

Better Images. Better Decisions. Better Process Control.

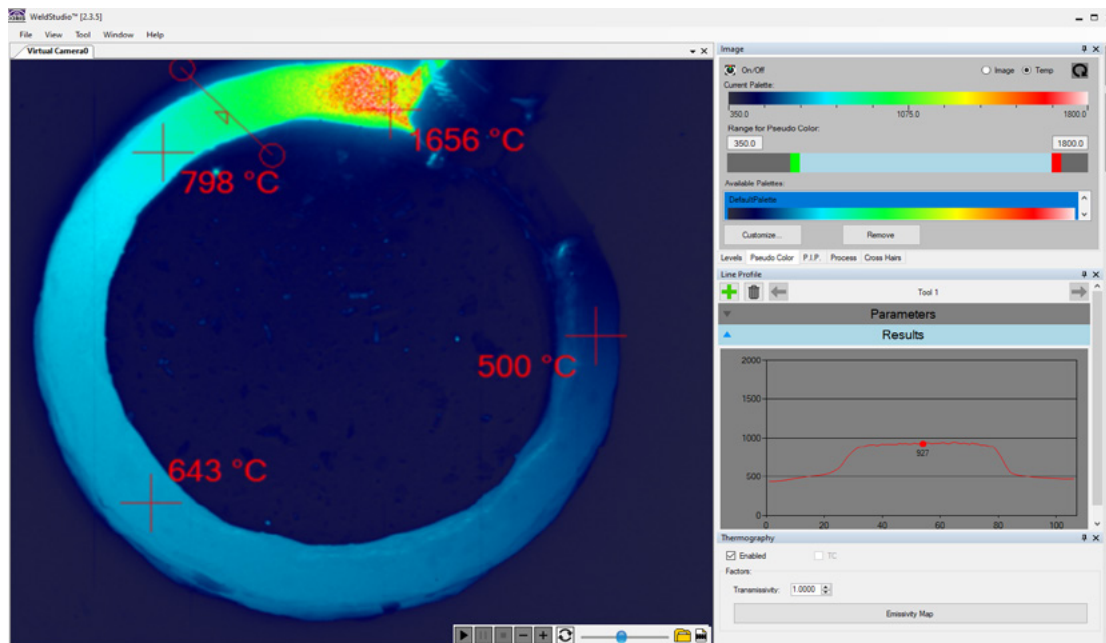
The **Xiris XIR-1800** is a High Dynamic Range (HDR) thermal camera designed for use in critical metal joining and Additive Manufacturing applications where thermal properties of key features need to be carefully monitored in real-time.

Combining a spectacular 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.



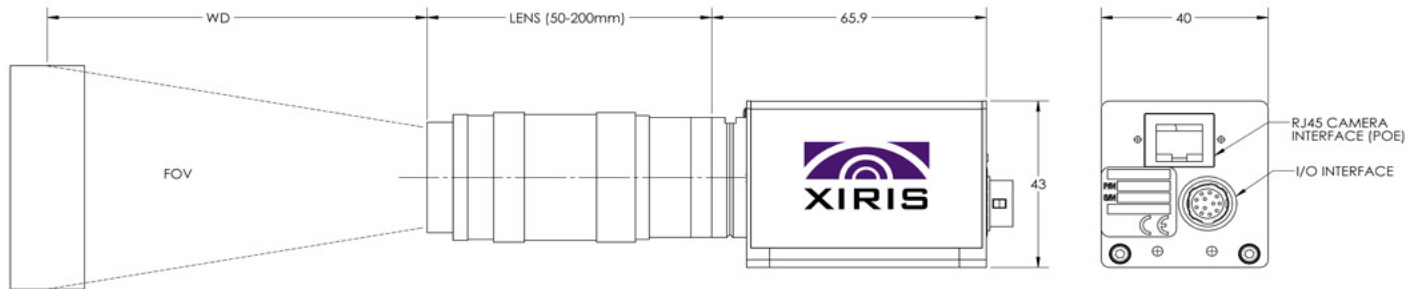
Benefits

- Enables, high contrast clear images of the welding arc or Laser process, melt pool and surrounding material.
- Provides a thermal temperature map to monitor key weld zones such as the melt pool, deposited material and surrounding base material for in-process control and quality assurance. From ~ 250 to over 1800°C.
- Provides thermal calibrated temperature measurements in the 350-1500 °C range, in Thermal Mode.
- Provides ability to image through smoke or fumes to provide an exceptionally clear, real-time views of any metal additive or welding process.
- Provides ability to capture high speed pulsing processes in real-time using Global Shutter and high frame rates, with or without triggering.
- Integrates with Xiris WeldStudio™ 3 Pro, allowing multiple Xiris weld cameras (thermal or visual) and a Xiris weld microphone to be integrated together for data synchronization, capture and analysis in one powerful software platform.
- Utilizes C-Mount lenses and can be configured with numerous optics to suit any application.



Xiris® XIR-1800 Thermal Camera

Camera Body Outline



Standard Lens Configurations

| WD | F=35mm | F=50mm | F=75mm | F=100 mm (2 x 50) | F=150mm (2 x 75) |
|-----|-----------|---------|---------|----------------------|---------------------|
| | FOV | FOV | FOV | FOV | FOV |
| 100 | 34 x 27 | 16 x 13 | N/A | 10 x 8 | N/A |
| 200 | 63 x 51 | 36 x 28 | 19 x 16 | 21 x 17 | 12 x 9 |
| 300 | 90 x 72 | 55 x 44 | 33 x 26 | 36 x 32 | 19 x 16 |
| 400 | 118 x 93 | 75 x 60 | 46 x 37 | 43 x 35 | 27 x 21 |
| 500 | 147 x 118 | 95 x 76 | 59 x 47 | 55 x 44 | 34 x 44 |

Thermal Camera Specifications

Other lens options available

| | | | |
|---------------------------|---|---------------------------|--|
| 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 | Temperature Sensing Range | ~250 - 1800+ °C |
| Environmental Temperature | Ambient up to 35°C Up to 80°C with cooling plate | Thermally Calibrated | 350 - 1500°C |
| 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.

Please contact your Xiris sales Representative for further information.



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