



# M610

Dual Camera Image Processor



Nuclear  
Power



Homeland  
Security  
& Defense



Industrial and  
Manufacturing



Healthcare



Labs and  
Education

## OVERVIEW

The IST-Quadtek Calico II system from Mirion introduces new features and capabilities designed to enhance the ability to monitor and control our customers processes. The M610 provides precise temperature measurement across the entire screen, by employing innovative lens vignetting correction which is designed to eliminate erroneous temperature measurements at the edge of the image.

The systems flexibility allows one or two video cameras, each with a patented pyrometer, to be displayed through one M610 processor. The M610 sends the collective output to one or two VGA monitors giving the operators the ability to observe process conditions from two locations while measuring up to 32 'free form' temperature measurement zones including virtually any object or region in each field of view.

## BENEFITS

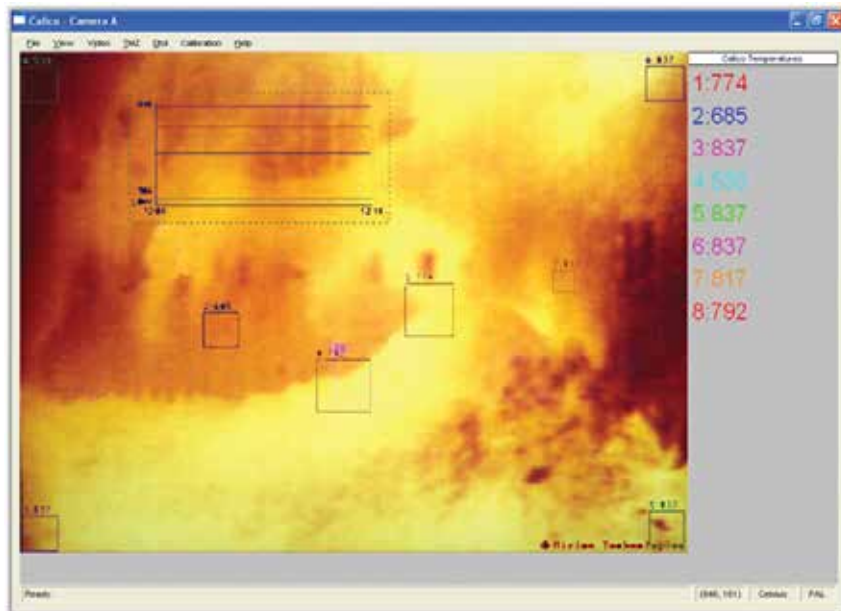
- Optimize lower furnace operation of recovery boiler
- Maintain proper bed profile in recovery boiler
- Reduced hardware costs
- Reduced space and power requirements
- Improved dependability

## KEY FEATURES

- 32 'free form' temperature measurement zones which are moveable and sizeable and can be colorized for grouping/clarity
- Independent emissivity setting for each TMZ
- One or two cameras into one processor
- Continuous clear, real-time video
- Dynamic and easy user interface
- Charting and graphing capability
- Colorization and contrast expansion
- 16 channels 4-20mA output
- Multiple temperature trending capabilities
- Snapshot feature can store images on an automatic or manual basis
- 10 x digital zoom with pan capability
- Connectivity with plant control system
- Large font support for 'viewing at a distance'

## SPECIFICATIONS AND PERFORMANCE

<b>Power</b>	100 ~ 240 Vac; 50/60Hz
<b>Power Consumption</b>	300W max
<b>Dimensions</b>	176mm (H) x 432mm (W) x 517mm (D) (6.93" x 17" x 20") (Excludes mounting lugs/handles)
<b>Temperature Range</b>	0° ~ 40°C (32° ~ 104°F)
<b>Relative Humidity</b>	80% up to 31°C (88°F) decreasing linearly to 50% at 40°C (122°F)
<b>Video Signal Input</b>	2 x composite video with multiplexed pyrometer data, compatible with Quadtek M300 Series camera
<b>Video Outputs</b>	DVI with VGA adapters supplied
<b>Analog Outputs</b>	4 ~ 20mA; 16 programmable channels
<b>Camera Requirements</b>	M330 and M340 Series IST-Quadtek Spyrometer
<b>Ancillary Hardware</b>	1 mouse; 1 standard keyboard; 1 DVD-RW drive
<b>Additional Interfaces</b>	1 serial port; 1 parallel port; 2 network; 4 USB on rear; 2 USB on the front (protected); audio out
<b>Weight</b>	17.3Kg (38lbs)



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**The management system governing the manufacture of this product is ISO 9001:2008 certified.**



