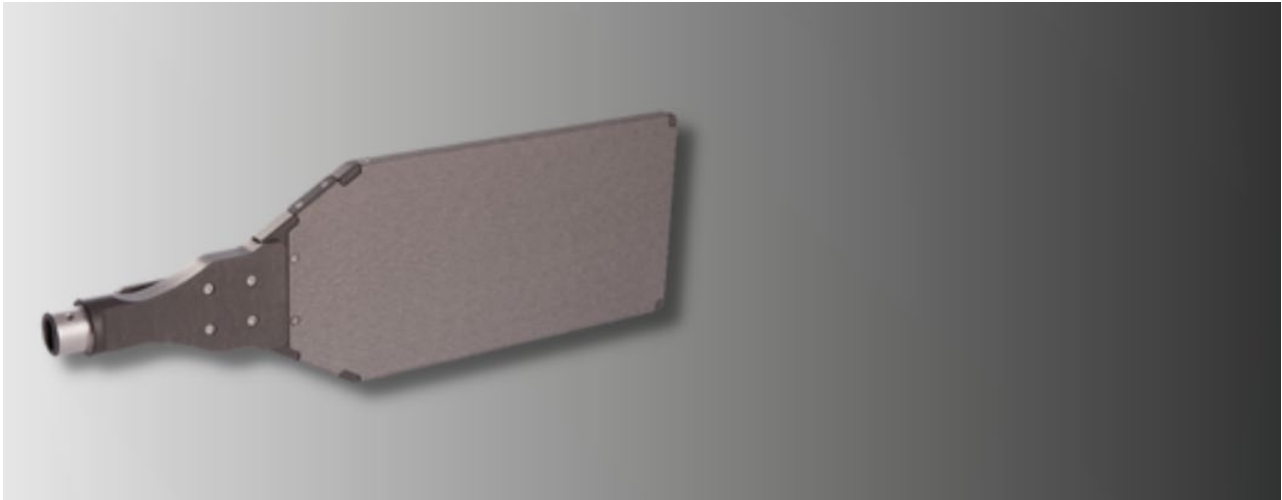


1510HS

CMOS X-ray Detector



The 1510HS is a dynamic X-ray detector designed for industrial NDT applications, with a pixel pitch of 100 μm and a Gadox scintillator. It is ideal for portable applications and weld inspection. The USB 3 interface handles data output, control and power supply. A handle can be attached for manual operation. Automatic exposure control (AED) allows the detector to be used with a portable source without synchronisation.

This detector employs a state-of-the-art CMOS sensor with 14-bit digital outputs and two gain modes offering a high dynamic range mode or a high sensitivity mode ideal for low dose, real-time imaging. The sensor is permanently bonded to a rad hard fibre optic plate (FOP) to enhance image quality and make the device more radiation tolerant. Innovative sensor design enables a frame rate of up to 66 fps and higher speeds in region of interest modes.

For developers, an SDK is available with DLLs for 64-bit Windows and Linux. These include C++ and .NET wrappers for easy integration with customised software. Library functions include dark subtraction, gain correction and defect correction. Example code is provided, including a simple Graphical User Interface. The SDK supports Camera Link, GigE and USB communications.

Key Features

Fast, low noise imaging with minimal image lag

CMOS sensor bonded to fibre optic plate (FOP)

