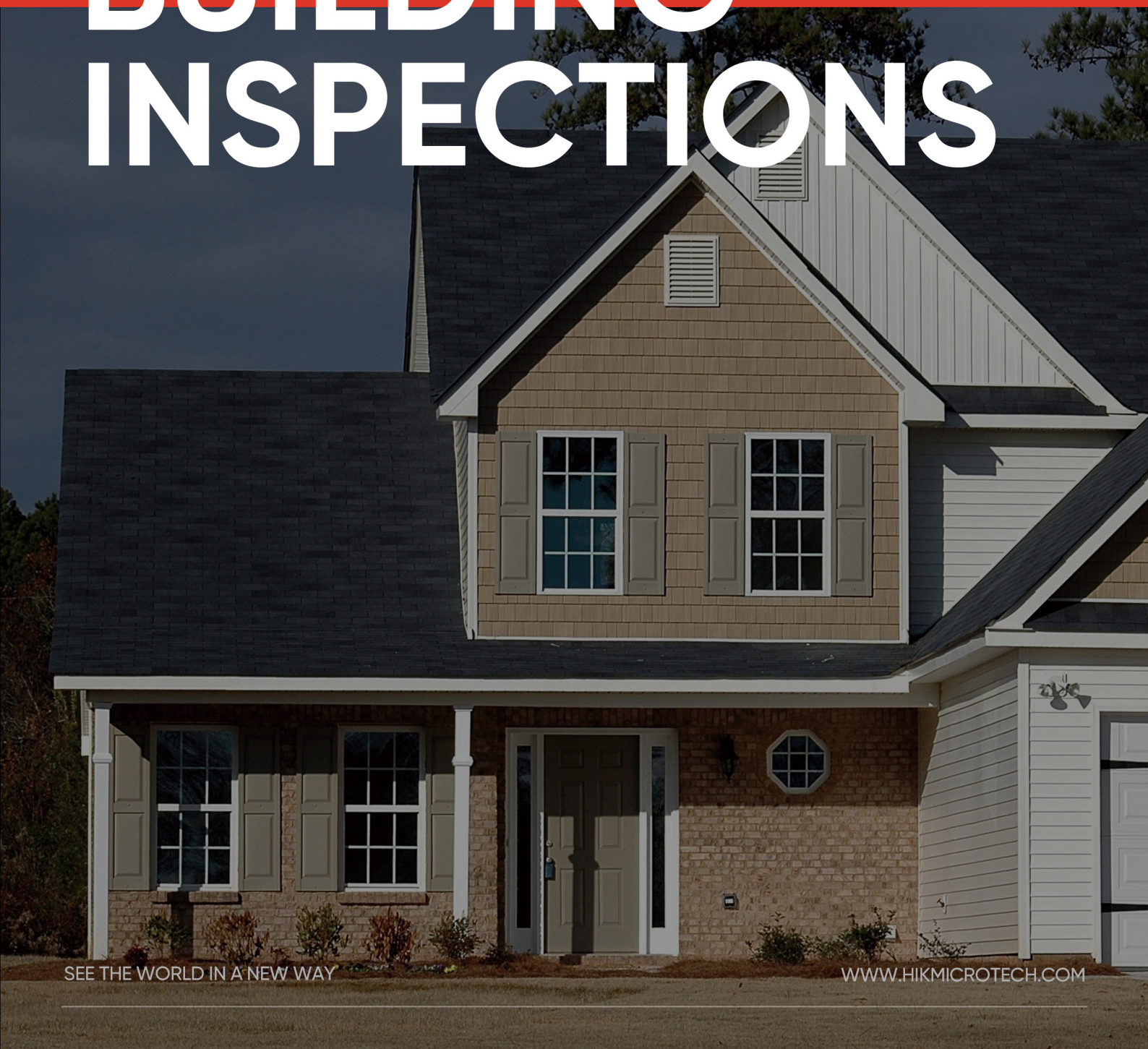
HIKMICRO

THERMAL IMAGING IN

BUILDING INSPECTIONS



SEE THE WORLD IN A NEW WAY

WWW.HIKMICROTECH.COM

USE THERMAL IMAGING CAMERAS FOR

HOME INSPECTIONS

Minimizing energy use in buildings and improving the thermal performance of building envelopes has become increasingly important in the drive for sustainability and energy efficiency. In building inspections, missing or damaged insulation, building envelope air leaks, and moisture intrusion can be very difficult to find before they become serious enough to damage or destroy building contents.

