

# Fluke infrared tools

Built for the toughest industrial environments

# Built for the toughest industrial environments

Get the infrared cameras that are built on 65+ years of industrial experience. Each camera is built without compromise to the Fluke standard of ruggedness, reliability and accuracy. Designed for everyday use, in any environment for thorough and accurate inspections.

Choose from the affordable and versatile Performance Series, the Professional Series that offers superior image quality, or the Expert Series that gives you HD images on a large touchscreen.



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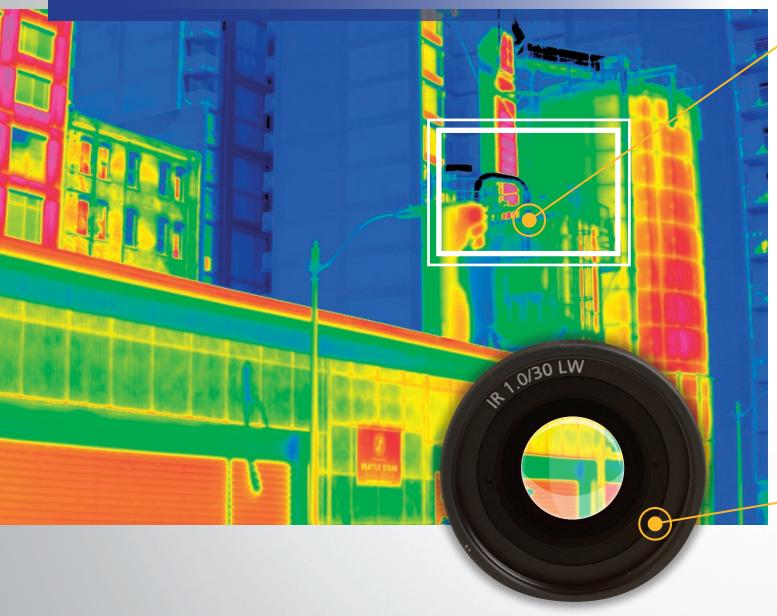
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FLUKE ®

### Look beyond pixels. You'll SEE THE DIFFERENCE.

Pixels are only part of the equation that determines infrared image quality.







#### Premier focus technologies.

Getting in-focus images can be painstaking with manual focus systems, and some autofocus systems may not focus on your desired target. Fluke Professional and Expert Series cameras include some of the most innovative focus technologies available.

- Capture a clear, accurate image focused throughout the field of view with MultiSharp™ Focus. Simply point and shoot—the camera automatically processes a stack of images focused near and far.
- Get an instant in-focus image of your designated target. LaserSharp<sup>®</sup>
  Auto Focus uses a built-in laser distance meter that calculates and
  displays the distance from your designated target with pinpoint
  accuracy—and immediately adjusts the focus.

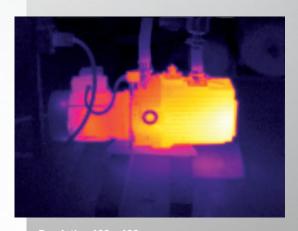


#### Simply the best optics.

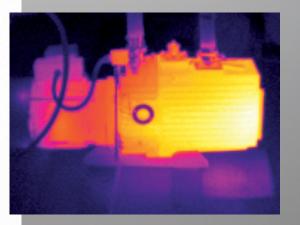
Fluke uses only 100% diamond-turned germanium lenses covered with a specialty coating. This is the most efficient available material to transmit energy to the detector to produce high quality infrared images.

#### HOW FOV (FIELD OF VIEW) IMPACTS IMAGE QUALITY

We all know that detector resolution is imperative to image quality, but the level of detail that you can see in an image is also impacted by the field of view.



Resolution 160 x 120
FOV 31 ° x 22.5 °
D:S 295:1
Details in this image are a bit blurry due to the wider field of view that leads to a lower D:S.



Resolution 160 x 120 FOV 23 ° x 17 ° D·S 400·1

Same resolution, but the tighter field of view enables you to see more details in the target from the same distance.

Both images were taken with Fluke cameras at the same distance from the target.

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## The future of infrared is here in STUNNING HD resolution.

Your work as an expert thermographer is defined by the quality of the infrared images you take and your ability to analyze what's before you. The most pressing challenge lies not in analyzing what you see, but the fear of missing something you can't.



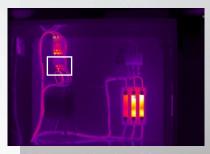
#### AN EXAMPLE OF WHERE TO USE THESE CAMERAS

Perfect for a substation technician, distribution technician or utilities engineer in the transmission and distribution segments of utilities, who is looking for the best accuracy and image resolution. With high temperature options (up to 2000 °C / 3632 °F), these infrared cameras are perfect for inspecting transmission lines, switchgears, transformers, and insulators. They are great for checking conductor and insulator conditions, coolant oil levels in transformers and pinpointing very small hot spots.

