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# Advanced Handheld Thermal Imager

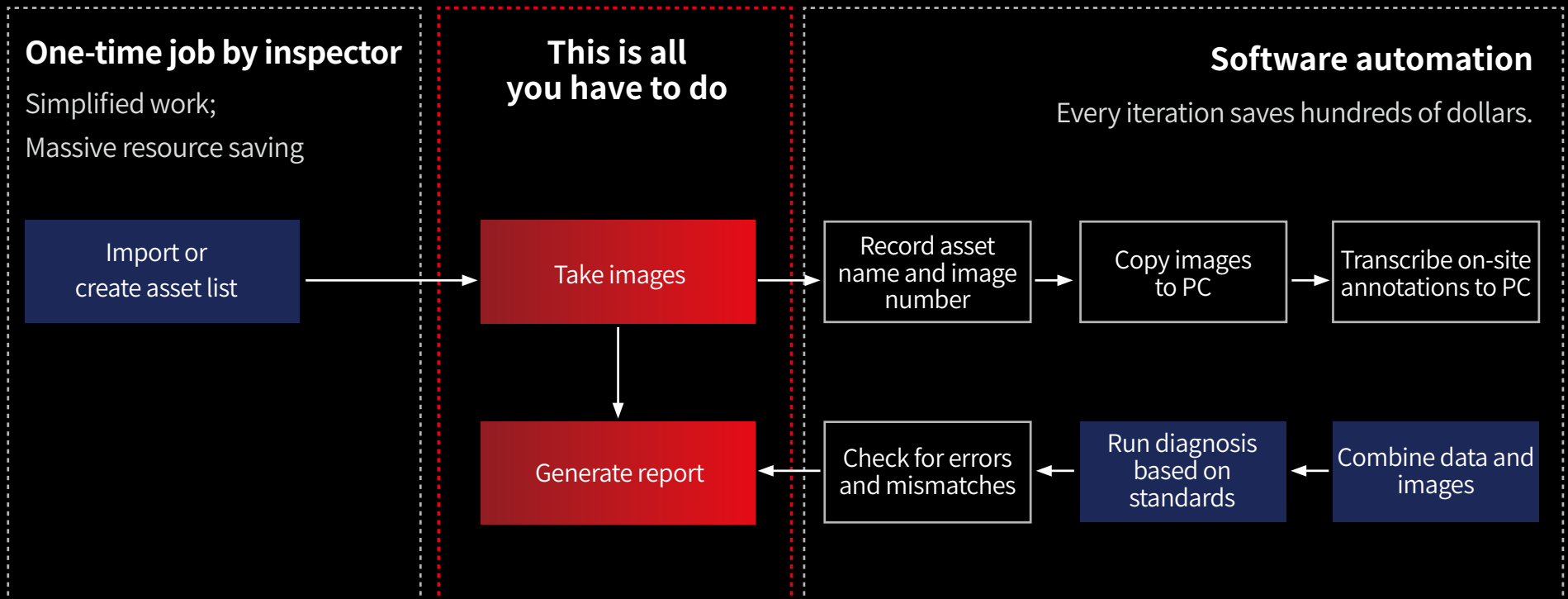
FOTRIC V series



# Powerful Software-NaviPdM<sup>®</sup> Venus



## Boost Efficiency with AI-powered Automation



# Powerful Software-NaviPdM<sup>®</sup> Venus

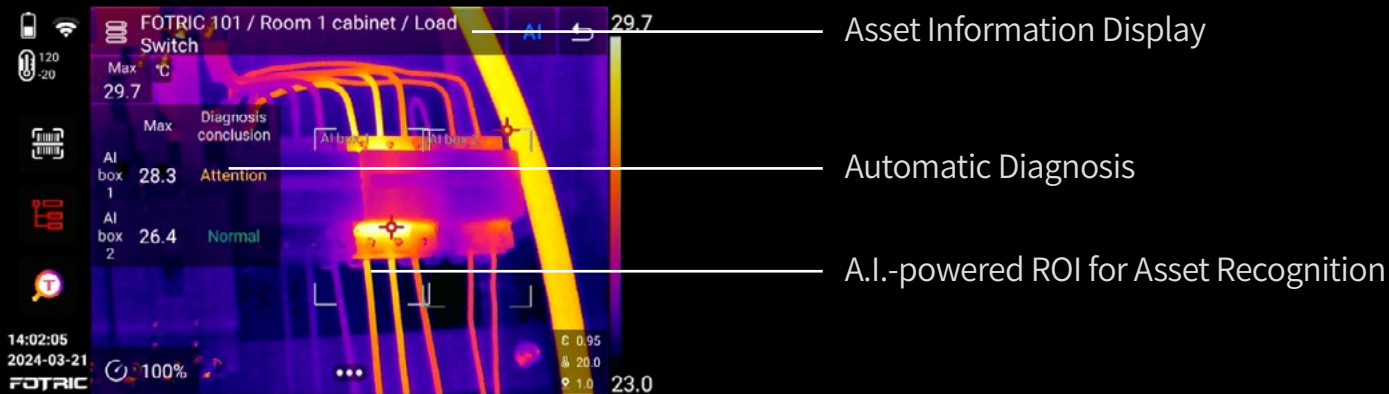


## Asset Recognition

- A.I. algorithm on the camera recognizes and tracks previously inspected components with measurement boxes.
- The QR code assisted archive system registers and identifies assets.

## Auto-diagnosis

- NaviPdM<sup>®</sup> Venus automatically run diagnosis on-device based on user-selected standards such as Delta-T or absolute temperature.
- It keeps a dynamic trend graph of the asset's temperature that makes predictive maintenance easy and intuitive.



FOTRIC NaviPdM<sup>®</sup>