Thermal imaging technology can and has been utilized in the discovery of otherwise undetectable heat, air, and moisture anomalies in buildings, and it is a way to set yourself apart from the competition with an add-on service your customers will love. As a home inspector, you can provide an even more elevated quality of inspection and report by using a thermal camera to perform thermal imaging home inspections. Contractors, technicians, and engineers all can benefit from portable thermal imaging devices.

Check out the following applications that will help individual professionals and entire industries transform how they prevent, seek, and solve some of their most common challenges.

APPLICATIONS

WHERE THERMAL IMAGING IS USEFUL

A seasoned home inspector knows that there are dozens of different systems and components that need to be thoroughly examined. These include heating, central air conditioning, plumbing, electrical, roof, attic, walls, ceilings, floors, windows and doors, basement, and structural elements. You've likely seen it all, from shoddy foundations and roofing that may as well be non-existent to pest infestations and leaky plumbing. But there are several top issues that a thermal camera in particular can help with, commonly found and hard to see with the naked eye.

ENERGY AUDITS

Detecting heat loss and air infiltration.

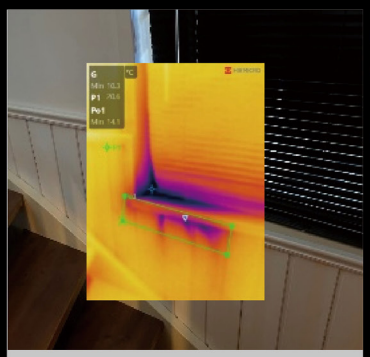
◆ FACTS

Energy efficiency depends heavily on the integrity of a building's envelope, including attics, windows, doors, and more. Air leaks not only cost more money on your heating and cooling bills but are also a source of poor air quality. Buildings that continuously leak air might be susceptible to moisture issues, which can invite things like mold into the building.

◆ BENEFITS

Thermal imaging can help identify where climate-controlled air is escaping or where unconditioned air enters a building unintentionally. And helping owners of residential structures apply corrective action and save energy costs. Customers use HIKMICRO Thermal cameras to make important diagnoses in buildings, helping owners of residential structures apply corrective action to reduce building insurance and improve the environment.

◆ THERMAL IMAGES



Air infiltrates from the lower left corner of the window

Cold air leaks from the bottom of the door

◆ RECOMMENDED SOLUTIONS

M20W

G61

INSULATION

Identify areas with missing or inadequate insulation.

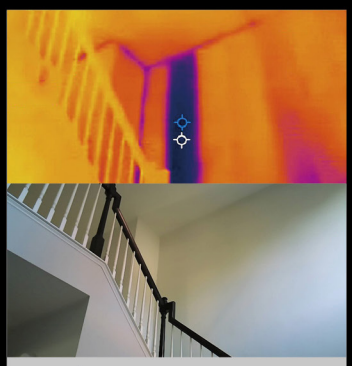
◆ FACTS

When insulation is missing in walls or rafters, it can cause energy loss and increase heating and cooling costs. It can also create thermal variances that interact with outside weather to create issues such as moisture intrusion and terrible molds.

◆ BENEFITS

HIKMICRO thermal imager can help find areas where insulation is missing, sagging, wet, or damaged, even most of the insulation is hidden behind drywall. If a panel of drywall is not showing a consistent color on the infrared image, this often means there are problems with the insulation.

◆ THERMAL IMAGES



The blue square part indicates the lack of insulation in the wall

Missing Insulation on the vertical wall of this vaulted ceiling

◆ RECOMMENDED SOLUTIONS

SP60

G61

HVAC

Detect radiator blockages, water leaks in radiant floor heating, air duct leaks, refrigeration-related problems, and more

◆ FACTS

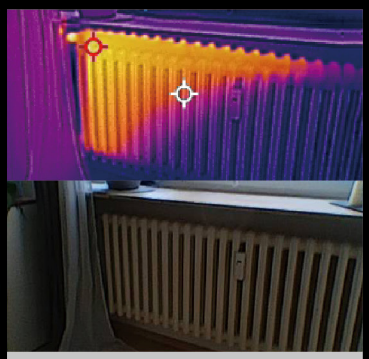
HVAC systems can be extremely complex and require proper maintenance to ensure optimal efficiency and performance. Radiator blockages, water leaks in hydronic radiant floor heating systems, air duct leaks, refrigeration-related problems and more can all lead to costly repairs, increased energy costs, and poor indoor air quality.