#### It's time to see what you're missing. Up to 3.1 million pixels with SuperResolution.

Instantly capture highly detailed images and start analyzing your images while still in the field. See incredible detail from a distance or extremely close up. On camera, you get up to 10x the pixels of a standard 320 x 240 camera (based on the TiX1000).

SuperResolution mode, available when viewed in software, lets you see HD resolution with up to 3.1 million pixels—4x the on-camera standard resolution.



Full image, taken from 5 feet away with a TiX1000 infrared camera. The area shown in the white box is lown up below.

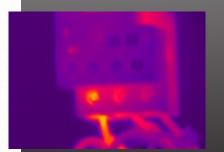
## The industry's most advanced focus options.

Precisely focus images by calculating the distance to your target with a laser distance meter, using LaserSharp® Auto Focus1.

EverSharp multifocal recording gives you edge-to-edge clarity of targets both near and far in one image, which is created by capturing multiple images from varying focal distances.



Regular resolution



Get 4x the pixels, and see incredible detail in your image

#### TiX1000/620

- Capture tough shots with a large 5.6 inch rotating LCD display
- Optimized for outdoor inspections with viewfinder that reduces outdoor glare
- High temperature option up to 2000 °C1
- · Capture spectacular images close up or from a distance with your choice of seven optional lenses including 2x telephoto, 4x telephoto, wide angle, super wide angle and 3 macro lenses<sup>1</sup>
- Identify rapid changes in temperature with the optional Subwindowing feature (up to 240 Hz)



<sup>&</sup>lt;sup>1</sup>Features vary by model; see pages 28-30 for model specifications



# TABLET-SIZED SCREEN. More details. Faster decisions.

You need maximum flexibility with an ergonomic design that allows you to easily navigate over, under and around hard-to-reach objects. With a lens that rotates a full 240 degrees and a tablet-sized 5.7 inch touchscreen LCD, you can aim and focus from a comfortable angle and easily capture the target that was once impossible to see.



#### AN EXAMPLE OF WHERE TO USE THESE CAMERAS

Built for heavy industrial environments, a plant technician in oil & gas or chemical processing can use this tool for a number of different inspections. With the rotating lens, these cameras are an ideal form factor for large asset inspections, such as transformers, tanks, turbines or furnaces. The ergonomic design of these tools make them great for a long inspection day of detecting solid levels of tanks or inspecting conditions of refractories.

## 100 % Focused—Every object. Near and far.

Capture a clear, accurate image focused throughout the field of view with MultiSharp<sup>TM</sup> Focus. Be sure your images will be focused and high-quality when you go back to the office to view them, even when working outdoors with the possibility of glare on your screen. Simply point and shoot—the camera automatically processes a stack of images focused near and far.



Manual focu



## See around obstacles.

Easily maneuver over, under and around objects with the 240° rotating lens while viewing the screen at a comfortable angle.



MultiSharp™ Focus

MultiSharp™ Focus produces an image focused throughout the field of view

#### TiX580/560/520/500

- See small details in the image and discover anomalies faster with up to 640 x 480 resolution images and the 5.7 inch tablet-sized touchscreen
- Edit and analyze images on camera—edit emissivity, enable color alarms and markers, and adjust IR-Fusion<sup>®</sup> visual and infrared image blending
- Get 4x the pixel data with SuperResolution, to create up to 1280 x 960 images<sup>1</sup>
- Find subtle temperature differences easily—instantly improve thermal sensitivity to as low as 30 mK<sup>1</sup>
- Monitor processes with video recording, live video streaming, remote control<sup>1</sup>, or auto capture
- Integrate temperature data, images and video into R&D analysis and reports with MATLAB® and LabVIEW® Tool Boxes¹
- Collaborate from the field in real time by wirelessly syncing images directly from your camera to the Fluke Connect\* app on your smartphone, and optimize, analyze and generate reports with SmartView\* desktop software<sup>2</sup>

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<sup>&</sup>lt;sup>1</sup>Features vary by model; see pages 28-30 for model specifications

<sup>&</sup>lt;sup>2</sup>Within your provider's wireless service area; Fluke Connect\* is not available in all countries

Ti480/450/400/300

#### FLUKE ®

# Autofocus redefined. ON TARGET AND IN FOCUS. Every. Single. Time.

You're it when it comes to getting the right answers—there's no room for fuzzy, out-of-focus infrared images. Potential problems hide behind incorrect readings, which is why you need a camera with LaserSharp® Auto Focus for crisp, sharp images.



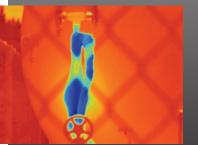
#### Precisely focused images.

If your image is out of focus, temperature measurements could be off by up to 20 degrees or more. Getting crisp images in manual focus takes time and careful attention. Patented LaserSharp® Auto Focus with laser driven target detection gives you an in-focus image of your designated target with the push of a button. The built-in laser distance meter instantly calculates and displays the distance to your target, and the focus engine immediately adjusts the focus.





Passive autofocus systems may only capture the near-field subject (fence



Using a laser pointer with LaserSharp Auto Focus captures your target.