# Robust On-device Analysis Capabilities

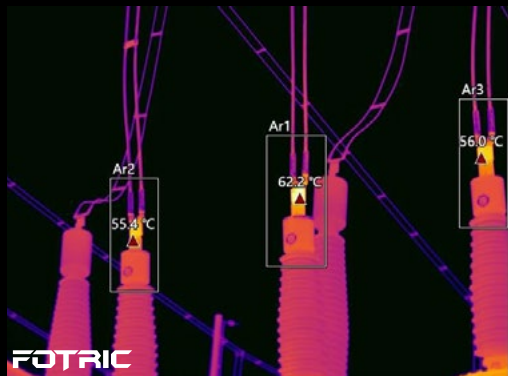
## On-device Trend Analysis

Predictive maintenance made easy.



## Radiometric Mastery

Record up to 14 minutes of radiometric video with every frame fully analyzable.



## Temperature Rise Function

Quick and intuitive diagnosis.



# Extraordinary Performance

Reveal miniscule thermal difference at any temperature range.

Up to  
**640\*480**  
IR resolution

Up to  
**30mK**  
Thermal sensitivity

Up to  
**-20~1550°C**  
Temperature range

Up to  
**0.19mrad**  
IFOV

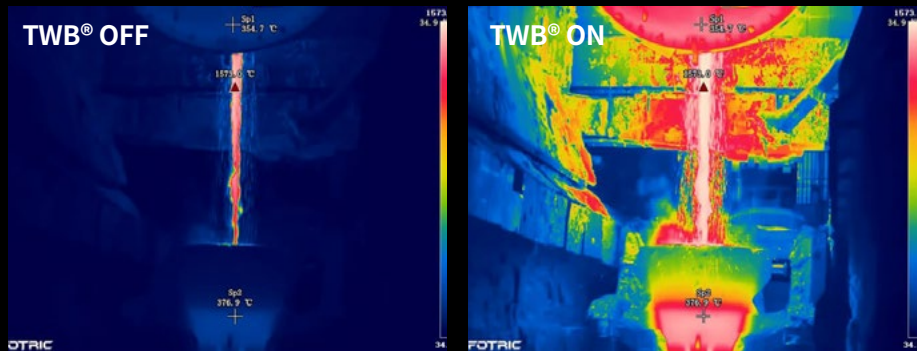
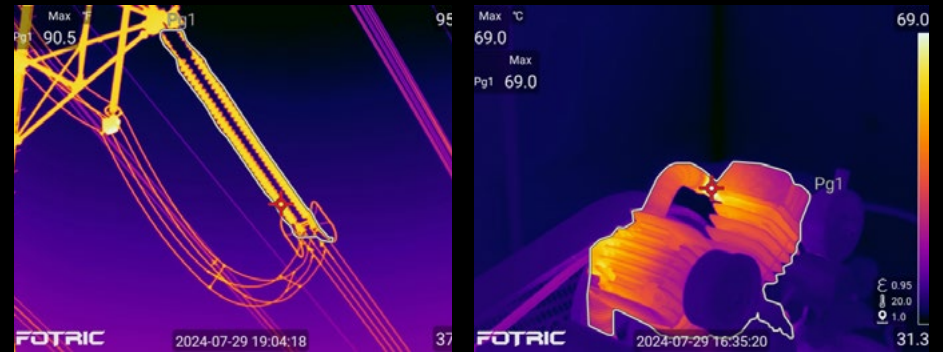
- Hand work eased like never before with programmable AI Quick-Access button.
- Turbo-Focus system enables swift and meticulous measurements.
- Interchangeable lenses provide coverage for any target, any scene.
- Complimentary access to Face Detection feature.



