



HIKMICRO FIREFIGHTING THERMAL CAMERAS INTRODUCTION

Thermal camera for observing in total darkness and smoke.

INDUSTRIAL PRODUCT | 2023.Q3



PRODUCT CATEGORY



Thermal

Handheld



Fixed



Firefighting

New



Explosion-proof

New



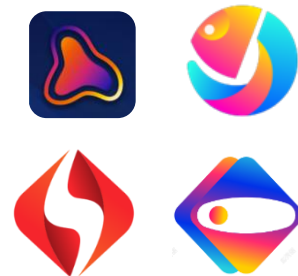
Acoustic

Acoustic

New



Software



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01 FB21

Compact And Reliable Thermal Camera For
Observing In Total Darkness And Smoke.

02 FT31



FB21- Overview

The HIKMICRO FB21 is a compact, reliable, firefighting thermal camera designed for firefighters to observe in total darkness and smoke, helping to save lives, protect property, and keep firefighters safe.

Features like dual cameras, LED flashlights, easy-to-navigate buttons, and a temperature range of up to 550°C (1022°F) help you work effortlessly in harsh environments. 8 color palettes for you to choose from, which satisfy most application scenarios.



Basic Parameters		FB21
Infrared Image	IR Resolution	256 × 192 (49,152 pixels)
	NETD	< 40 mK (@ 25 °C, F#=1.0)
	Image Frequency	25 Hz
	Field of View (FOV)	37.2° × 50.0°
	Min. Focusing Distance	0.3 m (0.98 ft)
	Focus Mode	Focus Free
Image Display	Visual Camera	1600 × 1200 (2 MP)
	Display	240 × 320 Resolution, 3.2" LCD Screen
	Color Palettes	Basic, Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building
Measurement and Analysis	Object Temperature Rang	-20°C to 550°C (-4°F to 1022°F)
	Accuracy	Max. (± 2°C/3.6°F, ± 2%), for ambient temperature -20°C to 50°C (-4°F to 122°F) and object temperature above 0°C (32°F)
General	LED Light	Yes
	Battery Type	Rechargeable Li-ion battery
	Protection Level	IP65
	Drop Test Height	2 m (6.56 ft)
	Working Temperature Range	Up to 10 minutes for ambient temperature -10°C to 90°C (14°F to 194°F); up to 2 minutes for ambient temperature -10°C to 115°C (14°F to 239°F)
	Weight	Approx. 380 g (0.84 lb)

FB21– Form Factor



240 × 320 Resolution, 3.2" LCD Screen

Visual Lens, View the optical image

Thermal Lens, View the thermal image

Wrist Strap Attachment Point and Tripod Mount



LED Light

Trigger

FB21- Compact And Reliable

The HIKMICRO FB21 is a rugged, compact, high-quality thermal imaging camera designed for firefighters to observe in total darkness and smoke, helping to save lives, protect property, and keep firefighters safe.



256

High Image Quality

Features a highly sensitive (NETD < 40 mK) VOx detector, along with optimized image enhancement algorithms to provide clear thermal images.

3.2"

3.2" Color LCD

View the details of your images on the large, class-leading LCD screen

IP65

Rugged & Durable Design

IP65 rated for protection against water and dust. Featuring 2-meter (6.56ft) drop protection, suitable for harsh environment.

FB21- For Observing In Total Darkness And Smoke



Working Temperature Range:

Up to 10 minutes for ambient temperature -10°C to 90°C (14°F to 194°F)

up to 2 minutes for ambient temperature -10°C to 115°C (14°F to 239°F)

Object Temperature Range: -20°C to 550°C (-4°F to 1022°F)



FB21



For Smoke Systems



For Fire Rescue



For Building

FB21- For Observing In Total Darkness And Smoke

8 color palettes give different image display options.

Among the palettes designed for firefighting, it allows you to make quick inspections in harsh environments.

Fire Detection

For scenes with higher background temps where open flames are present, particularly in structural fires.

Rescue

For use with lower temperature situations, such as initial rescue efforts after traffic accidents, searches in wooded areas, etc.

Basic

For initial fire attack and rescue operations; colors represent temperature.



Different palettes, corresponding to different Isotherm, with colors varying from yellow, orange, to red, help to quickly target temperature zones.

For example in **basic** mode:

Yellow coloring 150°C to 350°C;

Orange coloring 350°C to 550°C;

Red coloring >550°C

FB21- For Observing In Total Darkness And Smoke

8 color palettes give different image display options.