LaserSharp® Auto Focus gives you in-focus images with the push of a button.

#### Navigate easier than ever.

The Professional Series cameras have stunningly clear 3.5-inch, up to 640 x 480 high resolution responsive touch screens to easily spot problems, with intuitive controls to quickly navigate to the next image or switch modes. Plus, all camera features can be accessed one-handed-even with gloves-because of the large buttons.

#### Ti480/450/400/300

- Pistol grip form factor with up to 640 x 480 resolution for quick, point and shoot troubleshooting
- Capture clear, accurate images focused throughout the field of view with MultiSharp<sup>TM</sup> Focus<sup>1</sup>
- Get 4x the pixel data with SuperResolution, which captures multiple images and combines them to create up to 1280 x 960 images<sup>1</sup>
- Digitally document critical information with your infrared image using IR-PhotoNotes™, voice annotation, or text annotation
- Monitor processes with video recording, live video streaming, remote control<sup>1</sup>, or auto capture
- Collaborate from the field in real time by wirelessly syncing images directly from your camera to the Fluke Connect\* app on your smartphone, and optimize, analyze and generate reports with SmartView® desktop software2

<sup>&</sup>lt;sup>1</sup>Features vary by model; see pages 28-30 for model specifications

<sup>&</sup>lt;sup>2</sup>Within your provider's wireless service area; Fluke Connect<sup>a</sup> is not available in all countries

FLUKE CONNECT



# Our bestselling cameras just got BETTER.

You deserve a leading-edge visual infrared experience. With our smartest, most intuitive user interface yet, the Ti480 PRO and Ti450 PRO offer increased thermal sensitivity to capture the smallest differences, the latest technology for on-screen clarity and lens compatibility to capture targets tiny-to-large.



your tool belt.

#### Faster and easier to use than ever.

The Ti450 PRO and Ti480 PRO include an improved, user-tested, touch screen interface. The display integrates a contemporary design, featuring multiple rectangular markers in-camera. It helps your crew quickly identify min/max temperatures for an area of the equipment or equipment array.



Improved interface helps to quickly identify min/max temperatures.



Screen comparison between Ti450 and Ti450 PRO. Diagnose problems faster with sharper onscreen infrared images with clearer color differentiation.



# temperature differences.

Catch smaller

With the enhanced measurement accuracy and the wider dynamic temperature range of the Ti450 PRO and Ti480 PRO—up to 1500 °C with NETD as low as 25 mK— you can collect precise information for making informed decisions.

#### Ti450 PRO/Ti480 PRO

- Increased sensitivity to visualize temperature differences
- Easier to visualize and diagnose issues with sharper on-screen images, multiple rectangle markers and 9 color palettes
- More intuitive visual interface
- More flexibility to visualize targets-tiny to large with interchangeable smart lenses—no calibration required
- Capture a clear, accurate image focused throughout the field of view with MultiSharp™ Focus.
- Get an instant in-focus image of your designated target with LaserSharp® Auto Focus

quality are critical, these cameras are the perfect additional to



# Infrared for every day. SF6 gas detection when you need it.

Finally, a safe, easy and affordable way to catch SF6 leaks. Increase efficiency and save money with a top performing infrared camera that delivers pinpoint, state-of-the-art SF6 detection—conduct two critical functions with a single tool.



# Designed for dependability.

Using the technology from Fluke's bestselling pistol grip camera, the Fluke Ti450 SF6 easily switches from infrared to gas mode with a turn of a dial, making it easy to change modes on the fly when you are in the field.



Safely investigate equipment using the included tripod mount and eyepiece



#### Two tools in one. At a one of a kind price.

Best of all, it's affordable enough to own, so you can conduct infrared and gas inspections whenever and wherever you want without having to pay heavy rental charges or hire expensive contractors.



Everything you need to detect an SF6 leak is included in the Ti450 SF6 case

#### Ti450 SF6

- Detects the location of an SF6 leak-without shutting down equipment
- 320 x 240 resolution for gas and infrared images; SuperResolution increases to 640 x 480, only in infrared mode
- Get in-focus images in both infrared and gas modes with a touch of a button with LaserSharp® Auto Focus
- $\bullet \ \ \text{Capture clear, accurate infrared images focused throughout the entire field of view with $MultiSharp^{\text{TM}}$ Focus }$
- Compatible with smart lenses that require no calibration when swapping them between cameras—2x telephoto lens included in kit
- Small and lightweight, fits easily into your tool box



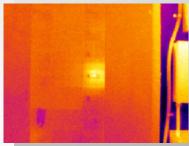
### Rugged. Accurate. BUILT TO PERFORM.

You need quick, accurate infrared imaging in a rugged body. Get up to 320 x 240 resolution, so you can easily identify small details that could indicate a big problem.

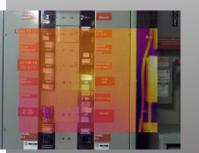
# AN EXAMPLE OF WHERE TO USE THESE CAMERAS For daily inspections where you need results immediately, these rugged cameras are great. HVAC/R contractors and facilities maintenance technicians looking for quick, frontline troubleshooting of hot spots will value this tool. They are ideal for users open to manual, auto, or fixed focus options, and for those who are concerned about larger $\Delta Ts$ .