**MIRION**  
TECHNOLOGIES

High Temperature. **Safety.**

# M560

High Temperature Solid State IR Camera



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## OVERVIEW

The IST-Quadtek M560 High Temperature Camera from Mirion is a remote observation system which utilizes a solid state IR device to monitor the smeltbed in recovery boilers, monitor slag build-up in utility power boilers and monitor product distribution and control, as well as burn efficiency in industrial process furnaces. The wavelength selections in conjunction with our special filtering result in:

- Improved image quality
- Ability to view further in typical applications
- Enhanced sensitivity of the overall product in-situ

## KEY FEATURES

- Solid state IR sensor guarantees no picture degradation or image burn
- Lens tube lengths from 24" to 72" supported
- Medium, wide and superwide lens options
- Small front opening and improved seal reduces air usage and keeps lens cleaner
- Sapphire window more durable and scratch resistant than other than materials
- Minimal preventative maintenance
- Image performance enhancements in typical applications

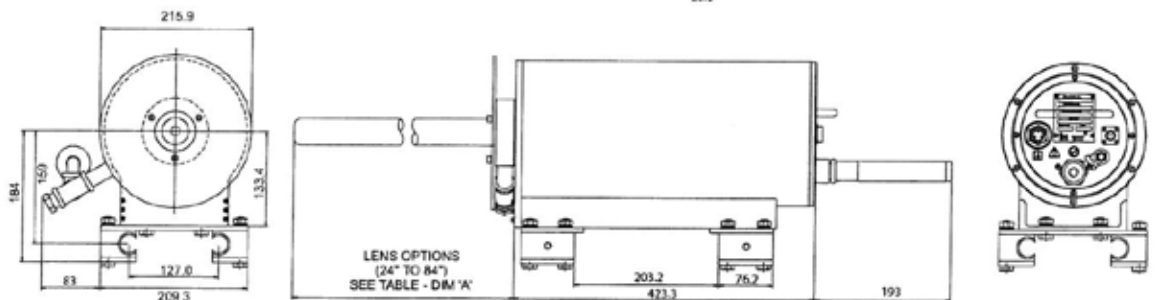
## SPECIFICATIONS AND PERFORMANCE

Camera	
<b>Power Requirements</b>	100/115/230 VAC, 50/60 Hz, 24 Watts
<b>Video Output</b>	Monochrome EIA Standard RS-170, 525 lines or CCIR, 625 lines, composite video output and sync; 1.0 to 1.4V p-p

Lens	
<b>Construction</b>	Air-cooled 304 stainless steel outer shroud. Sapphire window for maximum environmental protection
<b>Lengths</b>	/124: L = 550mm/21.7" (503mm/19.8") /136: L = 854mm/33.7" (808mm/31.8") /148: L = 1160mm/45.7" (1113mm/43.8") /160: L = 1465mm/57.7" (1417mm/55.8") /172: L = 1769mm/69.7" (1722mm/67.8")
<b>Field of View</b>	Medium: 45° horizontal Wide: 70° horizontal Superwide: 90° horizontal
<b>Diameter</b>	38mm (1.5")
<b>Optical Filter</b>	Particulate-penetrating proprietary infrared filter
<b>Cooling Requirements</b>	Instrument-quality air*, 7-10 dm <sup>3</sup> s <sup>-1</sup> @ 35-70 kPa (15-20 SCFM @ 5-10 psig typical) *Air quality to ISO 8573-1, Class 1-7-2

Enclosure	
<b>Construction</b>	Corrosion-resistant nylon cover; anodized aluminum body; NEMA 4, dust and waterproof
<b>Cooling Type</b>	Vortex cooled; instrument-quality air; 13 dm <sup>3</sup> s <sup>-1</sup> @ 690kPa (25 SCFM @ 100 psig typical) optional
<b>Ambient Environment</b>	0° to 60°C (32° to 140°F) operating temperature

Mechanical	
<b>Focus Adjustment</b>	Optical focus adjustment screw located on back of enclosure
<b>Video Output Jack</b>	Female PL-259 "UHF" type
<b>Power Input Jack</b>	Removable waterproof miniplug (JOY type TP, female 3-conductor; mating power cord provided)
<b>Enclosure Cooling Input</b>	1/4" brass quick-disconnect nipple; mating coupler (Snaptite BVHC4-4F) provided
<b>Lens Cooling Input</b>	1/2" brass quick-disconnect nipple; mating coupler (Snaptite BVHC8-8F) provided



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The management system governing the manufacture of this product is ISO 9001:2008 certified.