



F40 X-Ray Detector

High Resolution, Wide Dynamic Range

Compact Form Factor, USB 3.0

Multiple Capture Modes for Any Application



Image performance: The F40 provides a high 10.2 MP resolution via the 19.5 μm pixel with 16-bits of grey-scale data. The small pixel with patented low-noise technology provides crisp, clear images. This enables extreme detail for subject analysis in a wide range of applications from living tissue through dense materials.

Ease of use: Packed into a 72mm x 53mm active area, this light-weight agile form factor uses USB 3.0 connectivity for plug-and-play integration and high-performance imaging right where you need it.

Any application: With several trigger, shutter and high-speed modes, we enable a variety of use cases from single shot to programmed sequences. The wide dynamic range and 99% pixel linearity make the F40 suitable for a large span of exposure values from low intensity to high intensity x-ray sources.

Trusted excellence: Building upon decades of field proven designs, Fairchild Imaging can modify the scintillators per specific needs. F40 sensors are designed and manufactured in the United States of America. Contact your sales representative for more information.

Key Features

Main Benefits

10.2 MP resolution

19.5 μm pixel

25.6 lp/mm MTF

99% pixel linearity

70 dB dynamic range

Bringing visibility to fine image detail

High speed frame rate

Agile form factor

Dual gain modes

Multiple trigger modes

Customizable scintillator options

Wide exposure range up to 135 kV

Imaging excellence in a wide range of applications

USB 3.0 plug and play

Onboard image correction

Waterproof capsule

135g total weight

Ease of integration and use

Ideal for capturing images in versatile environments

Specifications

Sensor

Detector	CMOS
Total resolution	10.2 MP
Active area dimension	72 mm x 53 mm
Active area pixels	3700 x 2736 pixels
Scintillator	FOP with CsI
Frame rate	6.4 fps max raw capture
Digital output	16 bits
Data protocol	USB 3.0, Type-C
Image processing	Onboard correction files

Mechanical

USB cable	Detachable, Field Replaceable
Waterproof	IPX8
Weight	135 grams

Pixel

Pixel size	19.5 μm x 19.5 μm
Shutter types	Rolling, Global Reset
Trigger	Auto-detect Software programmable
Programmable gain	LG: 1x HG: 20x
Integration time range	25 ms to 2.5 s
Pixel linearity	99% in HG
Visible resolution	25.6 lp/mm

Operating

Operating Systems	Windows, Mac, Linux
Power requirement	3 amps
Operating temp	-5°C to 55°C



(F40, shown in actual size.)



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