

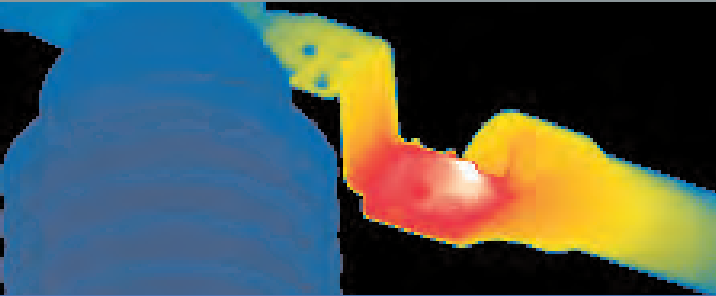


The Global Leader in Infrared Cameras

**NEW!**

HIGH DEFINITION INFRARED

# ThermaCAM® P640



*Simply the Best in Infrared*  
[www.bestininfrared.com](http://www.bestininfrared.com)

# Why Buy the P640?

## What's Your **Competitive Advantage?**

*Superior thermal and visual image quality, spot size resolution, temperature measurement accuracy, and a host of advanced features will give you the best engineered, best infrared camera on the market today.*

If you are an infrared consultant or a professional thermographer, the P640 can also help you expand your business or advance your career. Whether you're seeking to charge higher rates for your services, start your own consultancy, or excel in your existing job, the P640 gives you a unique competitive advantage.

As the first and largest infrared camera manufacturer in the world, we spend tens of millions of dollars each year to bring ever-more sophisticated IR cameras to market. Why? Because as the technology improves, the uses for infrared grow even more.

*It's a good business. It's our only business.*

As the largest infrared camera manufacturer in the world, we can give **you** a strong competitive advantage (that's how we got to be the largest!).

Right now, FLIR will let you trade-in your old IR camera for up to \$12,000 as credit towards the purchase or lease of a brand new ThermoCAM P640. For details, fill out the "Best-in-Infrared" survey on the back of this brochure or on the web at [www.bestininfrared.com](http://www.bestininfrared.com).

What is your competitive advantage? How do you plan to advance in your job? We invite you to see what the P640 has to offer!



### Superior Image Resolution

The new 640 x 480 detector in the P640 delivers 307,200 pixels versus 76,800 in an IR camera with a 320 x 240 detector. That's 4 times better resolution (16 times better than an infrared camera with a 160x120 detector)!

This can make the difference between seeing – or not seeing – if a thermal anomaly even exists, especially if you're looking at small or distant targets. The P640's superior image quality also allows the professional thermographer to see much more image detail to truly pinpoint or diagnose the nature of a problem.

### Superior Temperature Measurement

More pixels mean greater temperature measurement accuracy, particularly for small objects. To the professional thermographer, this means clear, practical benefits – and a strong competitive advantage. With the P640, you can now resolve smaller objects from further away and still get accurate temperature measurements.

The P640 is ideal for professional thermographers, infrared consultants, those working in the utility industry, or anyone needing to view small or distant targets with better thermal image detail and temperature measurement accuracy.

Of course, **seeing really is believing**, and a brochure is not the best place to see how different detectors yield different results.



That's why we're inviting you to visit [www.bestininfrared.com](http://www.bestininfrared.com) and watch a multi-media presentation on how the P640 detector outperforms all the rest!

Learn More...

Get all the details at:  
[bestininfrared.com](http://bestininfrared.com)

