 mW power)
Pad ....washable patient mat
Attenuation of patient support table ....<1.2 mm AL
Communication cable ....7.62 m serial
Scanner leakage current .... meets IEC 60601-1 safety standard

Connectivity:

- Teledensitometry[14]
- DICOM® interface
- HL7 interface
- SQL Server

Computer specifications:

Processor ....Intel® Core™ i3
Operating System............................Windows® 10 2021 LTSC
Memory... RAM 8 GB
Storage .... 1 TB NVMe SSD
Optical Drive.. DVD-RW SATA
Monitor .... 24" SVGA (min resolution 1920 x 1080 32-bit color)
Archive Drive (optional) ....1 TB USB
Document viewing................................Adobe® Reader® DC
Browser..Microsoft Edge
Connector ....RS-232 Serial Port
Printer ....Windows®-compatible

Detector specifications:

Detector .... LYSO X-ray counting detector

Environmental specifications:

Power..................200-240 VAC 50/60 Hz 10A dedicated circuit
Consumption .... idling 40VA, scanning 450VA
Distortion ....sinusodal waveform, less than 5% THD
Humidity............................... 20%-80% non-condensing
Room temperature.. 18°C-27°C
Scanner heat output .... idling 150 BTU/hr, scanning 1500 BTU/hr
Console heat output ....approx. 200 BTU/hr with 24" monitor
Ventilation .... all cooling vents must remain unblocked
Dust, fumes, debris........... install system in clean, ventilated area

11

References:

1. Consult for market availability.
2. Requires purchase of AFF application and Corescan (for VAT and SAT) application.
3. Data on file with GE Healthcare, April 2019.
4. Requires DXAVision.™
5. Requires DXAVision™ or Sports Athletics Package.
6. Requires Advanced Analytics.
7. Customizable Threshold for AFF requires AFF Application.
8. Customizable Threshold for VAT requires CoreScan application.
9. S.M. Hunt et al, "Changing Bone Densitometers in Clinical Practice: Effect on Precision Error", Presented at the American Society for Bone and Mineral Research Annual Meeting, September 23-27, 2005, Nashville, TN, USA.
10. Data on file with GE Healthcare, January 2017.
11. German speaking countries only.
12. Bone-Lean-Tissue Color Coding, Metabolic Results (ICW, ECW, TBW), Resting Metabolic Rate, Composer Style Sheets – Body Sports Medicine Segmental, Body Patient Weight Loss.
13. A small room kit with isolation transformer may be required. Please refer to local regulations.
14. Additional hardware may be required for fax capabilities.