CAD PRO® *Advantage* With SmartFeeder® *XL*

X-Ray Film Digitizer for Mammography Priors, Digitized Film CAD

The VIDAR **CAD PRO *Advantage*** film digitizer was specifically designed and engineered for use in mammography CAD (computer-aided diagnosis) systems. CAD systems incorporate advanced pattern recognition and image analysis, requiring a film digitizer that meets the highest standards of image quality and reliability. By meeting these rigorous requirements, CAD PRO *Advantage* is an ideal fit for mammography facilities transitioning to digital technology. It provides the ability to quickly digitize prior studies and, when coupled with the appropriate software, uses the DICOM MG standard to identify the specific mammography view contained on each film. See VIDAR's Whitepaper "Realizing the Benefits of Full-Field Digital Mammography; *The Role of the Film Digitizer*" for more information.

In order to read a new mammography study, radiologists and mammographers may require the two most recent prior studies. The ongoing transition to digital technology in mammography often requires radiologists to view both film-based priors and new digital images for the same returning patient read. The CAD PRO *Advantage* is able to bridge the gap in the transition to digital mammography – allowing for the digitization of film-based prior studies so that radiologists can view these priors, with their specific hanging protocols, on the mammography reading workstation. Radiologists and mammographers have limited time for reading studies, and the need to move from digital workstation to light box and back is cumbersome and time-consuming – creating a less-than-ideal clinical and diagnostic environment.

Responding to Marketplace Needs With SmartFeeder® *XL*

With the introduction of the **SmartFeeder *XL***, VIDAR proves its continued commitment to customer needs by extending the digitizer's capabilities beyond analog film. With the added capabilities of the SmartFeeder *XL,* both analog and printed mammography films can be digitized, ensuring a smooth workflow and increased productivity for the mammography team.

Technology Advantage and Innovation

The CAD PRO *Advantage* offers unmatched spatial and contrast resolution, allowing radiologists to be confident that the image data received from the film digitizer is an exact representation of the original film. VIDAR's Automatic Digitizer Calibration (ADC) prompts the film digitizer to calibrate automatically before every film digitized and user intervention is not needed to maintain image quality. The CAD PRO *Advantage* includes a closed-loop quality assurance system to ensure the digitizer sub-system meets all FDA/MQSA requirements. This combination ensures excellent grayscale reproduction.

CAD PRO *Advantage* with SmartFeeder *XL*

Meeting Customer Requirements

The CAD PRO *Advantage* includes a modular 50-sheet feeder. The advanced feeder design eliminates film jams, double feeds, and film pick-up problems that occur with other digitizers. Most importantly, the CAD PRO's feeder is designed for continuous case loading, allowing the user to add cases during the digitizing process.

The CAD PRO *Advantage* can digitize a four-film study in 93 seconds, 30% faster than previous versions, further increasing productivity. Reliability is ensured with the LED light source which improves repeatability of the device as well as longevity, and lowers the total cost of ownership. The modular design of the CAD PRO allows easy access for maintenance cleaning and light source field replacement, minimizing downtime.

VIDAR systems corporation
The Image of Reliability

CADPRO® Advantage With SmartFeeder® XL

Film Size	Nominal Resolution	Pixels	Spot Size (µm)	DPI	Line pairs per mm	Digitizing Speed
24 cm x 18 cm (analog)	5K x 4K	5376 x 4032	44	570	11	17 seconds
24 cm x 30 cm (analog)	5K x 7K	5376 x 6720	44	570	11	29 seconds
10” x 8” (printed)	6K x 5K	5700 x 4560	44	570	11	20 seconds
10” x 12” (printed)	6K x 7K	5700 x 6870	44	570	11	29 seconds

Clinical Optical Density Range .05 to 4.2

DMAX: 4.8

Bit Depth 32-bit mapped to 16-bit (65,536) or 12-bit (4,096) Grayscale Output

MTBF ≥50,000 hours

Film Sizes 18 cm x 24 cm, 24 cm x 30 cm, 8” x 10” and 10” x 12”
Thickness: 0.006” to 0.008”

Auto Film Feeder Continuous Loading SmartFeeder *XL* — Modular with 50-film capacity (mixed sized, no presorting necessary)

Translation Table Linear OD

Geometric Accuracy Better than 1% or 2 pixels, whichever is greater, in both axes

Scan Rate 233 lines/second (160 films per hour, 18cm x 24cm)

Hardware Interface USB 2.0

Software Windows® scanning modules available

Power Requirements
Voltage: 85~264 vac
Frequency: 47~63 Hz
Power: ≤100 watts

Operating Environment 50º to 95º F (10º to 35º C), 20% to 85% relative humidity non-condensing

Storage Environment 0º to 140º F (-18º to 60º C), 20% to 85% relative humidity non-condensing

Illuminator LED Illuminator, > 500,000 scans

Detector Solid-state, next-generation High Definition CCD (HD-CCD®)

Dimensions
With Feeder & Exit Tray: 19” W x 21.25” D x 25.5” H (483 mm x 540 mm x 648 mm)
Without Feeder & Exit Tray: 19” W x 14.25D” x 12.75” H (483 mm x 362 mm x 324 mm)
Shipping: 24” W x 29” L x 24” H (610 mm x 737 mm x 610 mm)

Weight 47 lbs. (21 kg); shipping weight: 62 lbs (28 kg)

Specifications are subject to change without notice

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