

Better Images. Better Decisions. Better Process Control.

The **Xiris XVC-1000/1100 Weld Camera** combines a spectacular 140+dB High Dynamic Range capability with a full suite of welding-specific imaging software tools, and a host of unique features to provide excellent image quality of a variety of welding and laser processes. The versatile modular design is ideal for R&D, Education and Metal Additive Manufacturing.

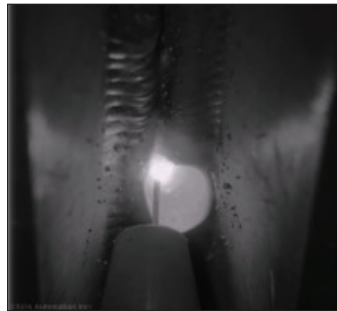
The **XVC-1000/1100** comes packed with functionality designed to maximize image quality and reliability, including image triggering, general purpose I/O, image windowing capability, and a weld arc photodetector.



GTAW/TIG



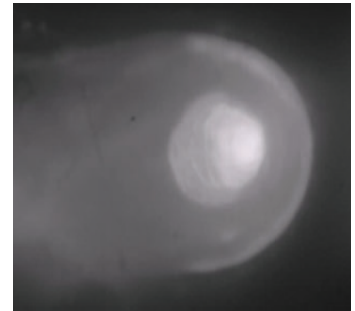
GMAW/MIG



Plasma



Laser



High Dynamic Range (HDR)

With a dynamic range image 140+ dB, the XVC-1000/1100 can acquire images with a greater range of tonal detail than any standard camera. This is particularly important for welding processes where there is a very bright light source in the image that needs to be seen in great detail as well as the darker surrounding background features. The XVC-1000 is the monochrome version and the XVC-1100 is the color version.

Color When You Need It

The XVC-1100 can acquire HDR color images useful for various welding processes, such as GTAW, where color provides extra information such as: the boundary of the Heat Affected Zone, oxidation of the melt pool and tip, and shielding gas coverage. The very bright weld arc can be seen in color without saturation as well as its darker surrounding background features.

Versatile Welding Functionality

Every feature of the XVC-1000/1100 is designed to maximize usability for the welding industry, with a compact body size, industry standard C/CS mount lens holder, multiple mounting points, status LED and UV/IR filter system.

Field Programmable Gate Array (FPGA)

The on board FPGA controls all camera functionality, including on-camera image processing, Area of Interest (AOI) extraction, user memory channels and more. It can also be updated with new firmware in the field.

Opto-Isolated GPIO

Opto-isolated GPIO protects the camera from noise generated by external devices typically found in a welding environment, such as welding power supplies, motors, etc., as well as power issues caused by malfunctioning devices attached to the camera.

Triggering

Hardware and software triggering to synchronize image acquisition to an external device such as a welding power supply, light source, or to other cameras. Supported modes include free running, external, and single shot triggering, with an optional trigger delay.

Added Software Capability

Using WeldStudio Pro enables numerous advanced Machine Vision tools to measure features, including melt pool measurements and anomaly detection. Several interfaces like OPC-UA, Modbus/TCP are also available for integration with automation controllers and/or process monitoring system.