#### Precisely blended images offer more detail.

Image quality is everything when it comes to quickly analyzing infrared images. You need the right level of detail in your infrared image to pinpoint specific areas of concern. Fluke Performance Series IR cameras blend visible light and infrared images using patented IR Fusion<sup>®</sup> technology<sup>1</sup> to capture a clear 5MP real-world picture of your target. Blend at different preset levels and add picture-in-picture (PIP) to capture an incredibly revealing hybrid image.



Full infrared





50 % Blending, cropped in to see detail

Easily read the breaker label with IR Fusion technology—precisely blended visible and infrared images.



### environment.

See potential problems easily with the 3.5 inch LCD screen. The rugged, one-handed design (right or left handed) helps you work up a ladder or in virtually any environment, and leaves one hand free.

#### TiS75/S65/S60/S55/S50/S45/S40/S20/S10

- Get precisely focused images from as close as 15 cm (6 in) with manual focus, or choose fixed focus for faster images without the need to focus from 45 cm (1.5 ft) and beyond
- Monitor your battery charge and avoid an unexpected loss of power with the smart battery's LED charge indicator
- Get easy access to saved images with a removable SD card
- Digitally document critical information such as the location of the equipment or the motor nameplate with the infrared image using IR-PhotoNotes™ or voice annotation¹
- Collaborate from the field in real time by wirelessly syncing images directly from your camera to the Fluke Connect\* app on your smartphone, and optimize, analyze and generate reports with SmartView desktop software2

<sup>&</sup>lt;sup>1</sup>Features vary by model; see pages 28-30 for model specifications

<sup>&</sup>lt;sup>2</sup>Within your provider's wireless service area; Fluke Connect\* is not available in all countries

# SOFTWARE for Fluke infrared cameras.

In the field or the office, Fluke Connect® makes it easy for you to analyze and organize thermal images in compelling reports. In addition to reports, images in Fluke Connect are available to the whole team on any mobile device, browser, or laptop so everyone can have access to the latest information.



#### Fluke Connect® mobile app.

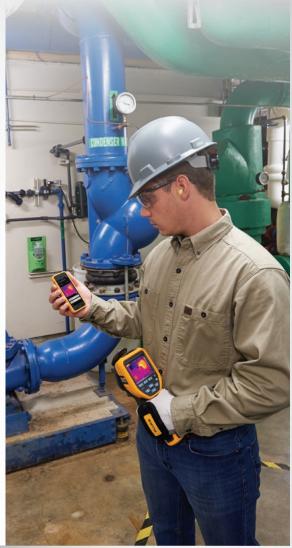
Wirelessly sync images directly from your camera to Fluke Connect\*. Email images to colleagues from the field to collaborate in real time. Edit and analyze images and generate reports on the go.

Download the free app by searching "Fluke Connect" in the Apple or Android app store



Powerful, new Fluke Connect\* software for your Windows desk-top computer makes it easy to edit images, perform advanced analytics, generate quick, customizable reports and export images to the format of your choice. Fluke Connect\* is a comprehensive and connected software platform that represents the future of integrated equipment maintenance.

Download free at www.fluke.com/flukeconnectti



#### Fluke thermal imaging software features at a glance

- Download, view and wirelessly transfer thermal images
- Share images and measurements with remote team members
- Adjust level and span, IR Fusion® blending and color palettes
- Add and edit markers and color alarms
- · Add text, audio and photo annotations
- Export radiometric .is2 images in BMP, JPG, PNG, GIF and TIFF format
- Create thermal imaging reports and export as PDFs
- Export temperature data in CSV or XLS format
- Search images by date, severity & title
- Free cloud storage for anywhere, anytime access (can be used offline)
- Customizable report templates
- Easy to use group editing feature

Fluke Connect\* analysis and reporting software is available in all countries but Fluke Connect system is not. Please check availability with your authorized Fluke distributor.

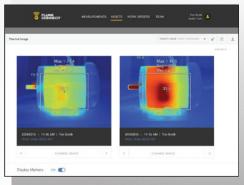
#### Quick, Confident Decsions with Fluke Connect® Assets

Fluke Connect Assets wirelessly transfers images from the camera to an asset record with no mistakes. This way, your whole team can see accurate temperature trends by asset and make confident decisions.

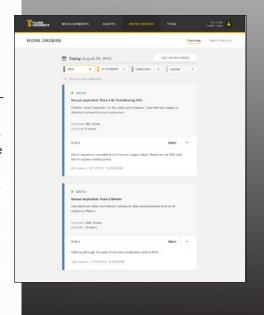


#### Receive instant alarms.

Set alarms based on equipment conditions you configure. Share live video and readings to troubleshoot problems from any location. And save yourself the time and effort of going to the plant floor or back to the office every time there is a question.



