

Better Images. Better Decisions. Better Process Control.

The Xiris **XVC-700/710** Weld Camera is a compact, +140 dB High Dynamic Range camera specifically designed for integration with welding automation equipment where a lightweight, slimline camera is preferred.

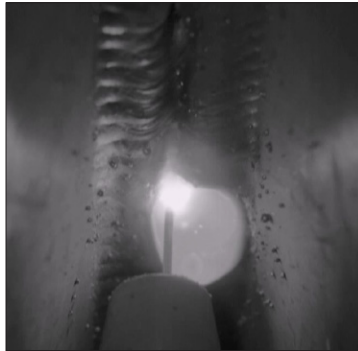
The **XVC-700/710** Weld Camera uses the latest advanced electronics design and flexible PCB technologies to provide a fully digital image for a variety of welding processes.



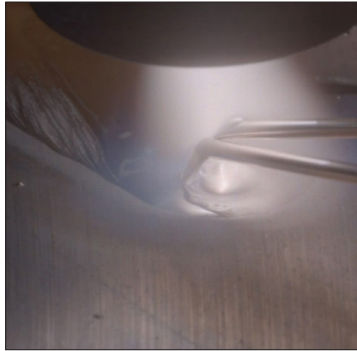
GTAW/TIG



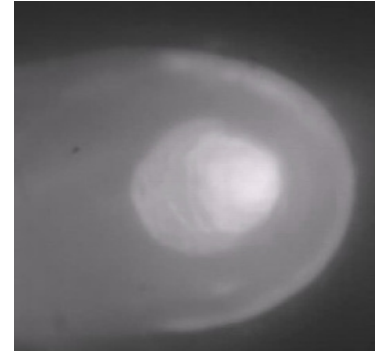
GMAW/MIG



Plasma



Laser



Welding Specific Versatility

Every feature of the XVC-700 is designed to maximize usability and versatility for the welding industry, including a lightweight, compact body size, angled head variants, onboard FPGA and multiple compact optics configurations using industry standard S-Mount lenses.

Software

The XVC-700 camera is fully compatible with all Xiris WeldStudio™ software suites that include numerous powerful camera and image processing tools to fully optimize, analyze, record and playback welding processes. Using the WeldStudio™ SDK these software components can be customized and fully integrated into your welding automation or Additive Manufacturing system.

Angled Head

Due to the flexible design of the electronics, the camera can be built so that the optics can be angled relative to the camera body, allowing the camera to fit in tight locations. This is very useful to help minimize welding head size in automated welding equipment. Optical Design Services can be provided upon request.

High Dynamic Range with Color

With a full 1280x 1024 pixel resolution and High Dynamic Range (HDR) in excess of 140 dB, the XVC-700/710 is able to acquire detailed images with a greater range of tonal detail than any standard camera. Operators can see the bright weld arc without saturation as well as darker surrounding background features like the weld seam, melt pool, torch tip and shielding gas. The XVC-700 is Monochrome best suited for machine vision, while the XVC-710 is the color version that is often very useful in welding processes like GTAW, Plasma or GMAW.

GigE Interface with POE

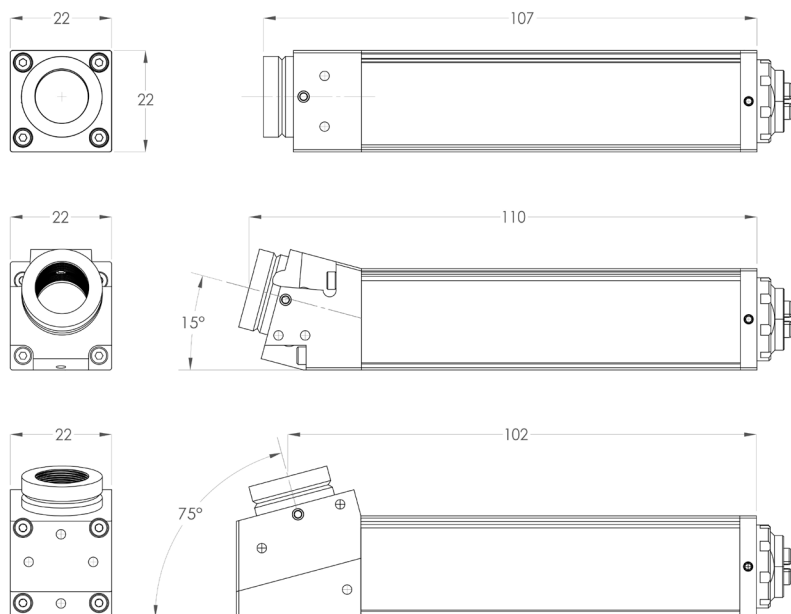
A single, robust M12 Ethernet connection and cable with Power Over Ethernet helps simplify installations, minimizing the need for specialized or additional cables. The fully digital GigE protocol enables robust, high-bandwidth image transmission up to 100 meters from the point of welding, without any image quality degradation.

Accessories

All the accessories you need, such as Optics, Controllers, HMIs, cables, power adapters, external cooling plates and industrial housings, can be provided on a custom basis.

Xiris® XVC-700/710 Weld Camera

Camera Body Outline



FOV - Lens Options

| WD (mm) | F=16 FOV (mm) | F=25 FOV (mm) | F=35 FOV (mm) |
|---------|---------------|---------------|---------------|
| 70 | 39 x 29 | 18 x 15 | 15 x 12 |
| 100 | 55 x 43 | 30 x 23 | 22 x 18 |
| 200 | 111 x 88 | 64 x 51 | 47 x 38 |
| 300 | 165 x 128 | 98 x 79 | 72 x 57 |
| 500 | 280 x 220 | 167 x 133 | 121 x 97 |

XVC-700/710 Specifications

| | | | |
|------------------------|--------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------|
| Dimensions (mm) | 22 W x 22 H x 107 L (0° without optics) | Software | Xiris WeldStudio™ WeldStudio™ SDK SeamMonitor™ |
| Weight | 89 g (without optics) | Operating System | Microsoft Windows 7/ 10 (64Bit) |
| Lens Mount | Lockable S - Mount or C-Mount with adaptor | Camera Controls | Shutter Mode, Exposure Time, Frame Rate, Picture in Picture |
| Image Sensor | 2/3" HDR CMOS (Model 700) 2/3" HDR Color CMOS (Model 710) | Image Data | Mono 8/12 (Model 700) Bayer 8/12 (Model 710) |
| Pixel Size | 6.8 µm square (8.7 mm x 7 mm active area) | Shutter Range | 1 µs – 53s Exposure |
| Filter | Internal UV + IR Cut Filter | Shutter | Global or Rolling |
| Dynamic Range | 140+ dB | Camera Connectors | M12 Ethernet (X-Coded) |
| Temperature | Operating: 0° to 35° C (No Cooling) Operating: 0° to 80° C (With Cooling Plate) Storage: -20° to 60° C | Image Data Format | Gigabit Ethernet (8 /12 Bit-depth) |
| Humidity | Operating: 20 to 80% Storage: 20 to 95% (no condensation) | Power Consumption | Maximum 6 W Power Over Ethernet (POE) |
| Head Inclination Angle | 0° (Straight) ,15° , 75° Other available upon request. | Compliance | CE, FCC-B, RoHS |

Specifications are subject to change without notice.

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