# Compelling Image Quality

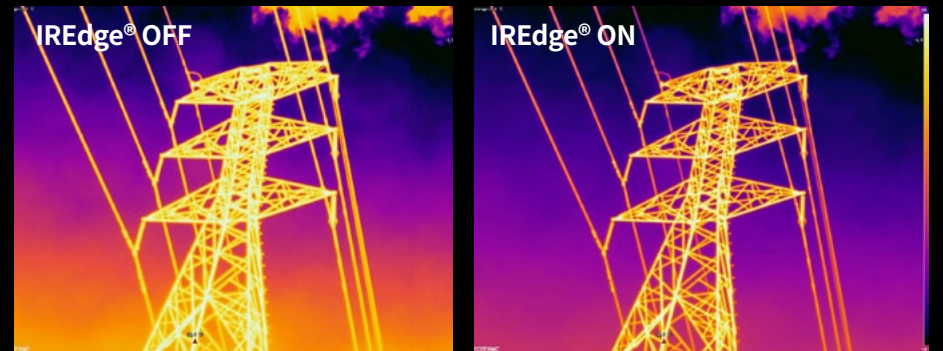
## MagicThermal®: A.I.-driven object contour detection and markup

- Automatic contour markup of thermal targets.
- Facilitates more accurate temperature analysis by ensuring measurement zones.



## TWB® (thermal white balance) Feature

Magnifies subtle differences even at broad temperature range.



## IREdge® Imaging Algorithm

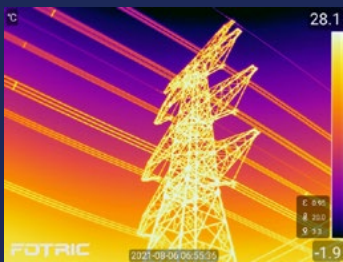
Optimize color pixel distribution to enhance image line prominence.

# Exceptional Field Work

FOTRIC's fine-tuned new series is equipped to help you thrive in the toughest environments.

## *“One imager to see them all”*

Inspectors need to deal with objects far and near, large and small. And that's what FOTRIC products can accommodate. FOTRIC V series cameras come with **interchangeable 44°, 25°, 12°, 7° lenses and OGI HR lens**, making sure the owner can accurately acquire object's condition and temperature at any distance.



44° lens



7° lens



## IP54

Enclosure Rating

## 2-meter

Drop-resistant design

- Professional laser meter for distance and area measurement.
- Full-range radiometric video for post-analysis.
- Voice annotation via Bluetooth Headset.
- QR-code scan to save in Tags, for auto-naming of files.
- Outstanding battery performance for worryfree survey sessions.



