

Better Images. Better Decisions. Better Process Control.

The Xiris **XVC-1000/1100 Weld Camera** combines a spectacular 140+dB High Dynamic Range capability with power over Ethernet, a full suite of welding-specific imaging software tools, and a host of unique features to provide unprecedented image quality of a variety of welding and laser processes.

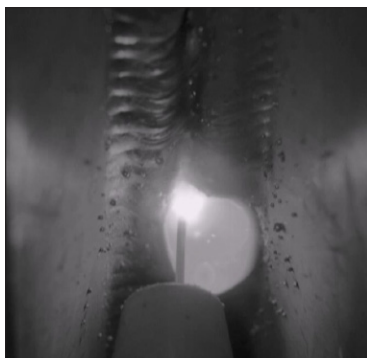
The **XVC-1000/1100** comes packed with functionality designed to maximize image quality and reliability, including image triggering, general purpose I/O, image windowing capability, and a weld arc photodetector.



GTAW/TIG



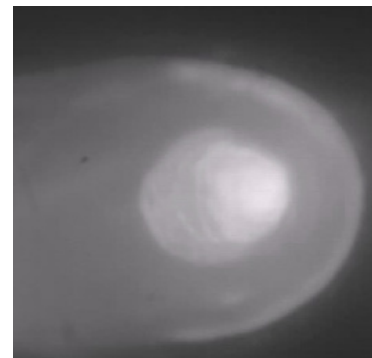
GMAW/MIG



Plasma



Laser



High Dynamic Range

With a dynamic range image in excess of 140 dB, the XVC-1000/1100 is able to acquire images with a greater range of tonal detail than any standard camera. This is particularly important for various industrial processes such as welding where there is a very bright light source in the image that needs to be seen in great detail without saturation as well as darker surrounding background features that also need to be present in the image and seen by the user. The XVC-1000 is the monochrome version; the XVC-1100 is the color version.

Color When You Need It

With high dynamic range (HDR) color imaging, the XVC-1100 is able to acquire color images when required for various welding processes, such as GTAW, where color provides extra information to the user such as: the boundary of the Heat Affected Zone, oxidation of the melt pool and tip, and shielding gas presence. The very bright weld arc can be seen in color without saturation as well as its darker surrounding background features as a result of the HDR imaging.

Welding Specific Functionality

Every feature of the XVC-1000/1100 is designed to maximize usability for the welding industry, including the high dynamic range sensor, the small compact body size, the industry standard C/CS mount lens holder, multiple mounting points, status LED and removable glass with 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.

All Digital Solution

The image coming from the camera is an 8 or 12 bit digital signal, providing lots of extra information that can be processed to obtain the best possible image for display. Also being a digital only signal, there are no additional image losses going from analog to digital, providing the best quality image possible.

Software

The Xiris WeldStudio™ Viewer is a full demo software utility compatible with Microsoft Windows 7/8.1. It includes the Xiris camera driver and controls, graphic tools to provide the user with crosshairs and targets, and image processing functions to provide additional image enhancements for the user. Also included is a full video recording and playback utility.