Among the palettes designed for firefighting, it allows you to make quick inspections in harsh environments.

Black & White

Same representations of temperature as the Basic mode, but in grayscale.



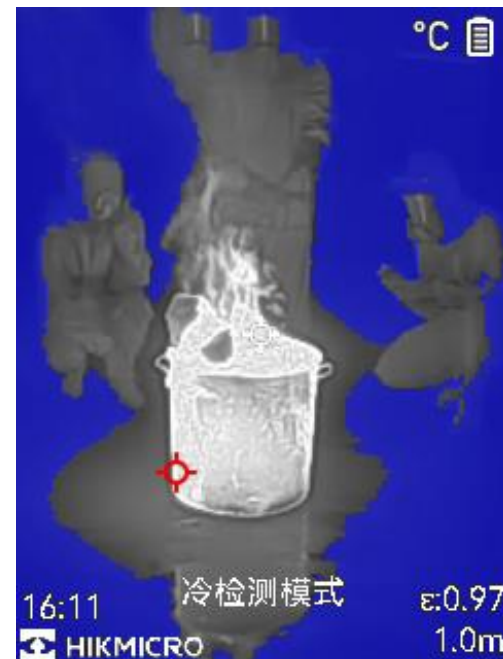
Hot Area

Used for finding hotspots. The hottest 20% of the scene is colored red.



Cold Area

Used for finding cold spots. The coldest 20% of the scene is colored blue.



Building

Used to detect temperatures in buildings such as mechanical, plumbing and electrical structures, etc.



FB21- More Features

The HIKMICRO FB21 is a rugged, compact, high-quality thermal imaging camera designed for firefighters to observe in total darkness and smoke, helping to save lives, protect property, and keep firefighters safe.

4 Images Modes

Thermal, Fusion, PIP and Optical modes to suit your preferred view.



Thermal



Fusion



PIP



Visual

Durable and Rechargeable Batteries

Built-in 3350mAh Li-Ion rechargeable battery allow the camera up to 6 hours of continuous operation.

25 Hz Fast Image Frequency

25 Hz fast image frequency delivers smooth video while panning across scenes or viewing moving targets.

LED Flashlight

The LED flashlight allows you to work safely in dim or dark environments.

FB21- Scope Of Delivery



Compact thermal camera for observing in total darkness and smoke.

- ◆ Thermal Camera with Wrist Strap
- ◆ Power Supply
- ◆ International Use Plugs
(US/EU/UK/AU/CN) for Power Supply
- ◆ USB 2.0 A to USB Type-C Cable
- ◆ Calibration Certificate
- ◆ Quick Start Guide



Calibration Certificate



Quick Start Guide



Thermal Camera with Wrist Strap





USB Cable



Charger and International Adapters

FB21 – Competitive Analysis

	FEATURE/PRODUCT	HIKMICRO FB21	FLIR K1
			
Infrared Image	IR Resolution	256 × 192 (49,152 pixels)	160 × 120 pixels
	NETD	< 40 mK (@ 25 °C, F#=1.0)	<100 mK @ 30°C (86°F)
	Image Frequency	25 Hz	8.7 Hz
	Detector Pitch	12 μm	12 μm
	Field of View (FOV)	37.2° × 50.0°	57° × 44°
	Spatial Resolution (IFOV)	3.3 mrad	6.22 mrad
	Focus Mode	Focus Free	Focus Free
Image Display	Visual Camera	1600 × 1200 (2 MP)	320 × 240 pixels
	Display	240 × 320 Resolution, 3.2" LCD Screen	2.4 in. backlit LCD, 320 × 240 pixels
	Color Palettes	Basic, Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	• TI Basic (White-hot with isotherm) • White-hot • Iron
	Image Modes	Thermal/Visual/Fusion/PIP	• TI Basic (White-hot with isotherm) • White-hot • Iron
Measurement and Analysis	Object Temperature Range	-20°C to 550°C (-4°F to 1022°F)	High Gain Mode: -10°C to 140°C (14°F to 284°F) Low Gain Mode: -10°C to 400°C (14°F to 752°F) (at room temperature) ±5°C (±9°F) or ±5% in High Gain Mode, or ±10°C (±18°F) or ±10% in Low Gain Mode, for ambient temperatures of 10–35°C (50–95°F)
	Accuracy	Max. (± 2°C/3.6°F, ± 2%), for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)	±5°C (±9°F) or ±5% in High Gain Mode, or ±10°C (±18°F) or ±10% in Low Gain Mode, for ambient temperatures of 10–35°C (50–95°F)
	Measurement Tools	Center Spot, Hot Spot, Cold Spot User-definable: 3 spots	Center Spot
Data Storage and Communication	Storage Media	Built-in 16 GB flash memory	Internal memory (3.9 GB)
General	Battery Operating Time	Approx. 6 hours	Approximately 5.5 hours in MSX mode; 3.8 hours with torchlight only
	Battery Charging Time	Approx. 3 hours fully charged	4 hours to 90%, 6 hours to 100%
	Protection Level	IP65	IP67
	Drop Test Height	2 m (6.56 ft)	2 m (6.56 ft)
	Working Temperature Range	Up to 10 minutes for ambient temperature -10°C to 90°C (14°F to 194°F); up to 2 minutes for ambient temperature -10°C to 115°C (14°F to 239°F)	Up to 10 min. with flashlight on, -10°C to 90°C (14°F to 194°F) Up to 2 min. with flashlight on, -10°C to 115°C (14°F to 239°F)
	Weight	Approx. 380 g (0.84 lb)	0.41 kg (0.90 lb.)