Asset Analysis dashboard: Easily compare complex data



#### **FLUKE**

#### Fluke Connect® Assets

- · Assign infrared images to an asset and view changes in your equipment over time
- · Receive instant alarms based on asset conditions
- Generate work orders that include measurements and infrared images to provide more complete information to your maintenance teams
- · Reduce your paperwork, increase your efficiency
- · Minimal investment and setup time needed

Download the phone app at:





Fluke Connect\* analysis and reporting software is available in all countries but Fluke Connect system is not. Please check availability with your authorized Fluke distributor.



# SEE the impossible.

#### **Telephoto lenses**

**LENSES** 

The difference between finding and potentially diagnosing the problem, and not seeing any discrepancy at all. Get the detail you need, even from a distance, when you view your target magnified 2 or 4 times more than a standard lens.





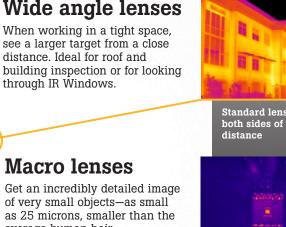


Standard (left), 2x telephoto (center) and 4x elephoto (right)—see the right level of critical nfrared detail

#### Wide angle lenses When working in a tight space,

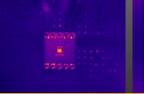
see a larger target from a close distance. Ideal for roof and building inspection or for looking through IR Windows.

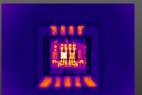
average human hair.





both sides of the building at once from the same





Standard (left) and 25 micron macro lens (right)see detail in very small objects

Lens type	Use for	Applications
2x telephoto	Small to medium sized target, viewed from a distance	Maintenance, electrical, and process technicians—when equipment is too high, difficult to reach or unsafe to approach     Building inspection—see fine detail from a distance
4x telephoto	Small target, viewed from a great distance	Petrochemical—tall stacks  Power utilities generation and transmission—long distances  Metallurgy and metals refinement—too hot to approach; may have equipment near refinery that needs inspection
Wide angle	Large target, viewed from a relatively close distance	<ul> <li>Maintenance, electrical and process technicians—when working in a tight space or needing to view a large area</li> <li>Building inspectors—for roofing and industrial building inspections, save time by seeing a much greater area at once</li> </ul>
Macro	Tiny to microscopic target, viewed from extremely close	Research and development  Electronics design and validation  Microscopic thermography

279 FC

# CHANGE THE WAY you see digital multimeters.

Combining a full-featured digital multimeter with integrated thermal imaging, the 279 FC thermal multimeter helps you find, repair, validate and report many electrical issues quickly so that you are confident problems are solved.







#### 279 FC

- Locate the problem immediately with an 80 x 60 infrared image (non-radiometric) and center-point temperature measurement
- Full-featured digital multimeter has 15 measurement functions including: ac/dc voltage, resistance, continuity, capacitance, diode test, min/max, ac current (with iFlex\*) and frequency
- Full-color 3.5 inch LCD screen provides clean, crisp readings
- Rechargeable lithium ion battery allows for a for a full work day (10+ hours) and auto power off saves battery power
- Transmit results wirelessly with the Fluke Connect<sup>®</sup> system<sup>1</sup>
- iFlex option expands your measurement capabilities so you can get into tight, hard to reach spaces for current measurement (up to 2500 A ac)

<sup>1</sup>Within your provider's wireless service area; Fluke Connect<sup>®</sup> is not available in all countries.

#### VISUAL IR THERMOMETER

VT04/VT04A



## Designed to SEE IT ALL.

Say good-bye to spot-by-spot readings. An infrared heat map superimposed over a visual image provides the context you need to clearly see temperature-related issues—priced to outfit the whole team.



#### VTO4/VTO4A

- Handy when you need it; easily fits in your tool bag or pocket
- Intuitive enough to use right out of the box
- Easily access saved images with the removable SD card
- Save in .bmp format when you only want the image, or choose .is2 format so you can optimize images and create reports in SmartView\* software (available for download at www.fluke.com/vtsmartview)
- Protect your visual IR thermometer with the included hard case (VTO4) or soft case (VTO4A)
- Choose your preferred way of powering your visual IR thermometer: a rechargeable Li-ion battery (VTO4) or 4 AA batteries (VTO4A)



# For FAST, EASY, DEPENDABLE readings, these are the go-to tools.

For a quick temperature reading, it doesn't get much easier than an IR Thermometer from Fluke. So rugged and fast you'll always want to keep it with you.



#### Quick and simple measurements.

With a start-up time of a mere second, you'll never have to wait on your tool. Simply pull the trigger and instantly get a spot measurement. Laser guides show where you're measuring, and dual lasers on some models indicate the area the measurement is based on.



## Rugged, ready and reliable.

You have a tough job. Tough on you and your tools. That's why Fluke IR thermometers are ready for action even in harsh conditions—tested to withstand dust and water with an IP54 rating <sup>1</sup>. Some can even survive a 3 meter drop <sup>1</sup>. For rugged reliability, it's tough to beat Fluke.



