

Better Images. Better Decisions. Better Process Control.

The **Xiris XIR-1800** is a High Dynamic Range (HDR) thermal camera designed for use in critical metal joining and DED Additive Manufacturing applications where thermal properties of key features need to be carefully controlled

Combining a 120+ dB HDR capability with sensitivity to the Short-Wave InfraRed (SWIR) spectrum, the XIR-1800 Thermal Camera provides enhanced imaging of metal joining processes beyond what is visible using standard thermal or visible-light cameras.



Benefits

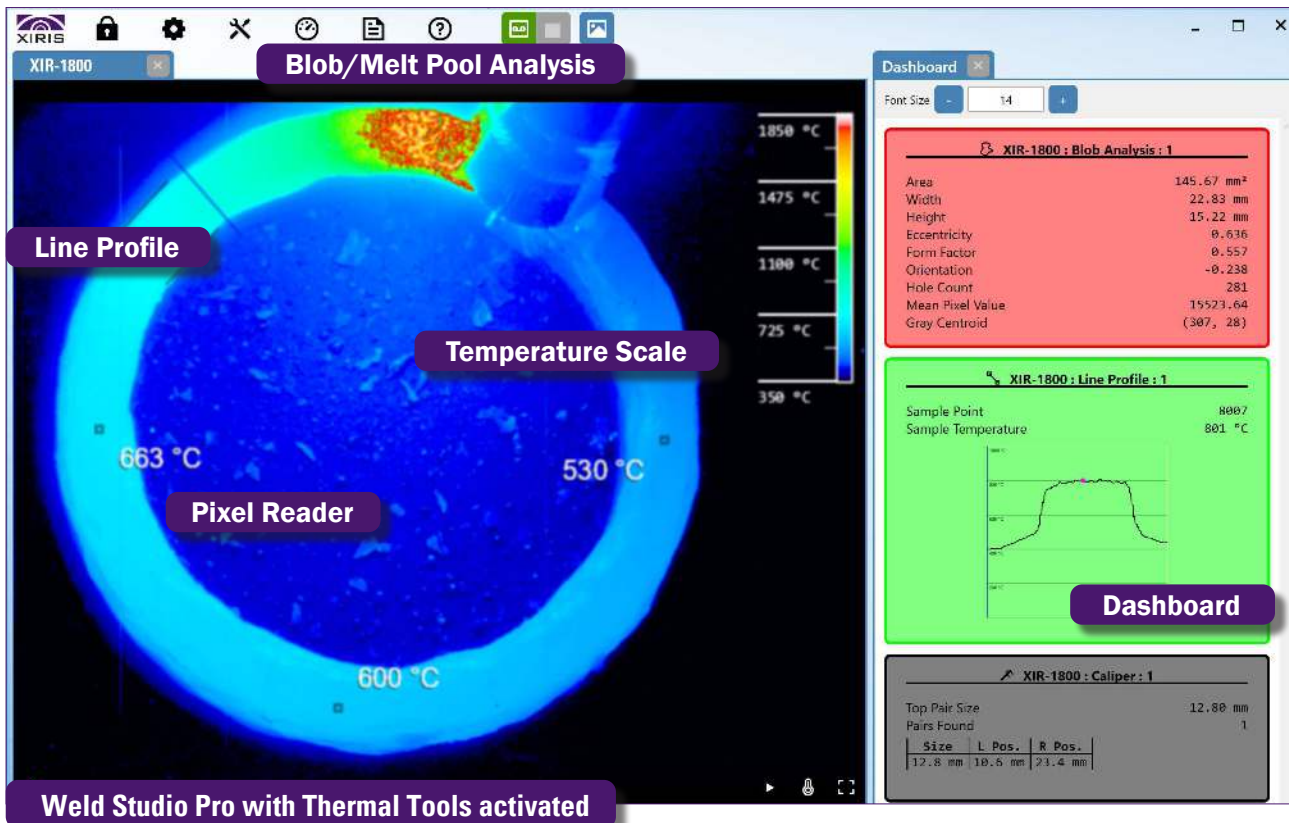
- Provides a thermal temperature map to monitor key weld zones such as the melt pool, deposited material and the heat affected zone.
- Provides ability to image through smoke and fumes.
- The Weld Studio Pro software provides powerful thermal analysis tools, including:

Blob Analysis: this machine vision tool will automatically segment and measure the melt pool using user defined thresholds.