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02 FT31

High-performance Thermal Camera For Observing In
Total Darkness And Smoke.



FT31 - Overview



The HIKMICRO FT31 is a high-performance firefighting thermal camera designed for firefighters to observe in total darkness and smoke, helping to save lives, protect property, and keep firefighters safe. Features like object details enhancement, easy-to-navigate buttons and a working temperature range of up to 260°C(500°F) help you work effortlessly in harsh environments. 8 color palettes for you to choose from satisfy most application scenarios.



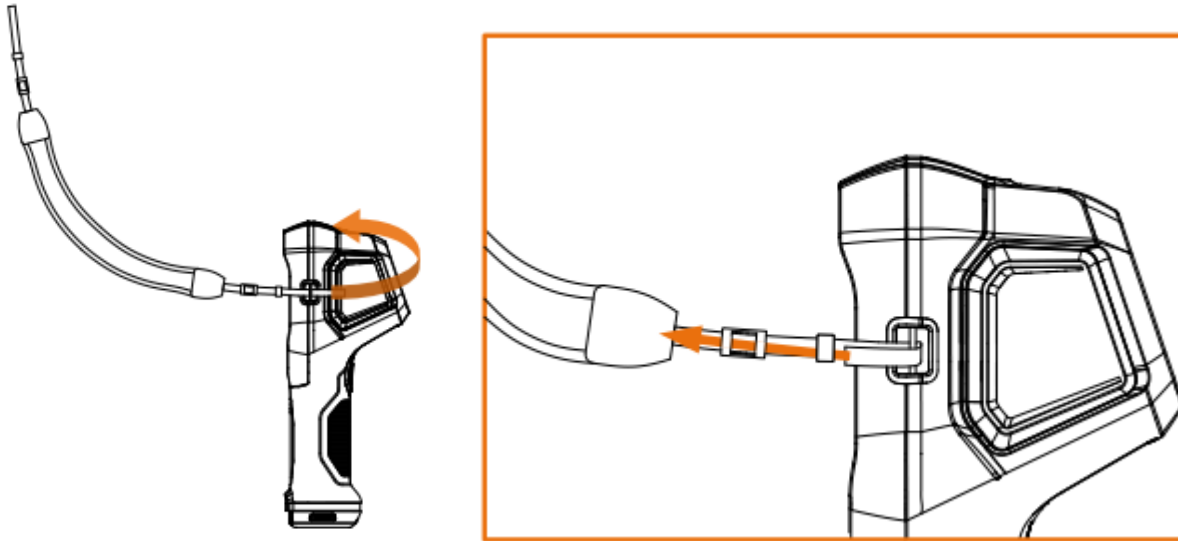
Basic Parameters		FT31
Infrared Image	IR Resolution	384 x 288 (110,592 pixels)
	NETD	< 35 mK (@ 25°C, F#=1.0)
	Image Frequency	60 Hz
	Field of View (FOV)	54.1°×40.2°
	Min. Focusing Distance	1 m (3.28 ft)
	Focus Mode	Focus Free
Image Display	Visual Camera	N/A
	Display	800 × 480 Resolution, 4.3" LCD Screen
	Digital Zoom	N/A
	Color Palettes	Basic, Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building
Measurement and Analysis	Object Temperature Rang	-20°C to 1200°C (-4°F to 2192°F)
	Accuracy	Max. (± 2°C/3.6°F, ± 2%), for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)
General	LED Light	N/A
	Battery Type	Interchangeable and rechargeable Li-ion battery
	Protection Level	IP67
	Drop Test Height	2 m (6.56 ft)
	Working Temperature Range	-20°C to 50°C (-4°F to 122°F) 80°C(176°F), 40min 150°C(302°F), 15min 260°C(500°F), 7min
	Weight	Approx. 1022g (2.25 lb)

