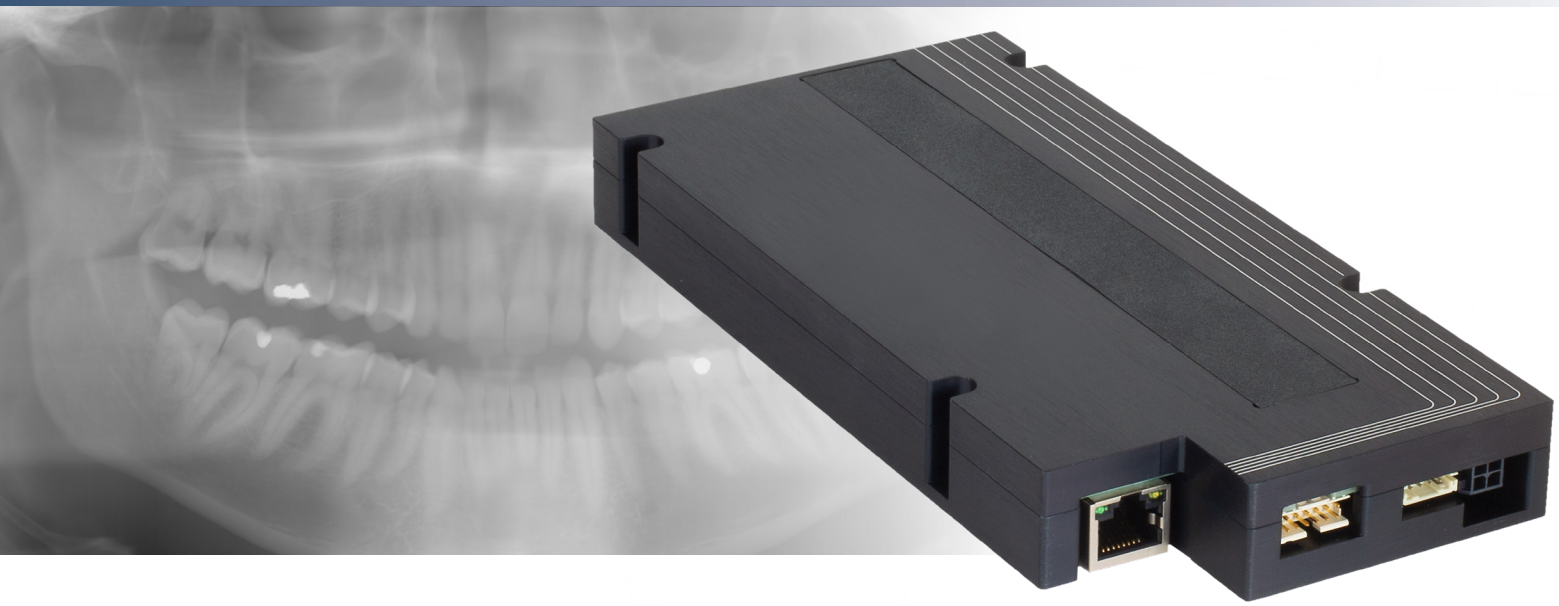
VAREX® IMAGING

Solutions in Sight®

DC-VELA

Photon Counting Detector



OVERVIEW

DC-VELA is a compact, high performance photon counting X-ray detector, designed and optimised for dental panoramic imaging.

Photon counting technology offers true digital pixels for excellent image quality even at high speeds. True digital pixels are free from read-out noise, resulting in superb low-dose performance and excellent efficiency. The corresponding benefits for the users are lower patient dose, shorter exposures and improved image quality.

DC-VELA brings leading-edge medical spectral imaging technology to dentistry. The true digital pixels are energy discriminating and produce multiple spectral images in addition to the standard X-ray image – all without extra hardware or increased dose.

FEATURES AND BENEFITS

- True Digital Pixels
- Excellent low-dose performance
- Fast imaging up to 600 fps @ 100 µm
- Dual energy with a single X-ray source
- Material separation software

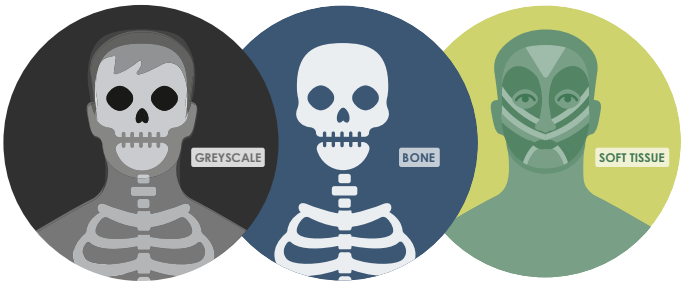
SPECTRAL IMAGING

DC-VELA's native dual energy feature produces three simultaneous spectral images - total, high and low-energy - from a single, low radiation dose exposure. This new functionality is easily implemented into existing system designs: no stacked detectors, beam filtering, multiple X-ray sources or kVp modulation is required. Dual energy information is available on any exposure without extra patient dose.

These spectral images are transformed into separated bone and soft tissue images by the integrated software. The software contains the material decomposition algorithms needed for dental, dual energy imaging in an easy-to-use format.

Conventional
X-Ray Imaging

Photon Counting Images
3 simulltaneous images



Graphics are for illustrative purposes only.

Multiple images having distinct content means more information for clinical decisions.

HIGH PERFORMANCE IN A COMPACT SHAPE

DC-VELA can reach remarkably fast imaging speeds of up to 600 frames per second for a typical panoramic exposure. This means blur-free projections for ultra sharp reconstructed images and faster acquisitions to reduce the time for the patient to stand still.

The high efficiency capture and noise-free readout can facilitate lower patient dose, higher contrast or increased imaging speed without increasing the X-ray source power.

All the features are packed in a compact enclosure comparable in size to conventional panoramic detectors.

SPECIFICATION HIGHLIGHTS

SENSOR
Technology . . . . . Photon Counting
Dual Energy

CONVERTER . . . . . .Cadmium Telluride CdTe
Pixel Pitch . . . . . 100 µm
Pixel fill-factor 100%

DIMENSIONS
Pixel Matrix . . . . . 1541 x 60
Physical size . . . . . 186 x 90 x 23 mm^3

COMMUNICATION
Data Interface 1000Base-T

PERFORMANCE
Maximum Speed
- Single energy . . . . . 600 fps
- Dual energy . . . . . 300 fps
MTF @ 2.5 lp/mm 70%
Lag . . . . . 0% (after 6 µGy)

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