◆ BENEFITS

The ability to find and mediate inefficiencies through a building's HVAC system can contribute to overall energy efficiency, especially in buildings where heating, cooling, and plumbing systems exchange thermal energy. Thermal imaging can help you diagnose these problems faster. You'll know the root of the problem sooner, so you can get to work fixing it faster.

◆ THERMAL IMAGES

Air duct leaks from the joint



Radiator blockages at the right side

◆ RECOMMENDED SOLUTIONS

Pocket2

B20

ELECTRICAL FAULTS

Identify Hot, Check Installed Load, and Phase Comparison

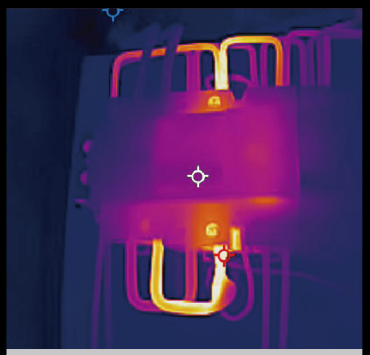
◆ FACTS

Damaged wires, electrical components, and connections would cause a variety of problems. Faulty wiring or components aging may result in electronic damage due to overload. Electric sparks may cause large-scale fires, which can cause property damage and even civilian injuries. By diagnosing the issue early on, technicians can conduct repairs before a total failure occurs.

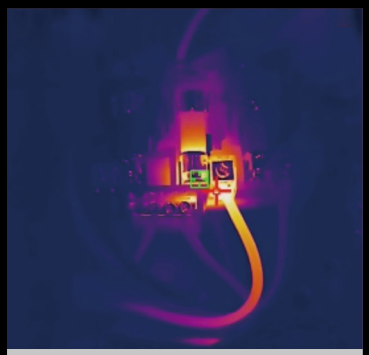
◆ BENEFITS

Most electrical problems exhibit a gradual rise in temperature prior to their failure. By making heat visible, HIKMICRO thermal imaging cameras allow technicians to see what cannot be seen with the naked eye. With the electrical fault sites identified, repairs can be made before complete failure occurs, preventing personal injury and property damage.

◆ THERMAL IMAGES



Hot Breaker



Hot Wires

◆ RECOMMENDED SOLUTIONS

Pocket2

B20

MOISTURE

Detect potential moisture in walls, ceilings, and floors

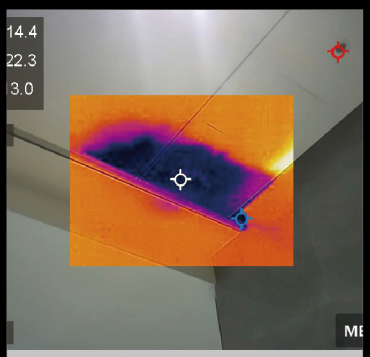
◆ FACTS

Moisture issues can come from a number of both external and internal sources. Commonly include roof leaks, improperly sealed windows, stucco issues, plumbing leaks, tub leaks, etc. Moisture intrusion can lead to structural integrity issues in roofs, floors, ceilings & beams, which in turn can lead to more property damage.

◆ BENEFITS

HIKMICRO Thermal imaging cameras can help identify areas of hidden moisture, which can then be repaired. Water will typically give up its heat at a slower rate than its surrounding materials because of its high thermal capacity, so thermal cameras can see if any areas have accumulated moisture by detecting temperature differences.

◆ THERMAL IMAGES



Air duct leaks from the joint

Radiator blockages at the right side

◆ RECOMMENDED SOLUTIONS

M20W

PEST AND INSECT ACTIVITY

Track pests and insects, such as termites, rodents, and more

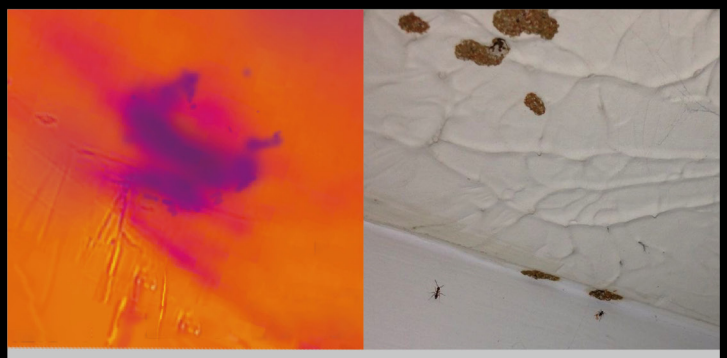
◆ FACTS

Invasion of pests (termites, bees, mice, other rodents, etc.) can damage building structures and even human health. Traditional pest detection methods rely on the patchwork of various pieces of evidence (such as animal feces, chewing noodles, wood rot, etc.), which are more prone to human error.

