

# RADIX Ruggedized Thermal Imaging Sensors

## RUGGED IR

Accurate measurement across a wide range of operating temperatures and environments

## SMART IR

RADIX camera controller provides power, local image storage and edge analytics for up to four RADIX cameras with multiple ROIs per camera. Sensor expansion supports a variety of supplemental sensors and communication protocols

## SECURE IR

RADIX camera systems provide secure, encrypted end-to-end telemetry for both on-premise and cloud-based deployments



RADIX radiometric thermal imaging sensors provide affordable and reliable measurement capability in a compact, ruggedized stainless-steel integrated enclosure with high-quality coated germanium optics and state-of-the-art image processing. Available with a variety of resolutions and focal lengths, RADIX offers a complete solution for persistent measurement and radiometric analysis of high-voltage electrical equipment and other apparatus indoors or outdoors and above or below-ground.

Combined with Power Intelligence Neuron camera controllers, RADIX cameras can be quickly and easily deployed into electrical substations, transformer vaults, network underground or industrial settings.

- Affordable, high-performance radiometric imaging cameras for rugged environments
- Multiple resolutions and focal lengths suitable to a broad range of applications and installations
- Local or host-based measurements and analytics
- Ruggedized IP67 stainless-steel integrated enclosure and high operating temperature certification

Supplemental sensors may be connected to the RADIX camera controller to simultaneously capture and correlate instantaneous voltage, current, pressure, vibration, moisture, combustible gases or other signals at programmable intervals over multiple interfaces.

Quickly and easily deploy enterprise-scale data acquisition and thermal analysis of critical assets using your company's existing networks and servers, or subscribe to Power Intelligence cloud services for hands-free operation of your entire monitoring operation.

## Specifications

Optical Resolution	382 x 288 pixels (RADIX 400) 80 x 80 pixels (RADIX 80)
Detector	FPA, uncooled microbolometer (17 $\mu$ m x 17 $\mu$ m pitch)
Spectral Range	7.5 – 13 $\mu$ m
Maximum Frame rate	80 Hz
Available Optics (FOV)	18° x 14° (f = 20 [0.79]), 29° x 22° (f = 12.7 [0.50]), 53° x 38° (f = 7.7 [0.30]), 80° x 54° (f = 5.7 [0.22])
Focus	Manual or Controller-based Autofocus
Optical resolution (D:S)	390:1 (18° optics)
Thermal sensitivity (NETD)	80 mK
Accuracy	$\pm 2$ °C or $\pm 2$ % ( $\pm 4$ °F or $\pm 2$ %), whichever is greater
Interface	FTP or REST (voa RADIX controller)
Cable Length	1 m (3.3 ft) (standard), 3 m (9.8 ft), 5 m (16.4 ft), 10 m (32.8 ft), 20 m (65.6 ft)
Ambient Temperature	0 °C to 50 °C (32 °F to 122 °F)
Enclosure (size / rating)	$\varnothing$ 36 mm x 100 mm ( $\varnothing$ 1.42 in x 3.9 in) (M30x1 thread) / IP 67 (NEMA 4)
Weight	200 g (7.1 oz)
Shock	IEC 60068-2-27 (25 G and 50 G)
Vibration	IEC 60068-2-6 (sinusoidal form) IEC 60068-2-64 (broadband noise)

## Ordering Info

RADIX-80-18	RADIX radiometric imager, 80 x 80 pix., 18° FOV
RADIX-80-29	RADIX radiometric imager, 80 x 80 pix., 29° FOV
RADIX-80-53	RADIX radiometric imager, 80 x 80 pix., 53° FOV
RADIX-80-80	RADIX radiometric imager, 80 x 80 pix., 80° FOV
RADIX-400-18	RADIX radiometric imager, 382 x 288 pix., 18° FOV
RADIX-400-29	RADIX radiometric imager, 382 x 288 pix., 29° FOV
RADIX-400-53	RADIX radiometric imager, 382 x 288 pix., 53° FOV
RADIX-400-80	RADIX radiometric imager, 382 x 288 pix., 80° FOV

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