



# THERMAL™ RADAR

INTELLIGENT 360° THERMAL CAMERA

## The World's First Rotating Head 360° Uncooled Thermal Camera

### Incredibly small footprint, uses only 5 watts power

TIR's continuous rotating LWIR camera provides intelligent high definition infrared surveillance for challenging or remote sites. Rotating at speeds up to 60 RPM this incredible camera stitches together a composite image of up to 16 "virtual" thermal cameras creating a 360° thermal image of over 5 MP. Using Wi-Fi, Ethernet or the built in Cellular Modem an operator can view the composite image in near real time as it continuously updates. When ever the powerful on board video analytics detect an intrusion or high temperature event, the unit has the ability to send alerts via email, SMS, Wi-Fi, GSM Cellular or the Iridium Satellite network.



### Applications Include:

- Challenging and Remote Site Coverage
- 24/7 360° Intrusion Detection
- Early Forest Fire Detection
- Border Surveillance
- All Terrain Access and Surveillance
- Monitor Sites with Little or No Infrastructure
- Establish 360° GeoSpatial Environment for Other Camera Systems
- Wide Area Continuous Thermal Monitoring

Finally, an Affordable  
Solution for 360°  
Thermal Coverage!

scan to learn more or  
visit [thermalradar.com](http://thermalradar.com)



### Features & Benefits

#### ► Fully Self Contained Surveillance Solution:

Thermal Radar operates as a fully self contained unit providing it's own power, communications, connectivity, analytics and alert monitoring. You can literally take it anywhere an ATV can go and deploy it in minutes.

#### ► Powerful Onboard Video Analytics:

Simple, easy to use analytics allow the user to quickly identify intrusions over the entire 360° FOV.

#### ► Highly Flexible Alert Platform:

Once an alert has been identified by the analytics, Thermal Radar has the ability to send these event notifications along with coordinates and JPEG images via SMS, Wi-Fi, Ethernet, Cellular, Satellite or even prerecorded phone messages. Vary the alert notifications by time of day, day of week, person, alert category, group, etc. Send only what you want to whom you want, when you want it.

#### ► Completely Undetectable:

Unlike Radar or other active surveillance systems, Thermal Radar is a completely passive system, rendering it invisible and impossible to detect.

#### ► Day or Night / Fair or Bad Weather System:

Thermal Cameras have long since demonstrated their ability to penetrate dust storms, fog, smoke and complete darkness. No lights, emitters or other devices are required. This camera sees the same image day or night without any assistance or support.

#### ► Cost Effective:

Thermal Radar's unique ability to multiply the power and capability of a single thermal sensor to do the work of 16 separate sensors allows it to provide cost effective blanket thermal coverage to any site.

#### ► Rugged and Reliable:

All components, including the entire rotating assembly, are completely protected from the elements inside a sealed enclosure. No rotating seals to fail, no more sandblasted lenses, no more fogged out images are just a few of the advantages of Thermal Radar's unique design.

#### ► Lightweight and Portable:

Thermal Radar tips the scales at less than four pounds. When combined with it's optional, portable, aluminum tower, Thermal Radar can be easily towed to any site with a conventional ATV and deployed 30 feet in the air in minutes. No supporting infrastructure required. This combination is completely self contained.

#### ► ONVIF Member:

Made to operate with other ONVIF compliant devices.

#### ► GeoSpatial:

Once calibrated, Thermal Radar has the ability to pinpoint any alert on a map and to send those coordinates to the user as part of the event notification. This makes Thermal Radar the ideal platform for tracking objects and can be used in conjunction with other camera systems to provide "slew to cue" data.

# Thermal Radar Technical Specifications

0719-ENG-TR

## Thermal Module

<b>Type</b>	FLIR Tau 2 sun-safe amorphous silicon microbolometer
<b>FPA Resolution</b>	336x256 or 640x512
<b>Image Bit Depth</b>	8-bit w/AGC or 12-bit raw
<b>Lens Focal Length</b>	7.5mm, 9mm, 13mm, 19mm or 25mm

## Speed and Resolution

<b>Rotation Speed</b>	30-60 RPM - Configurable
<b>Image FOV (H)</b>	360 Degrees
<b>Image FOV (V)</b>	69°, 56°, 45°, 35°, 32°, 25° or 20°
<b>Image Resoluion</b>	Configurable from .77 MP to 5.24 MP

## Power Requirements

<b>Input Voltage</b>	18V-57 VDC, Polarity Insensitive
<b>Input Connection</b>	IEEE 802.3at PoE+ compliant
<b>Power Consumption</b>	5-7 Watts (Accessory Dependent)

## Processor and Analytics

<b>Processor</b>	1GHz ARM Cortex A8 plus C64X+ DSP (TI OMAP DM3730)
<b>Memory</b>	512 MB DDR, 512 MB NAND Flash
<b>Image Storage Memory</b>	8 GB extended Temperature Range µSD Card - Removable
<b>Embedded Analytics</b>	Intrusion, Classification, Tracking, High Temperature

## Detection Range

<b>Man</b>	Up to 600 m
<b>Vehicle</b>	Up to 1,800 m
<b>Fire</b>	Up to 5 Km



## Communication

<b>Ethernet</b>	10/100BaseT with PoE+ Powering
<b>WI-FI</b>	802.11b/g with Internal or External Antenna
<b>Network Protocols</b>	Zero conf System with Multicast DNS/DNS-SD Service Discovery, Supports DHCP, RTP, NTP, TCP/IP, UDP/IP
<b>GSM Modem</b>	Six-band HSPA+ (3.75G), quad-band GSM/GPRS/EDGE, (800/850/900/1700/1900/2100 MHz), SIM card. Internal or External Antenna.
<b>CDMA Modem (optional)</b>	3G Dual Band (800/1900 MHz), Internal or External Antenna.
<b>Satellite Modem (optional)</b>	Low-latency, Truly Global Coverage Iridium Satellite Modem with External Antenna.

## Environmental

<b>Operating Temperature Range</b>	-40° C to +55° C (+65° C optional)
<b>Storage Temperature Range</b>	-40° C to +85° C
<b>Humidity</b>	5 - 95%, Non-Condensing
<b>Protection Standard</b>	IP66

## Physical

<b>Dimensions</b>	5.75" (W) X 7.75" (H) (146mm X 197mm)
<b>Weight</b>	4 lbs. (1.8 Kg)

## Portable Platform

<b>Deployed Height</b>	30 feet (9.1 m)
<b>Weight</b>	425 lbs (193 Kg)
<b>Battery Supply</b>	200 AH 24 VDC w/low Voltage Disconnect
<b>Solar</b>	30-55 Watt 24 VDC Panel with Charge Controller/PoE+ Inserter



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