Line Profile: delivers precise temperature data along a user-defined line on the image. This data is also graphed over time on the Dashboard

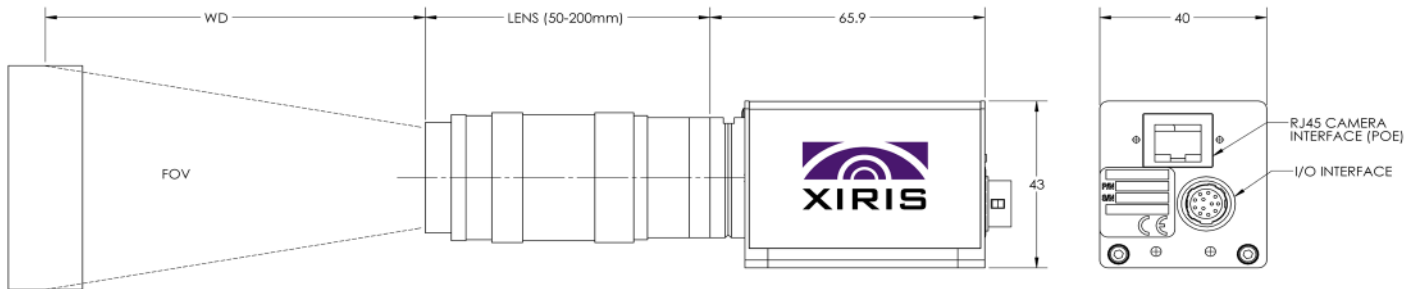
Pixel Reader: provides precise temperature measurements on any point of the image.

Dashboard: provides real-time data, including graphs, on the selected thermal tools.



Xiris® XIR-1800 Thermal Camera

Camera Body Outline



Standard Lens Configurations

WD (mm)	F=35mm	F=50mm	F=75mm	F=100 mm	F=150mm
	FOV (mm)	FOV (mm)	FOV (mm)	FOV (mm)	FOV (mm)
100	32 x 26	11 x 8	N/A	N/A	N/A
200	59 x 48	30 x 24	19.5 x 16	17 x 14	12 x 9
300	88 x 70	48 x 38	33 x 26	28 x 23	19 x 16
400	116 x 93	67 x 59	46 x 37	40 x 32	27 x 21
500	143 x 114	85 x 68	59 x 47	51 x 41	34 x 28

Other lens options available

Thermal Camera Specifications

Camera Dimensions	40(W) x 43(H) x 66(L) mm without lens	Image Sensor	1" SWIR HDR InGaAs +120 dB
Camera Weight	140 g without Lens	Wavelength Sensitivity	900 - 1700 nm
Environmental Rating	IP54 (without housing)	Resolution	640H x 512V Pixels (15 µm square pixels)
Shutter Range	10 µs – 5000 µs Exposure	Standard Temperature Calibration	350 - 1500°C
Environmental Temperature	Ambient up to 35°C Up to 80°C with cooling plate	Extended Temperature Calibration (Optional)	400 - 1850°C Higher possible on request
Camera Connectors	Locking RJ 45 Ethernet (Cat 6+) Hirose HR10A for I/O and Trigger	Frame Rate	Up to 180 fps at full resolution; Up to 1000 fps at reduced resolution with AOI
Lens Mounting	C/CS Mount	Thermal Calibrated Mode	100+ fps, hardware dependent
Software	Xiris WeldStudio™ 3 Pro WeldSDK 2.0.6 or later	Image Data Format	14 Bit Imaging 16 Bit Imaging with Thermal Calibration
Humidity	Operating: 20 to 80% (non-condensing)	Camera Controls	Exposure Time, Frame Rate, AOI, Image format, Trigger and I/O,

Other accessories such as optics, cables, controllers, power adapters, etc., can be provided upon request.



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