SF<sub>6</sub> Gas

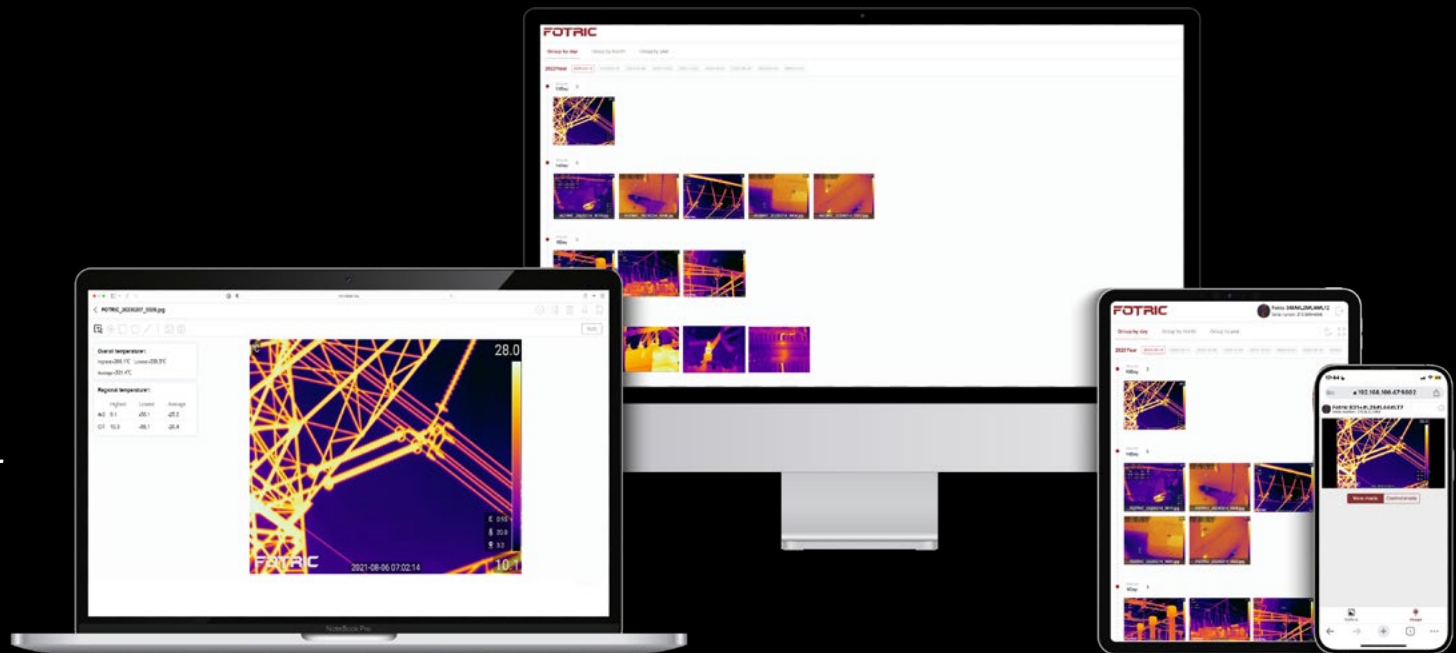


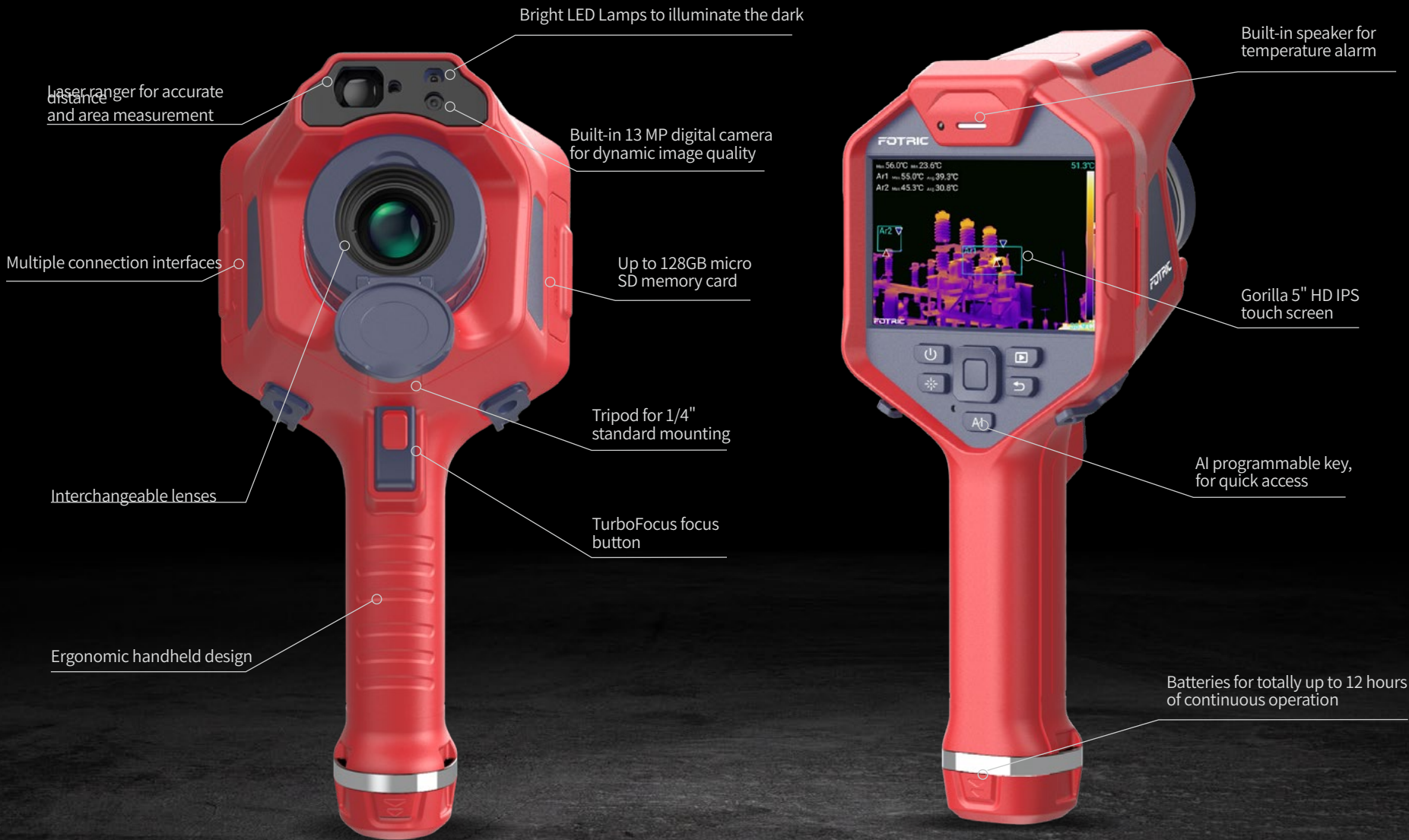
NH<sub>3</sub> Gas

# Powerful Software-IRExplorer™

## Brings Untrammelled Communication

- Remote control via WiFi 📶 or Self-equipped Hotspot 📶
- Access and edit thermal files
- Across any platform 🪟 Windows 🐧 Linux 🍏 MacOS/iOS 🤖 Android
- No need for installation





# Specifications

Model	V7	V5
<b>Thermal Imaging Parameters</b>		
Infrared Resolution	640 x 480	384 x 288
Super Resolution	1280 x 960	768 x 576
Thermal Sensitivity (NETD)	< 0.03°C (30mk)@30°C (86 °F )	
Spectral Range	8-14µm	
Image Frame Rate	30Hz	
IR Detector Type	Uncooled infrared focal plane detector	
Detector Pitch	17µm	
Field of View (FOV)	25° x 19°	
Spatial Resolution (IFOV)	0.68 mrad	1.14 mrad
Focal Length (mm)	24.8	13.7
Minimum Imaging Distance	0.25 m	0.1 m
Interchangeable Lenses	Refer to lens data sheet	
Focus Mode	TurboFocus® system for continuous, laser-assisted, thermal contrast AF, touch AF; Manual focus	
Digital Zoom	1-10x, continuous	
<b>Unique Features</b>		
NaviPdM® Venus	Support, AI inspection assistant	
IRExplorer™	Support, cross-platform remote control and data transfer	
T-DEF®	Support, thermal and visible light image blend, transparency 0% ~100%	
IREdge	Support, contour detail enhancement	
T-TWB®	Support, temperature visual representation normalization	
MagicThermal®	Support, A.I.-driven object contour detection and markup	
<b>Temperature Analysis</b>		
Temperature Range	-20°C ~ 120°C (-4 °F to 248 °F ), 0°C ~ 700°C (32 °F to 1292 °F ), 300°C ~ 1550°C (572 °F to 2822 °F )	
Intelligent Range	Support	