FT31 – Form Factor

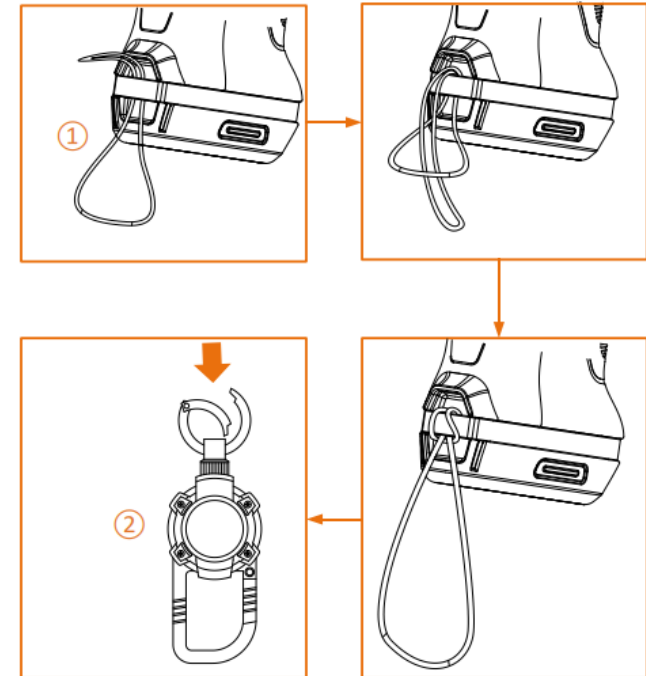


FT31– Form Factor

Accessory Installation



Neck Strap



Lanyards

① Lanyard ② Retractable Lanyard

FT31 – High-performance Thermal Camera

The HIKMICRO FT31 is a high-performance thermal imaging camera designed for firefighters to observe in total darkness and smoke, helping to save lives, protect property and keep firefighters safe.



384

High Image Quality

Features a highly sensitive (NETD < 35 mK) VOx detector, along with **ODE(Object Details Enhancement)** to provide clear thermal images.

60Hz

60 Hz Fast Image Frequency

60 Hz fast image frequency delivers smooth video while panning across scenes or viewing moving targets.

IP67

Rugged & Durable Design

IP67 rated for protection against water and dust. Featuring 2-meter (6.56ft) drop protection, suitable for harsh environment.

FT31- For Observing In Total Darkness And Smoke

Working Temperature Range:

-20°C to 50°C (-4°F to 122°F); 80°C(176°F), 40min; 150°C(302°F), 15min; 260°C(500°F), 7min

Object Temperature Range: -20°C to 1200°C (-4°F to 2192°F)



FT31



For Firefighting/ Smoke Systems



For Fire Rescue



For Building Construction

FT31- For Observing In Total Darkness And Smoke

8 color palettes give different image display options.

Among the palettes designed for firefighting, it allows you to make quick inspections in harsh environments.

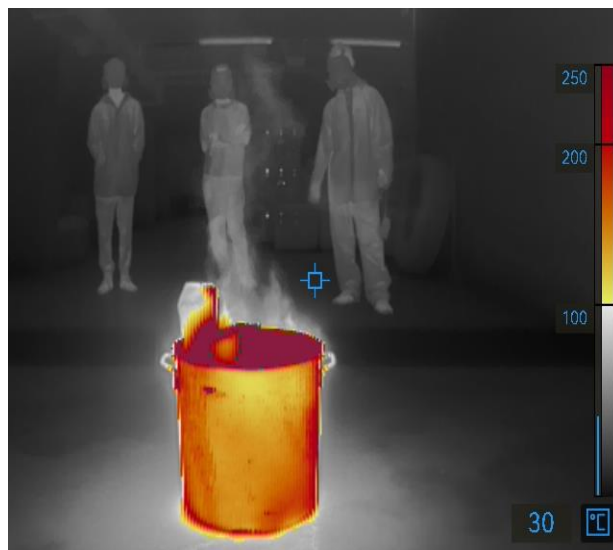
Fire Detection

For scenes with higher background temps where open flames are present, particularly in structural fires.