High Sensitivity and High Dynamic Range modes

High speed, flexible region of interest

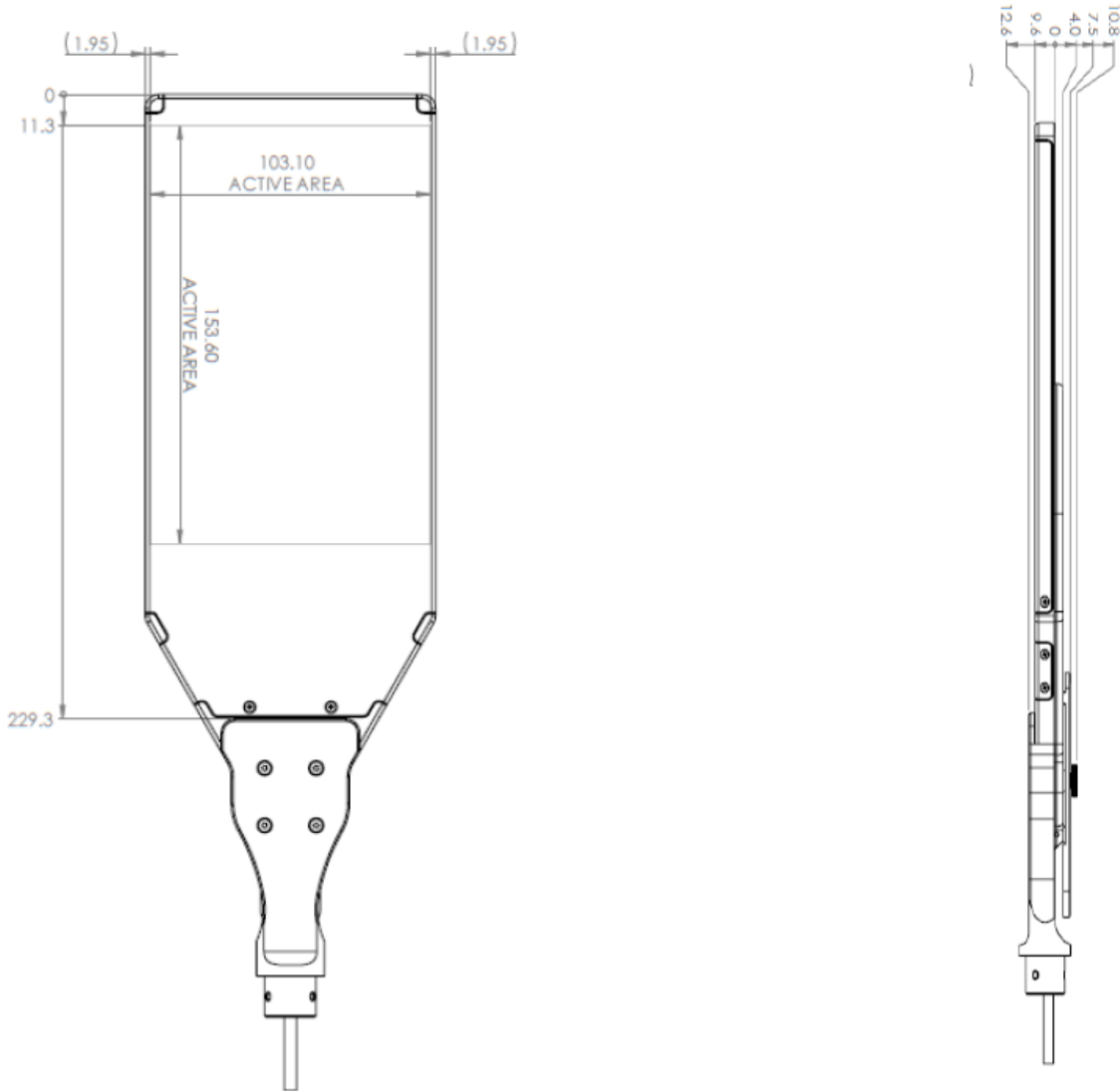
Choice of Gadox scintillators

Windows and Linux SDK available for rapid design-in

Technical Specifications

SENSOR	
Pixel Size	100 μm
Sensitive Area	103.1 \times 153.6 mm ²
Pixel Matrix	1031 \times 1536
MAX FRAME RATE	
Frame Rate Full Resolution	66 fps
IMAGE PERFORMANCE	
Dynamic Range - High Sensitivity Mode	72
Dynamic Range - High Dynamic Range Mode	76
Bit Depth	14-bit
Max Energy	120 kV
SCINTILLATOR, WINDOW & FOP OPTIONS	
Scintillator	Various Gadox Screens
X-ray Window Material	Carbon Fibre
FOP	1.8 mm Rad Hard
MECHANICAL	
Weight (3 mm FOP)	0.8 kg
Dimensions	229.3 \times 107.0 \times 9.6 mm ³
COMMUNICATIONS	
USB	High Speed USB 3.0
Trigger Mode	Continuous, SW, Auto Trigger
Software Support	64-bit Windows® and Linux
POWER	
Power Supply	5 V USB
Max Dissipation	5 W
TEMPERATURE RANGE	
Operating Range	+5 °C to +40 °C
Storage Range	-20 °C to +55 °C

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Unless otherwise specified, Spectrum Logic X-ray Detectors are components intended to be integrated into products by X-ray system manufacturers. System manufacturers are responsible for qualifying and validating their products for their intended uses and meeting all applicable regulatory requirements.

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Version 2.3

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