



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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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



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

1	基本模式	白热基础上有等温线：预览界面中， $T < 150^{\circ}\text{C}$ 渲染为白热， $150^{\circ}\text{C} < T < 250^{\circ}\text{C}$ 渲染为黄色， $250^{\circ}\text{C} < T < 300^{\circ}\text{C}$ 渲染为橙色， $T > 300^{\circ}\text{C}$ 渲染为红色。如右图。
2	黑白消防模式	黑白消防模式是在Basic模式的基础上标准化的消防模式。它是一种用于初始火灾干预的多用途模式，包括生命救援行动和火灾控制。它专为不想使用热着色功能的消防服务而设计。 相机会自动在高感光度范围和低感光度范围之间切换，以保持最佳的红外图像。 自动量程。 高灵敏度范围： -20 至 $+150^{\circ}\text{C}$ (-4 至 $+302^{\circ}\text{F}$) 低灵敏度范围： 0 至 $+550^{\circ}\text{C}$ ($+32$ 至 1202°F)
3	火焰模式	火焰模式类似于基本模式，但热着色的起点温度更高。适用于背景温度较高、明火较多、背景温度较高的火灾场景。相机自动在高灵敏度范围和低灵敏度范围之间切换，以保持最佳红外图像，同时保持安全和一致的热着色。 自动量程。 热着色： $+250$ 至 $+500^{\circ}\text{C}$ ($+482$ 至 $+932^{\circ}\text{F}$) 高灵敏度范围： -20 至 $+150^{\circ}\text{C}$ (-4 至 $+302^{\circ}\text{F}$) 低灵敏度范围： 0 至 $+550^{\circ}\text{C}$ ($+32$ 至 $+1202^{\circ}\text{F}$)
4	搜救模式	搜索和救援模式针对在风景、建筑物或交通事故场景中搜索人员时保持红外图像的高对比度进行了优化。 仅限高灵敏度范围。 热着色： $+100$ 至 $+150^{\circ}\text{C}$ ($+212$ 至 $+302^{\circ}\text{F}$) 高灵敏度范围： -20 至 $+150^{\circ}\text{C}$ (-4 至 $+302^{\circ}\text{F}$)
5	热量检测模式	热探测模式针对火势扑灭后大修期间搜索热点进行了优化，以确保没有剩余的隐藏火灾。此模式还可用于查找热模式（例如，事故后人们在汽车座椅上的迹象），以确保找到每个人。此模式还可用于在水中和开阔景观中搜索人。 仅限高灵敏度范围。 热着色：场景中最高温度的 20%。 高灵敏度范围： -20 至 $+150^{\circ}\text{C}$ (-4 至 $+302^{\circ}\text{F}$)
6	冷检测模式	冷探测模式针对在火灾情况下搜索冷点进行了优化——通常是寻找可能为火灾提供氧气燃料的气流和气流。 仅限高灵敏度范围。 冷色化：场景中 20% 的最低温度。 高灵敏度范围： -20 至 $+150^{\circ}\text{C}$ (-4 至 $+302^{\circ}\text{F}$)
7	建筑分析模式	建筑物分析模式适用于建筑物的分析和建筑物相关异常的检测。热图像可以提供有关结构、机械、管道和电气结构的信息，以及湿度、湿度和空气渗透的指示。 在此模式下，相机使用铁色调色板来显示不同的温度，其中黑色、蓝色和紫色代表最冷的区域，红色、橙色和黄色代表中档，白色代表最热的区域部分。温标会根据图像的热含量自动调整。

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.



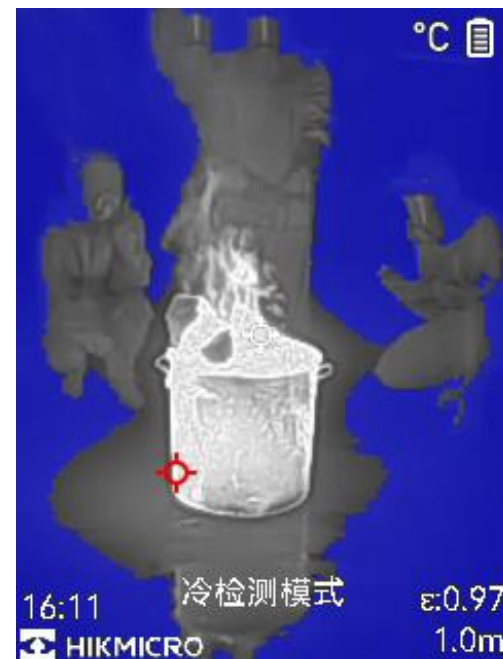
Hot Area

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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01 FB21

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.