#### 572-2/568/62 MAX+/64 MAX

- Measure accurately from farther away with up to a 60:1 distance to spot ratio (572-2 60:1, 568 50:1, 62 MAX+ 12:1, 64 MAX 20:1)
- Measure temperatures up to 900 °C (1652 °F):
   572-2 -30 °C to +900 °C (-22 °F to +1652 °F), 568 -30 °C to +800 °C (-22 °F to +1472 °F),
   62 Max+ -30 °C to +650 °C (-22 °F to +1202 °F), 64 MAX -30 °C to 600 °C (-22 °F to 1112 °F)
- Save time with available onboard, downloadable data storage of temperature readings (572-2 and 568 models)
- Get contact measurement with 2-in-1 IR thermometers (572-2 and 568 models)
- Intrinsically safe model available for use in hazardous environments including oil and gas (568 Ex)<sup>2</sup>.
- Identify the area you're measuring with dual-laser sighting on the 572-2 and the 62 Max+ or with single-laser sighting on the 568 and 64 MAX
- Get alerts when a temperature is outside the expected range with high and low alarms
- Flashlight (64 MAX) and large, easy-to-read backlit LCD display for easy viewing even in a dark environment
- Capture spot temperatures unattended (64 MAX)
- 99 data point logging (64 MAX)

<sup>1</sup>Testing was done on the 62 Max and 62 Max+
<sup>2</sup>See 568 Ex product page on Fluke website for details

#### **ACCESSORIES**

#### FLUKE ®

# Increase the SAFETY and SPEED of your electrical infrared inspections.

A company's greatest investment is not the equipment that's behind the panel door. It's the electricians, engineers and inspectors who risk their lives every day doing their jobs.



#### CV400/401/300/301/200/201

- Highest arc blast safety rating available—63 kA when properly installed
- Under 5 minute installation with 1 person; no need to remove panel door
- Available in 2 inch (50 mm), 3 inch (75 mm), and 4 inch (100 mm) sizes with convenient ¼ turn access
  or security key access options
- Clearly view equipment both visually and thermally with ClirVu\* coating that protects the optic
- Corrosion and UV resistant for challenging outdoor environments—IP67 rugged

# EXPAND the capabilities of your infrared camera.

#### **Batteries and chargers**

Expand your powering capabilities with an extra battery, charging base or car charger. All Fluke Professional and Performance series cameras feature interchangeable smart batteries. With the LED charge indicator, monitor your battery charge and avoid an unexpected loss of power with a push of a button.

Product	Description
SBP3	Rechargeable lithium-ion smart battery
SBP4	Rechargeable lithium-ion smart battery
SBC3B	Battery charging base
TI-CAR CHARGER	Car charger

#### **Tripod mounts**

Get sharp, steady images by attaching your camera to a tripod with a tripod mount (TRIPOD3). Set your camera to auto-capture to get multiple shots of the same target.

#### Sun visors

No need to squint when working outside. Get a sun visor (VISOR3) for your camera to reduce screen glare.



Not all accessories are compatible with all cameras.



	Expert Series Thermal Imagers							
	TiX1000	TiX620	TiX580	TiX560	TiX520	TiX500		
IFOV (spatial resolution)	0.6 mRad	0.85 mRad	0.93 mRad		1.31 mRad			
Detector resolution	1024 x 768 (786,432 pixels) SuperResolution mode: 2048 x 1536 (3,145,728 pixels)	640 x 480 (3 SuperResolution r (1,228,80		e: 1280 x 960 SuperResolution mode: 640 x 480 (307 200 pixels)				
Field of view	32.4 °H x 24.7 °V	32.7 °H x 24 °V	34 °H x 24 °V		24 °H x 17 °V			
Compatible lenses	2 wide angle, 2 telephoto, 3 macro and 1 standard	1 wide angle and 1 telephoto	TiX580: 2x telephoto	and wide angle; TiX560	smart lenses – D, TiX520, TiX500: 2x a icron macro	), TiX520, TiX500: 2x and 4x telephoto, wide		
Wireless connectivity	-	-	Fluke Connect- app con	npatible. Wireless connec Android™ 4.3 and u	ctivity to PC, iPhone- and p, and WiFi to LAN <sup>1</sup>	iPad= (iOS 4s and later),		
IR-Fusion*		AutoBlend™ mode, c	ontinuous blending		AutoBlen	d™ mode		
Picture-In-Picture (PIP)			Picture-i	n-Picture				
Focus system	LaserSharp- Auto Focus, auto focus, manual focus, and EverSharp multifocal recording	Auto focus, manual focus, and EverSharp multifocal recording	MultiSharp™ Focus, LaserSharp∗ Auto Focus with built-in laser distance meter and admanual focus					
Display	800 pixel	olor TFT display, 1280 x resolution, rlight operation	5.7 inch touchscreen LCD, 640 x 480 pixel resolution					
Design	Camo	corder	Ergonomic design with a 240 degree rotating lens					
Thermal sensitivity*	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.04 °C at 30 °C target temp (40 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK)	≤ 0.04 °C at 30 °C target temp (40 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)		
Temperature measurement range	-40 °C to +1200 °C (-40 °F to +2192 °F) High temperature option—request at time of order: up to 2000 °C (3632 °F)	-40 °C to +600 °C (-40 °F to +1112 °F) High temperature option—request at time of order: up to 2000 °C (3632 °F)	-20 °C to +800 °C (-4 °F to +1472 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)	-20 °C to +850 °C (-4 °F to +1562 °F)	-20 °C to +650 °C (-4 °F to +1202 °F)		
Frame rate	30 Hz or 9	Hz versions	60 Hz or 9 Hz versions					
Subwindowing modes available: (add-on at time of order—subwindowing options are not available on 9 Hz models)	Option 1: 640 × 480 (60 fps) Option 2: 384 × 288 (120 fps) Option 3: 1024 × 96 (240 fps)			-				
Software	SmartView* de	sktop software	SmartV	iew <sup>®</sup> desktop software a	and Fluke Connect mobi	le app <sup>1</sup>		
Voice annotation	60 seconds m	aximum recording time p	er image, reviewable pla	yback on camera; Blueto	oth headset provided (w	nere available)		
Text annotation			Ye	es				
Video recording			Standard and					
Streaming video (remote display)		hernet available in v* software	Yes, see the live stream of the camera display on your PC, smartphone, or TV monitor. Via USB, WiFi hotspot, or WiFi network to Smartview* software on a PC; via WiFi hotspot to the Fluke Connect* app on a smartphone; or via HDMI to a TV monitor					
Remote control operation	Y	es	Yes, through	n Smartview <sup>®</sup> desktop so	ftware or Fluke Connect	mobile app <sup>1</sup>		
	High temperature, low temperature, and isotherms (within range)							
Alarms		High ten	nperature, low temperatu	are, and isotherms (withi	n range)			

