



#### FEATURES/BENEFITS

- Radiation tolerant to 1MGy ( $1 \times 10^8$  rad)\*
- Radiation dose rate at 100Gy per/h ( $1 \times 10^4$  rad/h)
- Resolution >750tvl (HD mode)
- High definition
- Unique slip clutch for fail-safe retrieval
- Compact housing with small operating envelope
- Ease of HD module replacement
- 10:1 optical zoom with 4x digital
- Integrated camera/lights/pan & tilt
- Variable speed pan and tilt
- High-intensity white LED lighting
- Stainless steel construction
- Standard rack-mount controller with remote control input
- Rugged, radiation tolerant cable
- Zoom position overlay in SD mode

\* excludes replaceable HD/LED modules



## IST-REES HD-RAD CAMERA

### High Definition Inspection System for Wide Ranging Applications

The IST-Rees HD-Rad combines high definition video performance with a robust and versatile pan/tilt/zoom inspection platform. The integral HD camera provides an analog component output, giving users the highest quality color images during their inspection process. Additionally, the integrated high-intensity white LED lighting provides excellent illumination for most inspection applications.

The HD-Rad is based on an industry proven electromechanical arrangement, with a unique clutch assembly to allow fail-safe retrieval. All external surfaces are finished in Stainless Steel to allow easy decontamination if necessary.

An HD-Rad outstation assembly is rated to a total absorbed dose of 1MGy and designed to allow easy and cost effective field replacement of the more sensitive HD module and LED lighting assembly.

The addition of the HD-Rad to the long established IST-Rees range of products secures Mirion's position as a leader in the supply of imaging systems to the Nuclear Industry and emphasizes the Imaging Systems Division's commitment to the continuous development of our products and services.

imaging systems

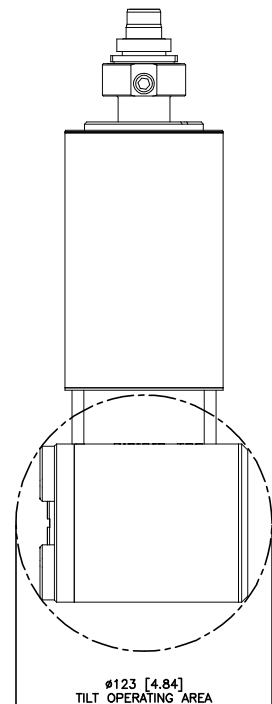
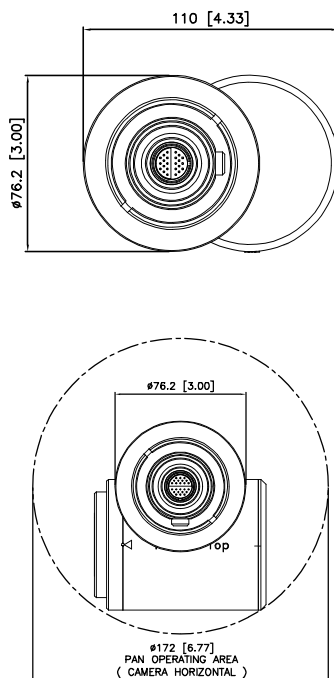
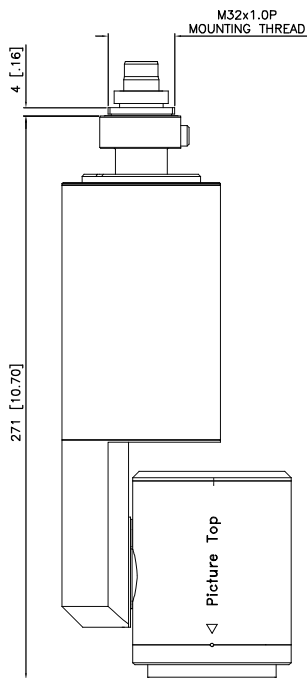
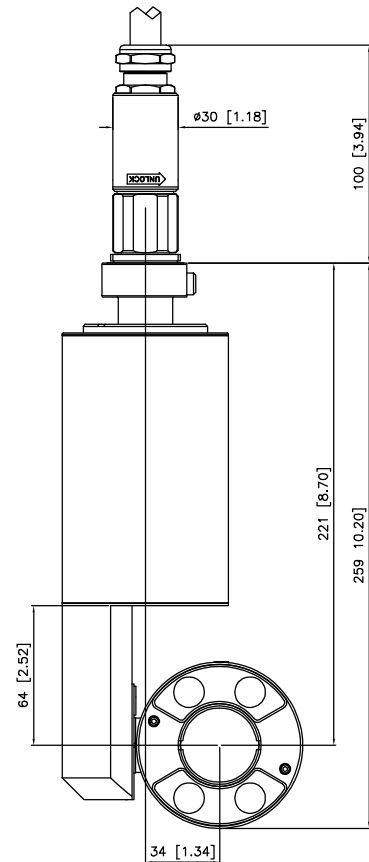
A Mirion Technologies Division

Featuring:

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## SPECIFICATIONS AND PERFORMANCE