# Specifications

ROI Spot	16 spot markers	
ROI Area	12 (rectangle or circle)	
ROI Line	8 measurement lines	
Accuracy	$\pm 2^{\circ}\text{C}$ (3.6 $^{\circ}\text{F}$ ) or $\pm 2\%$ , whichever is greater, (ambient temp at 77 $^{\circ}\text{F}$ )	
Measurement Parameters	Emissivity, Partial emissivity, Reflected temperature, Ambient temperature, Humidity, Distance and IR window compensation.	
Temperature Rise Feature	Support	
ROI Emissivity	Support	
Area Alarms	Support	
Color Alarms (temperature alarms)	High temperature, low temperature, and interval isotherms	
PC Software	AnalyzeIR <sup>®</sup>	
<b>Image Display</b>		
Display Screen	5 inch touch screen (1280 x 720)	
Image Overlay	Display global max, min, avg and measurement parameters.	
High/Low Temperature Tracking	Yes, for both global and ROI	
T-TWB <sup>®</sup>	Temperature visual representation normalization option	
IREdge	Contour detail enhancement	
Image Mode	Thermal image, Digital Camera, Picture in Picture, and T-DEF <sup>®</sup> , High sensitivity mode (only active when the lens is identified as OGI HR lens)	Thermal image, Digital Camera, Picture in Picture and T-DEF <sup>®</sup>
Palettes	16 standard palettes: Grey, Iron10, Iron, Rainbow, Grey10, GreyRed, MidGrey, Yellow, Rain, Rain10, Blue, GlowBow, Medical, Medical10, MidGreen, Prism.	
Inverted Palettes	Support (16 inverted palettes)	
Temp Span Mode	Auto (Minimum Temp Span 3 $^{\circ}\text{C}$ (5.4 $^{\circ}\text{F}$ )), Manual (Minimum Temp Span 2 $^{\circ}\text{C}$ (3.6 $^{\circ}\text{F}$ )), Touch-screen (Minimum Temp Span 2 $^{\circ}\text{C}$ (3.6 $^{\circ}\text{F}$ ))	

# Specifications

Capture Feature	
Digital Camera	13MP industrial grade camera
Storage Card	Micro SD card, 128G, expandable up to 1TB
Capture Mode	Single frame / Video recording / Time-lapse
Video Recording	Radiometric thermal video(IRS.) and MP4 video recording (non-radiometric).
File Format	Radiometric thermal photo (JPEG.), thermal video (IRS.) and non-radiometric digital camera photo, MP4 video
Gallery	Support (Image preview & analyze and video preview & analyze)
On-device Analysis	Support (Radiometric Image and Video Data)
Freeze Interface	Support single frame thermal image and radiometric video edition
QR Code Functionality	Support QR code and Barcode scanning
Annotation	Support Voice\Text\Tag\Favorite
Voice Annotation Length	200 s
Text Annotation	Support
Tags	Support
Favorite	Support (filter favorite files)
Data Connection	
Wi-Fi Connection	2.4GHz and 5 GHz frequency, support 802.11a/b/g/n/ac
Bluetooth Connection	BT4.2 LE, connectable to bluetooth headphone
USB Interface	USB Type-C; USB 3.0 / 2.0 compliant, Support USB OTG
HDMI Interface	Micro HDMI type,Comply with HDMI 1.4 specification, support 1080p image video transmission at 60Hz frame rate
FTP Data Transfer	Accessible through WiFi or Hotspot, rapid data transfer
Remote Display	Support Radiometric IR Video Streaming over type-C 3.0 interface; non-radiometric IR video streaming over HDMI interface and IRExplorer™
Remote Control	Support (through AnalyzIR® and IRExplorer™)