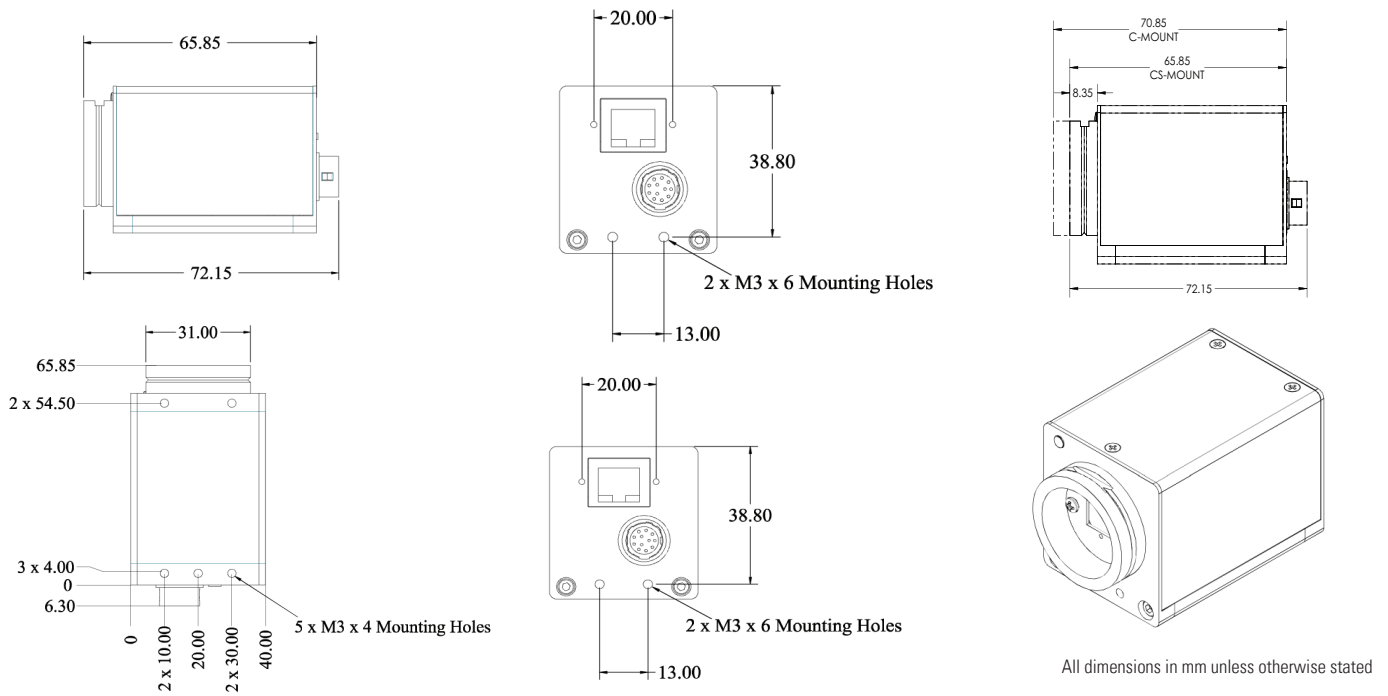
Accessories

Customize your system to meet your needs. All the accessories you need to get up and running, such as a fanless PC, display monitors, cables, power adapters, external cooling plates, industrial housings and optics can be provided on a custom basis from Xiris.

Xiris® XVC-1000/1100 Weld Camera

XVC-1000/1100 Specifications

Image Sensor	2/3" Mono HDR CMOS (1000); 2/3" Color HDR CMOS (1100)	Shutter Range	10 μ s - 100ms Exposure
Speed/Resolution	Up to 55 FPS at 1280 (H) x 1024 (V) pixels	Imaging Controls	Shutter Modes, Exposure time, AOI, Tonemapping, Colour enhancements, Frame synchronization via Trigger I/O
Pixel Size	6.8 μ m square (8.7 mm x 7 mm (0.34 x 0.26") active area)	Dimensions	40 x 43 x 65 mm (1.6 x 1.7 x 2.6") without optics
Shutter	Global and Rolling	Weight	135 g (without optics)
Dynamic Range	140+ dB	Lens Mount	CS mount (C mount with 5mm adapter)
Bit Depth	8/12 bit	Power Consumption	Power over Ethernet (PoE), or 12 V nominal via GPIO interface, maximum 6 W
Image Data	Mono 8/12 or Bayer 8/12	Connectors	Locking RJ-45, Hirose HR10A-10R-12P
Max. Cable Length	100 m	Max. # of Cameras	Hardware dependent (Typically up to 4)
Synchronization	Via external Trigger	Video Recording	Recording & Playback utility via Software
Trigger Options	<ul style="list-style-type: none"> Free-running External/recording trigger Single shot synchronized frame capture with Trigger Kit 	Camera Control Software	WeldStudio™ / WeldStudio™ Pro Xiris SeamMonitor™ Xiris WeldSDK
Trigger and GP Inputs	2x high-speed trigger + 2 GP Inputs, opto-isolated 10-24 VDC	Temperature	Operating: 0 to 45 °C, Storage: -20 to 60 °C
GP Outputs/ Strobe	2 opto-isolated, open-collector	Humidity	Operating: 20 to 80% Storage: 20 to 95% (no condensation)
Communications	Gigabit Ethernet, opto-insulated UART interface	Compliance	CE, FCC-B, RoHS
Photodiode	Detects presence of weld arc	Operating System	Windows 10 and later



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