



VXR-16 DosimetryPRO™

VXR-16 DosimetryPRO X-ray Film Digitizer for Radiation Dosimetry

Radiation Dosimetry

VIDAR Systems Corporation — the recognized leader in film digitizing technology — introduces the VIDAR VXR-16 DosimetryPRO™, the first digitizer capable of scanning and outputting 16 bits of grayscale data. This state-of-the-art x-ray film digitizer was developed by VIDAR to meet the unique needs of the oncology community for the exacting application of radiation dosimetry.

The fast-growing area of radiation therapy film dosimetry systems has revolutionized therapy dose analysis by providing radiation physicists and radiation oncologists with consistent, high-resolution, reproducible analyses of radiation treatment beams used for cancer therapies.

VXR-16 DosimetryPRO Provides Extraordinary Dose Resolution

Advanced radiation therapy treatments use the penumbral (beam edge) region, instead of just the flat part of the beam, to better treat tumor regions and to spare adjacent tissues. Use of the VIDAR VXR-16 DosimetryPRO with 65,535 shades of gray, provides significantly more information in the penumbral regions. This means that dose levels to adjacent tissues can be more accurately measured. It also means that leaf leakage in MLC (Multi-Leaf Collimator) systems are easier to measure. Greater dose resolution for complex fields used in IMRT (Intensity Modulation Radiation Therapy) and Dynamics Therapies results in greater confidence in the delivered dose. All of this translates to better outcomes for your patients.



Proven Performance and Reliability

The VXR-16 DosimetryPRO Film Digitizer delivers exceptional quality images, making it the ideal choice for radiation physicists. Incorporating the same advanced technology that is a hallmark of VIDAR's family of film digitizers, the VXR-16 DosimetryPRO features VIDAR's proprietary High Definition CCD (HD-CCD™) technology, ensuring clinically proven quality and unmatched value. The system offers ease-of-use and rugged, reliable performance, allowing clinicians to focus on the patient — rather than on the digitizing equipment.

Most important, the VXR-16 DosimetryPRO was developed by VIDAR Systems Corporation — a company with more than 10 years of experience serving the oncology market and the most trusted name in film digitizers.

HD-CCD Technology — High Quality and Value

The VXR-16 DosimetryPRO is the latest film digitizer to incorporate VIDAR's HD-CCD technology — fast becoming the standard in film digitizer technology worldwide. HD-CCD is based on the company's superior digital design and advanced image processing technology, and is unique to VIDAR's digitizers. As a result, they deliver substantially superior optical density range, resulting in superior diagnostic quality and value.

Because image quality is so important, the VXR-16 DosimetryPRO system features 65,536 shades of gray with an optical density range of 0.00-3.65, and the geometric accuracy is better than 1% or 2 pixels, whichever is greater, in both axes. Meeting the highest image quality standards in the industry makes the VXR-16 DosimetryPRO ideal for the most demanding applications, including radiation dosimetry.

Benefits of the VXR-16 DosimetryPRO Film Digitizer

- Provides superior image quality that exceeds ACR guidelines
- Optimized for dose films including GAFCHROMIC®
- Like previous VXR-8 and VXR-12 models, requires no maintenance
- Remarkable low cost of ownership
- Backed by VIDAR's superior service and technical support team
- A reliable, tested solution — VIDAR is the choice of leading dosimetry solution providers worldwide, including PTW, Precitron, RIT, Scanditronix, and Wellhofer





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Nominal Resolution	Pixels (14" x 17" film)	Spot Size (um)	DPI	Line pairs per mm
1K x 1.25 K	997 x 1211	356	71.25	1.4
2K x 2.5K*	1995 x 2422	178	142.5	2.8
4K x 5K	3990 x 4845	89	285	5.6

*ACR Standard for Teleradiology Guidelines [Revision 35 (1998)] recommends 2.5 line pairs/mm minimum

Clinical Optical Density Range	0 to 3.65
Scan Modes	16-bit output 8K x 10K mapped to 4K x 5K, 2K x 2.5K, 1K x 1.25K resolution output
Film Sizes	Width: 5" to 14" (12.7 cm to 35.6 cm) Length: 5" to 51" (12.7 cm to 129.5 cm) Thickness: 0.006" to 0.010" (0.15 mm to 0.51 mm)
Film Feeder	"Light Box" loading: head-up, normal reading, left justified
Translation Tables	Standard look-up tables: linear, log, and ability to down-load user defined LUT's
Geometric Accuracy	Better than 1% or 2 pixels, whichever is greater, in both axes
Scan Rate	125 lines/second
Hardware Interface	Conforms to the SCSI-2 specification SCSI termination and ID selection switch is accessible at the back of the unit
Power Requirements	Voltage: 95~130 Vac or 190~260 Vac Frequency: 47~63 Hz Power: < 75 Watts
Operating Environment	60° to 85° F (15° to 30° C), 20% to 85% relative humidity, non-condensing
Storage Environment	0° to 140° F (-15° to 60° C), 20% to 85% relative humidity, non-condensing
Illuminator	Broad Band UV light; >20,000 hours expected life
Detector	Solid-state, High Definition CCD (HD-CCD™)
Dimensions	Footprint: 16" W x 24" D (40.6 cm x 61 cm) Overall: 25.5" W x 24" D x 29" H (64.8 cm x 61 cm x 73.7 cm) Shipping: 26.5" W x 22.5" D x 29" H (67.3 cm x 57.2 cm x 73.7 cm)
Weight	41 lbs. (18.6 kg); Shipping weight: 60 lbs. (27.3 kg)
Certifications	FCC class A, CE MDD mark, UL 1950, IEC-950, CSA; FDA 510(k) 993599; ISO 9002; USA Mil Spec Standard 810E, Method 514.4, Procedure I

Specifications are subject to change without notice.

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460 Springpark Place
Herndon, VA USA 21070
www.filmdigitizer.com

Phone: +1.703.471.7070
Toll-Free: 1.800.471.7226
FAX: +1.703.471.7665

VIDAR
systems corporation
Medical Imaging
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