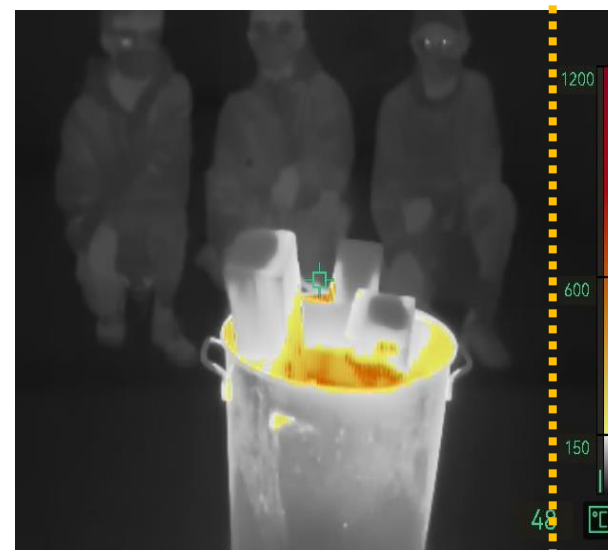
Rescue

For use with lower temperature situations, such as initial rescue efforts after traffic accidents, searches in wooded areas, etc.



Basic

For initial fire attack and rescue operations; colors represent temperature.



Different palettes, corresponding to different Isotherm, with colors varying from yellow, orange, to red, help to quickly target temperature zones.

For example in **basic** mode:

Yellow coloring 150°C to 600°C;

Orange coloring 600°C to 1200°C;

Red coloring >1200°C

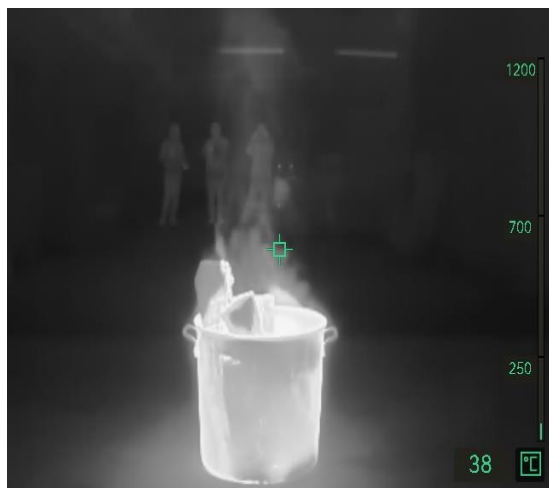
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Hot Area

Used for finding hotspots. The hottest 20% of the scene is colored red.



Cold Area

Used for finding cold spots. The coldest 20% of the scene is colored blue.



Building

Used to detect temperatures in buildings such as mechanical, plumbing and electrical structures, etc.



FT31 – More Features



Interchangeable Battery System

Includes 2 interchangeable Li-ion batteries and a dual bay charger to provide you with up to 12 hours of operation.



Fast Startup

Start-up time: 5 seconds (with IR image), 10 seconds (with OSD)



4.3" LCD Screen

View the details of your images on the large, LCD screen. With 1x, 2x, 4x digital zoom provides more image details.



High Capacity Storage

Built-in 32 GB flash memory it can store at least 100,000 images.


FT31 - Scope Of Delivery





Accessories	Items	Quantity
Device	Thermal Imager	1
	Neck Strap	1
Straps	Lanyard	1
	Retractable Lanyard	1
Batteries and Power	Interchangeable and Rechargeable Li-ion Batteries	2
	Power Supply for Battery Charger	1
	Two-bay Battery Charger	1
	International Use Plugs (US/EU/UK/AU) for Power Supply	4
Cables	USB 2.0 A to USB Type-C Cable	1
Cases and Pouches	Hard Carrying Case	1
Manuals	Calibration Certificate	1
	Quick Start Guide	1


THANK YOU

See the World in a New Way

 HIKMICRO Thermography

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