# Infrared is the Future. This is the Future of Infrared

HIGH DEFINITION

## ThermaCAM P640 FEATURES

- 1 NEW! Interchangeable Lenses and 8-to-1 Digital Zoom**  
Interchangeable, large diameter, germanium lens with ultrasonic drive technology for ultra-sharp images. Provides 8-to-1 continuous digital zoom with full Pan Technology. Use the Auto Focus, Manual "Lens Ring" Focus, or a combination of both!
- 2 NEW! Visual Camera Features**  
Interchangeable lens, 1.3 Mega pixel visual camera. You can even add a Hot Spot Marker to any visual image while you're in the field!
- 3 Target Illuminator**  
Integrated, Target Illuminator provides light for visible camera where conditions require.
- 4 Laser LocatIR™**  
Built-in LaserLocatIR projects a laser beam to more safely correlate physical targets with their infrared image.
- 5 Instant Access Buttons**  
End-User Customized Direct Access Buttons gives you instant access to the features you feel are most important!
- 6 NEW! Large Color LCD**  
Large, Swivel-mount, 5.6" Color LCD allows you to see the finely detailed P640 image and share your findings with others.
- 7 NEW! Tilt-able Viewfinder**  
Sharp and bright 800x600 high resolution viewfinder. Ideal for outdoor use!
- 8 Long Battery Life**  
The Li-Ion battery gives the user over 3 hours of inspections. The Battery can be charged while in the camera, in a 2-bay charger or in your car.
- 9 NEW! State-of-the-Art Connectivity**  
Fast Access to composite video, USB and FireWire connections. JPEG images or MPEG movies are stored on removable SD cards.



GET A DEMO!

Get all the details at:  
[bestininfrared.com](http://bestininfrared.com)

# Be the Best in Infrared

## SPECIAL OFFER!

Lease now for  
**\$999** per month!\*

Lease for as little as \$999 per month  
for the first 12 months.

Trade-in your old camera and decrease  
your monthly payment!

We can also customize a leasing or  
purchase plan to fit your specific budget  
needs! Call us direct at: 1 800 464 6372 or  
in Canada 1 800 613 0507.

\* Lease pricing is quoted in US Dollars  
for the USA market Only.

**And Remember – Buy or Upgrade to a New  
P640 by December 15, 2006 and get:**

A FREE Magellan XL GPS Unit and  
InfraMation Attendance with a Guest in Las  
Vegas – a \$2,049 value – Absolutely FREE!\*\*

See the "Best-in-Infrared" survey on the  
back of this brochure for more details!

\*\*attend either InfraMation 2006 or 2007 events

### UTILITY INDUSTRY



This camera is ideal for someone in the utility industry because you can resolve greater detail with smaller targets, while still looking at the larger picture. This is important because it saves time, makes you more productive, allows you to take less thermal images, and improves worker safety. Because you can be twice the distance away as compared to a 320x240 camera, or 4 times the distance as compared to the 160x120 camera.

#### ThermaCAM® P640 Benefits

- > 640 x 480 image quality
- > Improved worker safety
- > Best spot size resolution
- > Most accurate temperature measurement

### IR CONSULTANTS



Get the infrared camera that exceeds all others! The high definition P640 is the new standard for infrared consultants worldwide. Whether you seek to expand your business, justify higher billing rates, or providing razor-sharp/highly accurate reports to your customers, the P640 is a must-have for consultants whose core business is providing infrared inspection services.

#### ThermaCAM® P640 Benefits

- > 640 x 480 image quality
- > Justify higher billing rates
- > Razor-sharp customer reports
- > State-of-the-art for all applications

### MANUFACTURING



The P640 is ideal for top-level thermographers who's work environment demands the best infrared camera and technology. This camera is ideal for the full-time thermographer who intends to use his camera everyday, and may be required to produce detailed, sharp-looking, informative reports to either cost-justify to senior management or insurance companies the effectiveness of your infrared predictive maintenance program.

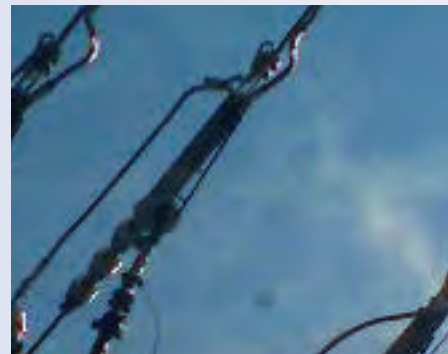
#### ThermaCAM® P640 Benefits

- > 640 x 480 image quality
- > Cost-justify to senior management
- > MPEG functionality dynamically captures moving targets
- > Best return-on-investment potential