◆ BENEFITS

The presence of pests can change the normal heat pattern of walls and floors. The concentration of active pest activity can change the surface temperature and thermal pattern of the wall lining, enough for the HIKMICRO thermal imaging camera to detect it as a hot spot.

◆ THERMAL IMAGES



see the insulation anomalies caused by termites

◆ RECOMMENDED SOLUTIONS

M30

HIKMICRO ANALYZER

EFFICIENT, POWERFUL THERMAL ANALYSIS AND REPORTING

HIKMICRO Analyzer is a powerful and free licensed PC software designed to help users manage and analyze thousands of thermal images and videos and quickly create professional reports. Compatible with files from HIKMICRO handheld thermal cameras, providing the features you need to simplify your workflow and increase your productivity.

- Free license
- Import, edit and manage files
- View, edit and analysis radiometric images and videos
- Advanced measurement and image analysis
- Batch processing with all image and measurement controls
- Quick reporting with pre-defined or customized templates

HIKMICRO VIEWER

WIRELESS ANALYSIS, REPORTING AND SHARING

The HIKMICRO Viewer is a powerful and intuitive mobile application designed to help users wirelessly stream video, analyze thermal images and video, quickly create reports and share with customers and coworkers in the field. It allows you to import stored files from the camera to the mobile device. Use the app to thermally adjust levels and spans with one touch, change color palettes, adjust parameters, and more.

- Free license
- Import images and videos from camera
- Quick reporting and sharing
- Screen Stream Mirroring
- Advanced measurement and image analysis
- After-sales contacts and online support services

Model	B20	Pocket2	M20W	M30	G61	SP60
Description	Compact Fast Troubleshooting Tools	Pocket Size Design, Fits in Any Pocket	Advanced Thermal Imaging Camera with Wide Ange	Advanced thermal imaging camera with Manual Focus	Ultra High Resolution. More Efficient Inspection	Ultra-high Performance and Maximum Flexibility
IR Resolution	256 x 192 (49,152 Pixels)	256 x 192 (49,152 Pixels)	256 x 192 (49,152 Pixels)	384 x 288 (110,592 Pixels)	640 x 480 (307,200 Pixels)	640 x 480 (307,200 Pixels)
SuperIR	Yes, on Captured Images					
FOV (H × V)	37.2° × 50.0°	50° × 37.2°	50° x 37.2°	37.5° × 28.5°	25° / 7° / 12° / 50°	50.0° / 24.8° / 12° / 8°
Temperature Range	-20 °C to 550 °C (-4°F to 1022°F)	-20 °C to 400 °C (-4°F to 752°F)	-20 °C to 550 °C (-4°F to 1022°F)	-20 °C to 550 °C (-4°F to 1022°F)	-20 °C to 650 °C (-4 °F to 1202 °F)	-20 °C to 650 °C (-4 °F to 1202 °F)
Frequency	25 Hz				50 Hz	25 Hz
NETD	< 40 mK			< 35 mK		< 30 mK
Operation Time	6 Hours	4 Hours	6 Hours x 2	4 Hours x 2	4 Hours x 3	4 Hours x 2
Focus Mode	Focus Free			Manual Focus	Laser Assisted AF/Continuous AF/AF/Manual Focus/Touch AF	
Display	240 × 320 Resolution, 3.2"LCD Screen	640 × 480 Resolution, 3.5" LCD Touch Screen with Auto-rotation			800 × 480 Resolution, 4.3" LCD Touch Screen	1280 × 720 Resolution, 5" LCD Touch Screen
Visual Camera	1600 × 1200 (2 MP)	3264 × 2448 (8 MP)				
LED Flashlight	√	√	√	√	√	√
Connect With App	√	√	√	√	√	√
1-Tap Level & Span	×	√	√	√	√	√
Video Recording	×	√	√	√	√	√
Laser	×	×	Laser Pointer	Laser Pointer	Laser Distance Meter	Laser Distance Meter
Removable Batteries	×	×	√	√	√	√
Interchangeable Lenses	×	×	×	×	√	√
Inspection Route	×	×	×	×	√	√
GPS & Compass	×	×	×	×	√	√
Viewfinder	×	×	×	×	×	√
Rotating Lens & Screen	×	×	×	×	×	√

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