CAMERA OUTSTATION (IN WATER ONLY)	
<b>Outstation Radiation Tolerance</b>	1MGy (1 x 10 <sup>8</sup> rad)* [ <sup>60</sup> Co]
<b>HD/LED Module Radiation Tolerance</b>	500Gy (5 x 10 <sup>4</sup> rads) [ <sup>60</sup> Co]
<b>Radiation Dose Rate</b>	100Gy/hour (1 x 10 <sup>4</sup> rad/h)
<b>Housing</b>	Stainless Steel
<b>Seal</b>	IP68
<b>Depth Rating</b>	60m (197')
<b>Horizontal Resolution (HD mode)</b>	>750tvl
<b>Horizontal Resolution (SD mode)</b>	550tvl NTSC/PAL
<b>Operating Temperature</b>	0° to 50°C (32° to 122°F)
<b>Pan and Tilt Range</b>	+/- 180 degrees
<b>Iris</b>	Auto and manual
<b>Focus</b>	Auto and manual
<b>Min Object Distance (In Water)</b>	13mm wide angle (5") 1060mm narrow angle (42")
<b>Zoom range</b>	10x optical, 4x digital
<b>Angle of View</b>	37° (Wide) to 4.1° (Narrow)
<b>Minimum Scene Illumination</b>	12 lux (f/1.8) with 50 IRE
<b>AGC Range</b>	Auto: -3db to +18db
<b>Electronic Shutter - Auto Exposure Mode</b>	1/60 sec (59.94/NTSC), 1/10000 sec (50/PAL)
<b>Recommended Illumination</b>	100 to 100,000 lux
<b>Weight (In Air)</b>	3.4kg (7.5lbs)
<b>Supports HD (Analog Component)</b>	1080i/59.94, 1080i/50 720p/59.94, 720p/50
<b>Supports SD (Composite)</b>	NTSC (CROP), NTSC (SQUEEZE) PAL (CROP), PAL (SQUEEZE)
<b>Video Outputs - HD</b>	Y Pb Pr
<b>Video Outputs - SD</b>	Composite & Y/C
<b>Light Output</b>	80lm each for total of 320lm

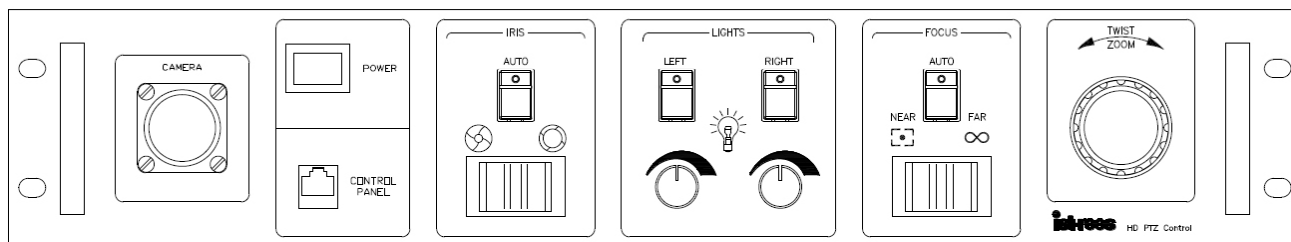


CAMERA CONTROL UNIT	
Case	19" Aluminum 2U (rack mount)
Weight	3.8kg (8.4lbs)
Dimensions	88mm H x 483mm W x 356mm D (3.5" x 19" x 14") Depth does not include handles or connections
Power Requirements	100 to 240V AC, 50/60 Hz - 40VA maximum
Outstation Cable Length	100m (328') maximum length to controller. Consult Mirion for longer cables
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Relative Humidity	80% for temperatures up to 31°C (88°F), decreasing linearly to 50% at 40°C (104°F)

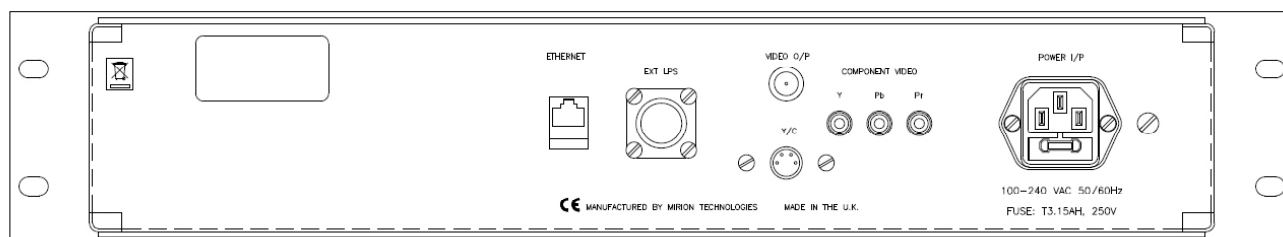
CAMERA CONTROL: FEATURES AND BENEFITS	
Dedicated controls	Pan (Joystick)
	Tilt (Joystick)
	Zoom (By Joystick Twist)
	Iris
	Focus
	Lights

Optional remote keyboard - plugs into front control panel.

### CAMERA CONTROL UNIT - FRONT PANEL



### CAMERA CONTROL UNIT - REAR PANEL



HD-RAD PART NUMBERS	
RC720CPA03A	Outstation assembly
RC720MCA03A	50Hz Camera Controller
RC720MCB03A	60Hz Camera Controller
RC720CAB04A/10M	Standard cable 10.0m (33ft)
RC720CAB04A/38M	Standard cable 38.0m (125ft)
RC720SYS05A	System with RC720CPA03A, RC720MCB03A, Tool Kit (KIT.01035) and Manual (RC720MAN001)
040-90051	Pole Mount Adapter



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The above specifications may vary according to system configuration. Mirion Technologies Incorporated reserves the right to amend or change the information on this sheet without prior warning.

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