	Professional Series Thermal Imagers								
	Ti480 PRO	Ti450 PRO	Ti450 SF6	Ti480	Ti450	Ti400	Ti300		
IFOV (spatial resolution)	0.93 mRad	1.31 mRad		0.93 mRad	1.31 r	nRad	1.75 mRad		
Detector resolution	640 x 480 (307,200) or 1280 x 960 with SuperResolution (1,228,800 pixels)	,200) or 320 x 240 (76,800 pixels) or 640 x 480 with SuperResolution (307,200 pixels) 320 x 240 (76,800 pixels)		640 x 480 (307,200 pixels) SuperResolution mode: 1280 x 960 (1,228,800 pixels)	320 x 240 (76,800 pixels) SuperResolution mode: 640 x 480 (307,200 pixels)	320 x 240 (76,800 pixels)	240 x 180 (43,200 pixels)		
Field of view	34° H x 24° V	24 °H	x 17 °V	34 °H x 24 °V	24 °H x 17 °V				
Compatible lenses	angle, 2x and	nart lenses: wide 4x telephoto, on macro	Pre-calibrated smart lenses: wide angle, 2x and 4x telephoto	Pre-calibrated smart lenses – Ti480: 2x telephoto, wide angle	Pre-calibrated smart lenses: 2x and 4x telephoto, wide angle				
Wireless connectivity	Fluke Connect∙ app compatible. Wireless connectivity to PC, iPhone- and iPad- (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN¹								
IR-Fusion <sup>*</sup>	Five modes of image blending (AutoBlend™ mode, Picture-in-Picture (PIP), IR/Visible alarm, Full IR, Full visible light) add the context of the visible details to your infrared image								
Focus system	MultiSharp™ Focus, LaserSharp- Auto Focus with built-in laser distance meter and advanced manual focus  LaserSharp- Auto Focus with built-in laser distance meter and advanced manual focus  LaserSharp- Auto Focus with built-in laser distance meter and advanced manual focus								
Display			3.5 inch touchs	screen LCD, 640 x 480	pixel resolution				
Design			Rugged, ergo	onomic design for one	e-handed use				
Thermal sensitivity*	≤ 0.05 °C at 30 °C target temp (50 mK) ≤ 0.025 °C at 30 °C target temp (25 mK)			≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK) ≤ 0.05 °C at 30 °C target temp (50 mK)				
Temperature measurement range	≤ -10 °C to +1000 °C (-14 °F to 1832 °F)  -10 °C to 1500 °C (14 °F to 2732 °F)  -20 °C to +1200 °C (-4 °F to +2192 °F)			-20 °C to +800 °C (-4 °F to 1472 °F)	-20 °C to + (-4 °F to +	-20 °C to +650 °C (-4 °F to +1202 °F)			
Frame rate			6	60 Hz or 9 Hz version	s				
Subwindowing modes available: (add-on at time of order— subwindowing options are not available on 9 Hz models)	-								
Software			SmartView* desktop	software and Fluke	Connect mobile app <sup>1</sup>				
Voice annotation	60 seconds maximum recording time per image; reviewable playback on camera; optional bluetooth headset available but not required								
Text annotation	Yes								
Video recording			St	andard and radiomet	ric				
Streaming video (remote display)	Yes, see the live str		splay on your PC, smar Fi hotspot to the Fluke				smartView <sup>®</sup> software		
Remote control operation	Yes, through Smartview <sup>®</sup> desktop software or Fluke Connect mobile app <sup>1</sup>								
Alarms	High temperature, low temperature, and isotherms (within range)								
Warranty	Two-years (standard), extended warranties are available								

<sup>\*</sup>Best possible.