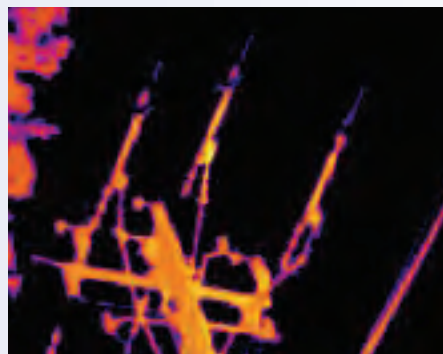
Lease or Buy

Get all the details at:  
[bestinfrared.com](http://bestinfrared.com)

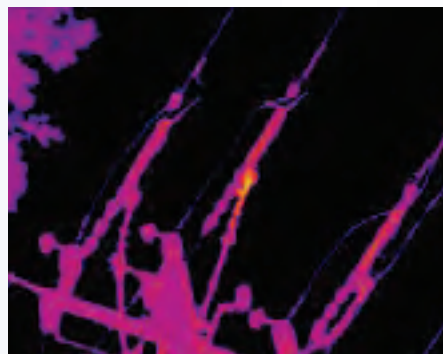
# You Can't Correct What You Don't Detect



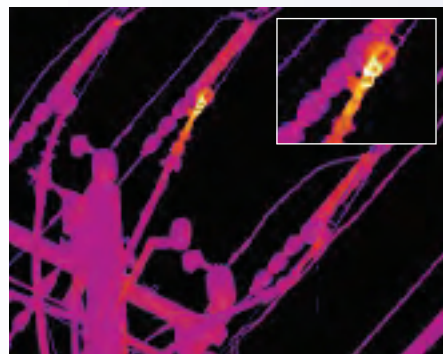
Switch Disconnect



**Detector: 160x120**  
 Distance: 12 yards  
 TMax: 125°F  
 Temperature Rise: 45°F



**Detector: 320x240**  
 Distance: 12 yards  
 TMax: 155°F  
 Temperature Rise: 72°F



**Detector: 640x480**  
 Distance: 12 yards  
 TMax: 173°F  
 Temperature Rise: 91°F

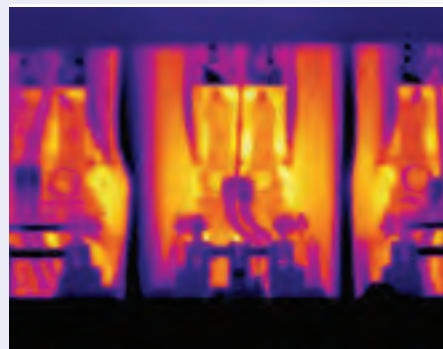
In this typical utility pole, the **160 x 120** thermal image is blurry and the temperature measures 125° F – almost the same as the surrounding equipment. It would be easy to miss that a problem exists even if you're standing right in front of it!

With the **320 x 240** IR camera, you can see that a problem exists but you can't resolve exactly where the problem is, and you record a temperature measurement of 155° F. But, how accurate is this temperature measurement?

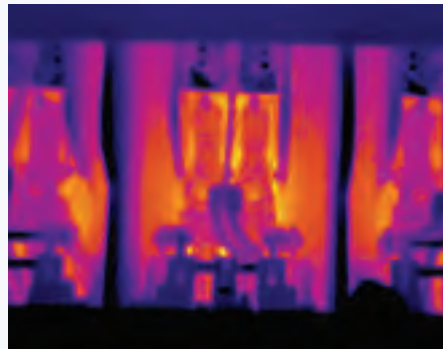
Only with the **640 x 480** resolution of the P640 can you clearly see that the problem is with the bolted plate connection and the 173° F temperature recording indicates this problem requires immediate repair. In this real-world example, a repair crew fixed the problem within 24 hours after it was diagnosed with the P640.