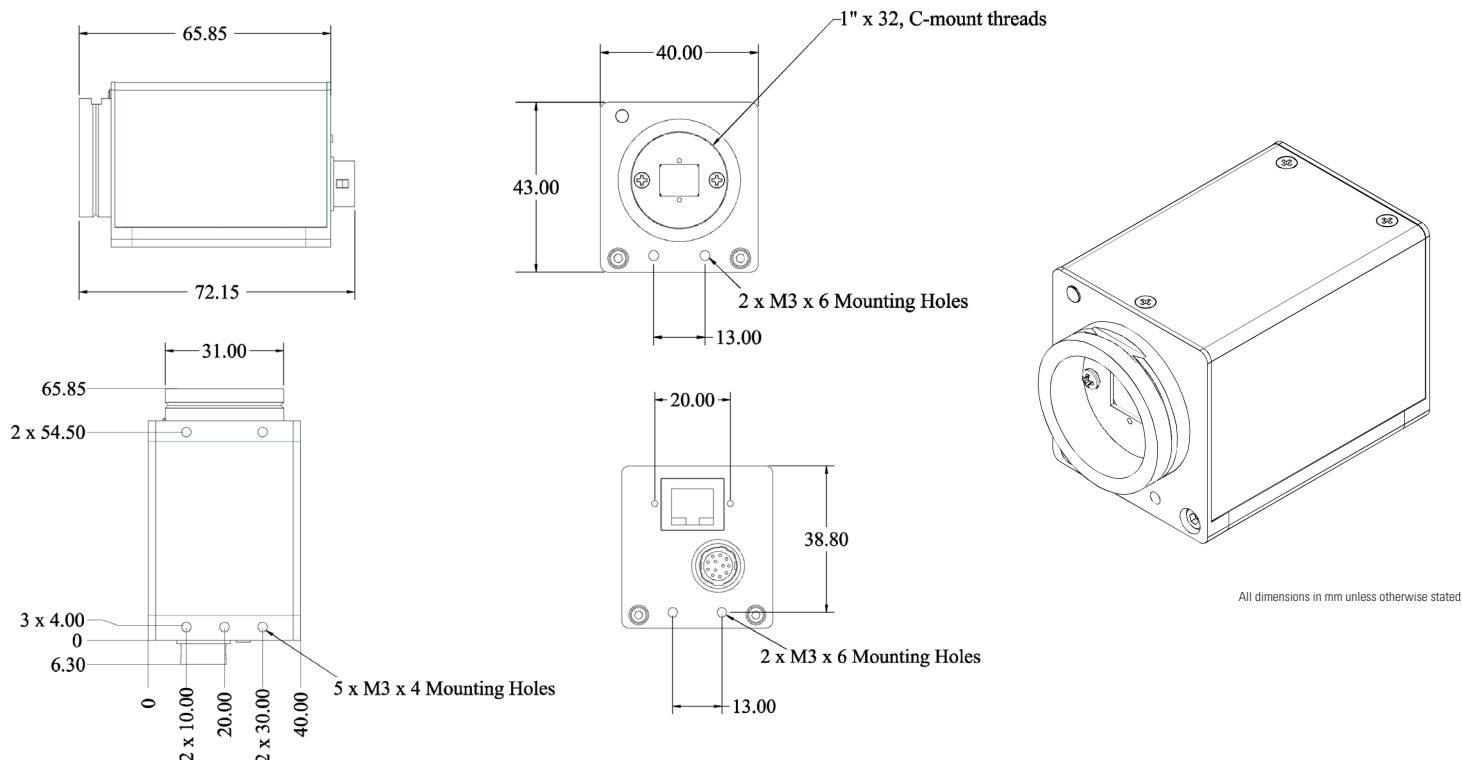
Accessories

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" HDR CMOS (Model 1000) 2/3" HDR Color CMOS (Model 1100)		
Speed/Resolution	Up to 55 FPS at 1280 (H) x 1024 (V) pixels	Shutter Range	1 µs - 53s Exposure
Pixel Size	6.8 µm square (8.7 mm x 7 mm (0.34 x 0.28") (active area)	Imaging Controls	ROI, exposure time, shutter mode, trigger delay, image format
Filter	UV + IR Cut Filter	Dimensions	40 x 43 x 65 mm (1.6 x 1.7 x 2.6") without optics
Shutter	Global or Rolling	Weight	135 g (without optics)
Dynamic Range	140+ dB	Lens Mount	CS mount (C mount with adapter)
Bit Depth	12 bits	Power Consumption	Power over Ethernet (PoE), or 12 V nominal (10-16 V) via GPIO interface, maximum 6 W
Image Data	Mono 8/12 (Model 1000), Bayer 8/12 (Model 1100)	Connectors	Locking RJ-45, Hirose HR10A-10R-12P (73)
Max. Cable Length	100 m	Max. # of Cameras	Hardware dependent, Typically up to 4
Trigger Options	<ul style="list-style-type: none"> Free-running External/delayed trigger Single shot 	Video Recording	Recording & Playback utility integrated
Synchronization	Via external trigger or software trigger	Camera Control	Via Xiris WeldStudio™ (standard), or Xiris WeldStudio™ SDK (optional), SeamMonitor™
Trigger Inputs	2 high-speed opto-isolated, 5-24 VDC	Temperature	Operating: 0 ° to 45 ° C, Storage: -20 ° to 60 ° C
Strobe Outputs	1 opto-isolated open-collector, max 40 VDC	Humidity	Operating: 20 to 80% Storage: 20 to 95% (no condensation)
GP Inputs	2 opto-isolated 5-24 VDC	Compliance	CE, FCC-B, RoHS
GP Outputs	2 opto-isolated open-collector, max 40 VDC	Operating System	Windows 7/8/10 (32 or 64 bit)
Communications	Gigabit Ethernet, opto-insolated UART interface	Photodiode	Detects presence of weld arc



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