# Specifications

Battery	
Battery Type	Rechargeable Li-ion, 7.4V, 3500mAh
Battery Operating Time	≥ 4 hours per battery
Batter Charging Time	2.5 hours to 90% full charge
Battery Charging System	Two-bay battery charger with LED display (12V, 3A)
Energy Management	User-selectable screen-off modes
Auxiliary Features	
Software Upgrade	Support on OTA upgrade and local upgrade through USB
AI Programmable Key	Support, for quick start
Laser	Level 2; Wavelength: 635nm; Power: <1mW; Distance measurement: 0.1~50m; Accuracy: $d \cdot 0.01\% \pm 2\text{mm}''$
Laser Measurement	Distance, Length, and Area
GPS	Support
Compass	Support
LED	Support
Physical Parameters	
Operation Temperature	-20°C (-4 °F ) to 50°C (122 °F )
Storage Temperature	-40°C (-40 °F ) to 70°C (158 °F ) (without battery)
Relative Humidity (Operation and Storage)	<95%RH
Ergonomic Design	Yes
Soft Portable Bag	Support
Hard Portable Case	Support (Hard rubber: PC + ABS, Soft rubber: TPE, Magnesium alloy, Flame retardant grade: UL94 HB)
Dimensions (mm)	312.8 x 123.3 x 139.2
Weight (include battery)	< 1.0kg (lens not included)
Tripod Interface	UNC 1/4 -20 threaded hole for tripod

# Specifications

Certification and Reliability	
Safety	EN 62368-1:2014+A11:2017 (Power Supply)
Electromagnetic Compatibility	EN 61326-1:2013 (immunity) EN 61326-1:2013 Class A (emission) FCC 47 CFR Part15 Class A (emission)
Vibration	2g (IEC 60068-2-6:1995)
Shock	25g (IEC60068-2-27:2008)
Collision	10g(IEC 60068-2-29) with packing
Drop	Engineered to withstand 2 meters (6.5 feet) drop with standard lens
Enclosure Rating	IP54 (protected against dust, limited ingress; protection against water spray from all directions), IEC60529:2013
Warranty	2 years (standard), extended warranties are available, 10 years for the infrared detector
Recommended Calibration Cycle	2 years (assumes normal operation and normal aging)
Languages	English, Spanish, German, French, Traditional Chinese, Korean, Italian, Portuguese, Thai
Standard Configuration	
Packaging	Infrared thermal imager, lens, lens cover, 3 batteries, battery charger, power adapter, USB type-C to USB interface cable, micro HDMI to HDMI interface cable, SD card, SD card reader, accessory bag (wrist strap, 2 wrist strap holders, 2 M4 * 8 screws, lanyard, Allen wrench), information bag (packing list, quick start manual, calibration certificate, warranty card), portable soft bag, portable hard case

# Lens

Model	Lens Parameters	Standard Lens	Wide-angle Lens	Telephoto Lens	Ultra-telephoto Lens	OGI HR Lens
V7	Field of View(FOV)	25° *19°	44° *33°	12° *9°	7° *5°	25° *19°
	Spatial Resolution(IFOV)	0.68mrad	1.20mrad	0.33mrad	0.19mrad	0.68mrad
	Minimum Imaging Distance	0.25m	0.1m	1m	3m	0.25m
	Focal Length	25mm	14mm	51mm	88mm	25mm
	Temperature Range	-20~120°C, 0~700°C, 300~1550°C				-20~120°C, 0~700°C
V5	Field of View(FOV)	25° *19°	44° *33°	12° *9°	7° *5°	—
	Spatial Resolution(IFOV)	1.14mrad	2.00mrad	0.55mrad	0.32mrad	
	Minimum Imaging Distance	0.1m	0.1m	0.25m	1m	
	Focal Length	15mm	8mm	25mm	51mm	
	Temperature Range	-20~120°C, 0~700°C, 300~1550°C				

# Innovation Excellence Integrity

Equipment described herein may require EU, US and UNSC authorization for export purposes.

Imagery for illustration purposes only.

Specifications are subject to change without notice.

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**FOTRIC**  
CONNECTING THE DIGITAL FUTURE