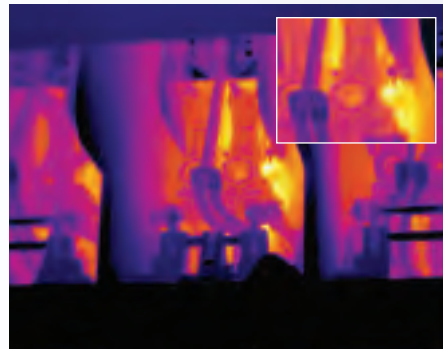
Generator Tie-In Breaker 480V



**Detector: 160x120**  
 Distance: 4 yards  
 TMax: 104°F  
 Temperature Rise: 33F



**Detector: 320x240**  
 Distance: 4 yards  
 TMax: 107°F  
 Temperature Rise: 35°F



**Detector: 640x480**  
 Distance: 4 yards  
 TMax: 114°F  
 Temperature Rise: 43°F

All three cameras in this example found the problem with the target being only 4 feet away, however only the **high definition performance of the P640** recording 307,000 individual pixel/temperature measurements could accurately measure the true temperature of **114° F**.

This is important to infrared consultants or professional thermographers because the P640 provides razor-sharp thermal images, hard temperature data and it takes the guesswork out of making assessments – ensuring your credibility with employers or customers.

The new high definition ThermoCAM P640 is, quite simply, the best tool for the job – a new standard for professional thermographers and infrared consultants.



Visit [www.bestinfrared.com](http://www.bestinfrared.com) and watch a multi-media presentation on how the P640 detector outperforms all the rest!

Achieve More...

Get all the details at:  
[bestinfrared.com](http://bestinfrared.com)

Imaging Performance	
<b>Thermal</b>	
Field of view/min focus distance	24° x 18° / 0.3 m
Spatial resolution (IFOV)	0.65 mrad
Thermal sensitivity @ 50/60Hz	0.06°C at 30° C
Electronic zoom / pan function	1 - 8 x continuous, including pan function
Focus	Automatic or manual
Digital image enhancement	Normal and enhanced
Detector type	Focal plane array (FPA) uncooled microbolometer; 640 x 480 pixels
Spectral range	7.5 to 13 µm
Visual	
Built-in digital video	1.3 Mpixel, full color / built-in Target Illuminator / exchangeable lens
Standard lens performance	f=8 mm / FOV 32°
Image Presentation	
Viewfinder	Built-in, tiltable, high-resolution color viewfinder (800 x 480 pixels)
External display	Built-in 5.6" LCD (1024 x 600 pixels)
Video output	RS170 EIA/NTSC or CCIR/PAL composite video, IEEE-1394 FireWire, USB
Measurement	
Temperature ranges	-40°C to +500°C, in 2 ranges; up to + 2000°C, optional
Accuracy (% of reading)	± 2 °C or ± 2% of reading
Measurement modes	Spots/Areas (Boxes, Circles), Isotherms (above, below, interval), Delta T
Menu controls	Palettes, load custom palettes, auto adjust (manual/continuous/based on histogram equalization), on screen live and reference image (PoP), image gallery, sequence storage, programmable storage
Alarm functions	Automatic alarm on any selected measurement function, audible/visible alarm above/below
Emissivity correction	Variable from 0.1 to 1.0 or select from listings in pre-defined material list
Measurement features	Automatic corrections based on user input for reflected ambient temperature, distance, relative humidity, atmospheric transmission, and external optics
Optics transmission correction	Automatic, based on signals from internal sensors
Image Storage	
Type	Removable SD-card (256 MB), built in RAM memory for burst recording
File format – THERMAL	Standard JPEG; 14 bit thermal measurement data included
File format –VISUAL	Standard JPEG inked with corresponding thermal image
Voice annotation of images	30 sec. of digital voice "clip" stored together with the image wired headset
Text annotation of images	Predefined by user and stored with image
Video Storage	
Type	Recording of fully radiometric IR-video clips in camera, transferable to SD-card Recording of MPEG-4 non-radiometric video to SD-card
Video Streaming	
Type	MPEG-4, IP-link using FireWire or USB
Laser LocatIR™	
Classification type	Class 2, Semiconductor AlGaInP Diode Laser: 1 mW/635 nm (red)
Power Source	
Battery type	Li-Ion, rechargeable, field-replaceable
Battery operating time	3 hours continuous operation
Charging system	In camera (AC adapter or 12V from car) or 2 bay intelligent charger
External power operation	AC adapter 110/220 VAC, 50/60Hz or 12V from car (cable with standard plug optional)
Power saving	Automatic shutdown and sleep mode (user-selectable)
Environmental	
Operating temperature range	-15° C to +50° C (5° F to 122° F)
Storage temperature range	-40° C to +70° C (-40° F to 158° F)
Humidity	Operating and storage 10% to 95%, non-condensing
Encapsulation	IP 54 IEC 529
Shock	Operational: 25G, IEC 68-2-29
Vibration	Operational: 2G, IEC 68-2-6
Physical Characteristics	
Weight	1.7 kg (3.8 lbs) w/battery
Size	120mm x 145mm x 220 mm ( 4.7" x 5.7" x 8.7")
Tripod mounting	1/4" – 20