¹Within your provider's wireless service area; Fluke Connect\* is not available in all countries.



	Performance Series Thermal Imagers								
	TiS75	TiS65/60	TiS55/50	TiS45/40	TiS20	TiS10			
IFOV (spatial resolution)	2.0 mRad	2.4 mRad	2.8 mRad	3.9 mRad	5.2 mRad	7.8 mRad			
Detector resolution	320 x 240 (76,800 pixels)	260 x 195 (50,700 pixels)	220 x 165 (36,300 pixels)	160 x 120 (19,200 pixels)	120 x 90 (10,800 pixels)	80 x 60 (4,800 pixels)			
Field of view	35.7 °H x 26.8 °V								
Compatible lenses	_								
Wireless connectivity	Fluke Connect- app compatible. Wireless connectivity to PC, iPhone- and iPad- (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN¹								
IR-Fusion <sup>e</sup>	Five modes of image blending (AutoBlend™ mode, Picture-in-Picture (PIP), IR/Visible alarm, Full IR, Full visible light) add the context of the visible details to your infrared image								
Focus system	Manual focus	Manual focus (TiS65), Fixed focus (TiS60)	Manual focus (TiS55), Fixed focus (TiS50)	Manual focus (TiS45), Fixed focus (TiS40)		focus			
Display	3.5 inch (landscape) 320 x 240 LCD								
Design	Rugged, lightweight, ergonomic design for one-handed use								
Thermal sensitivity*	≤ 0.08	°C at 30 °C target temp	(80 mK)	≤ 0.09 °C at 30 °C target temp (90 mK)	≤ 0.10 °C at 30 °C target temp (100 mK)	≤ 0.15 °C at 30 °C target temp (150 mK)			
Temperature measurement range	-20 °C to +550 °C	(–4 °F to +1022 °F)	-20 °C to +450 °C (-4 °F to +842 °F)	-20 °C to +350 °C	(–4 °F to +662 °F)	-20 °C to +250 °C (-4 °F to +482 °F)			
Frame rate	30 Hz or 9 Hz versions	30 Hz or 9 Hz versions (TiS65), 9 Hz (TiS60)	30 Hz or 9 Hz versions (TiS55), 9 Hz (TiS50)	30 Hz or 9 Hz versions (TiS45), 9 Hz (TiS40)	9 Hz				
Software		Fluke C	connect mobile app and	SmartView* desktop so	ftware <sup>1</sup>				
Voice annotation	60 seconds maximum recording time per image, reviewable playback on camera; Bluetooth headset available separately (where available)								
Text annotation			-	-					
Video recording	Standard and radiometric —								
Streaming video (remote display)	Yes, to Fluke Connect* Smartview* desktop software or mobile app								
Remote control operation			-	-					
Alarms	High temperature, low temperature, and isotherms (within range)  High temperature, low temperature –								
Warranty	Two-years (standard), extended warranties are available								

Fluke infrared tools are on the job because they do the job.

#### **Questions?**

Contact your local Fluke representative for more information, or go to our website and request your free product demonstration.

#### Fluke training

Between our online videos and seminars, and live classes with our training partner, The Snell Group, you can continue to grow as a thermographer and infrared technician.



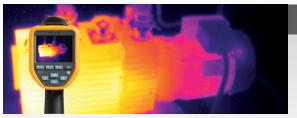
#### **Expert Series**

When you cannot be wrong, the Expert Series offers extremely detailed images. Plus, view images on a large, rotating, touchscreen display.



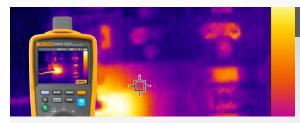
#### **Professional Series**

Focus with laser speed and accuracy on your designated target with LaserSharp\* Auto Focus. Get highly detailed images and advanced features.



#### **Performance Series**

Get detailed images in an affordable infrared camera that's rugged and reliable. The perfect tool for a quick inspection.



#### **Thermal Multimeter**

A full-featured digital multimeter with integrated thermal imaging



#### **Visual IR Thermometer**

An infrared heat map with hot and cold markers reveals potential areas of concern. See issues in context by blending the heat map with a visual image.



#### IR Thermometer

Get a quick temperature reading, even from a distance, with up to a 60:1 distance to spot ratio and a start-up time of a mere second.

<sup>\*</sup>Rest nossible

<sup>&</sup>lt;sup>1</sup>Within your provider's wireless service area; Fluke Connect\* is not available in all countries.



#### Fluke. Keeping your world up and running.®

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