Camera includes:	
Camera with visual and IR lens	
Power supply	
2 batteries (3 hours operating time on each)	
2 bay charging station	
QuickView software	
Manual and Quick Reference Card	
DS-card including USD Card Reader	
Headset	
Cables	
Lenses (optional)	
Automatic lens identification	
Field of view/minimum focus distance	
12° x 9° / 0.9m telelens	
45° x 34° / 0.1m wide angle lens	
Close-up 50lm 32 mm x 24 mm / 75 mm	
Interfaces	
USB / RS232	Image (thermal and visual), measurement data, voice and text transfer to PC
IrDA	Wireless communication
SD-card (2)	I/O slot; storage slot
Firewire output (IEEE 1394)	IEEE-1394 FireWire output (real-time none-radiometric video / filetransfer to PC)

**NEW!** RUGGED & LIGHTWEIGHT MAGNESIUM HOUSING!



## SPECIAL OFFER!

Buy or Upgrade to a ThermaCAM® P640 Infrared Camera by **December 15, 2006** and get:

A FREE Magellan XL GPS Unit and INFRAMATION Attendance with a Guest in Las Vegas, Oct 23-27,2006\* (Save \$2,049!)

\*attend either InfraMation 2006 or 2007 events

## More Affordable Than Ever! Trade and Lease Options

### Trade-in, Trade-up: Give Us Your Old IR Camera

Trade in your old infrared camera – any make, any model! – and FLIR will credit you up to \$12,000 when you buy or lease a new P640! What's your old camera worth? Fill out the "Best-in-Infrared" survey and find out! **Offer expires December 15, 2006.**

### Lease for 1, 3 or 5 Years!

Would you pay a new employee 5 years salary all in advance? Of course not! So why not pay for this new asset on a lease? It's a great way to let the P640 pay for itself as it generates new income or reduces costs. And, you take your maximum depreciation expense each and every year – saving your company significant tax dollars. You can even use your old camera trade-in credit to offset the lease! What's your lowest monthly price?

Visit [www.bestininfrared.com](http://www.bestininfrared.com) and find out now.

Learn more!

## InfraMation 2006

The World's Best Infrared Camera Conference  
Las Vegas, October 23-27, 2006

Take advantage of this once-a-year, largest and most informative conference that can help you get the highest return on investment from your infrared camera.

- > Attend valuable "How-to" Workshops
- > Learn from international expert presentations
- > Obtain ITC Re-certification credits
- > See the latest new products and technologies
- > Network with the world's largest infrared camera end-user group

### TO REGISTER:

- > **ONLINE:**  
[www.inframation.org/registration](http://www.inframation.org/registration) and register instantly!
- > **TELEPHONE / EMAIL**  
Contact us at 1 800 254 0632 [inframation@flir.com](mailto:inframation@flir.com)
- > **MORE INFORMATION**  
Get all the conference details at [www.inframation.org](http://www.inframation.org)

Advance Your Career!

Complete and return the **Best in Infrared** Survey on the back cover!

### SPECIAL OFFERS!

Get all the details at:  
[bestininfrared.com](http://bestininfrared.com)



United States: 1 800 464 6372 | Canada: 1 800 613 0507

Why do more people buy FLIR infrared cameras than all other brands combined?

FLIR Systems offers the widest selection of high quality infrared cameras, top-notch service and the best training in the industry.

Start Seeing the World in Infrared