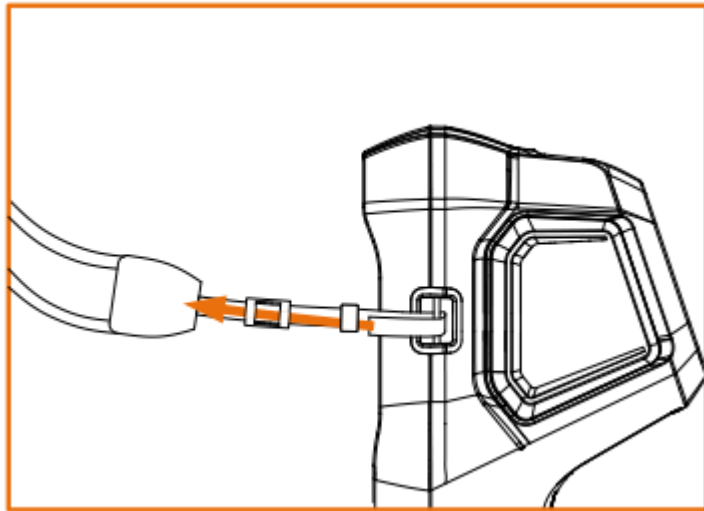
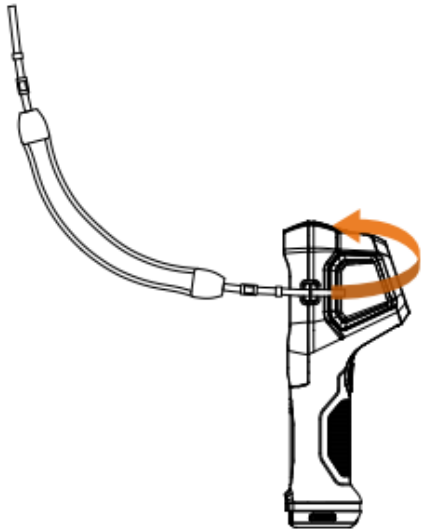
Basic Parameters		FT31
Infrared Image	IR Resolution	384 x 288 (110,592 pixels)
	NETD	< 35 mK (@ 25°C, F#=1.0)
	Image Frequency	60 Hz
	Field of View (FOV)	54.1°×40.2°
	Min. Focusing Distance	1 m (3.28 ft)
	Focus Mode	Focus Free
Image Display	Display	800 × 480 Resolution, 4.3" LCD Screen
	Digital Zoom	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)
Data Storage and Communication	Storage Media	Built-in 32 GB flash memory
	Video File Format	MP4 video
General	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

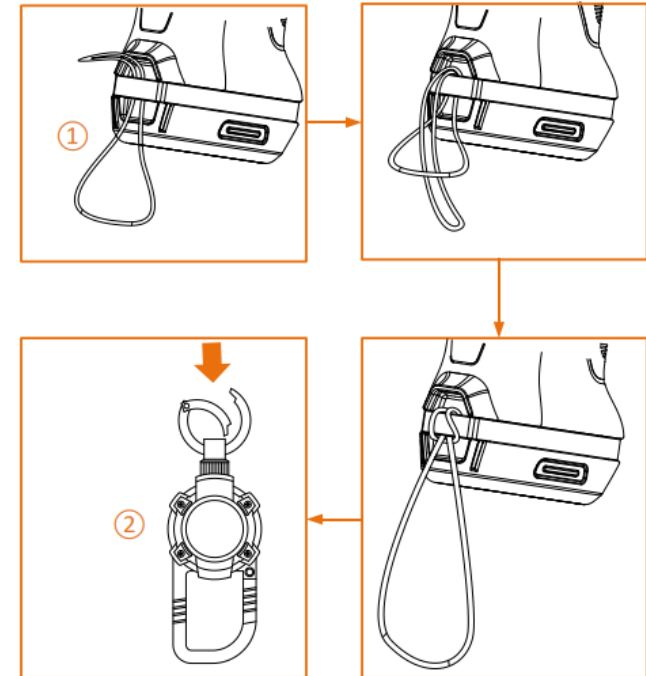


FT31– Form Factor

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.

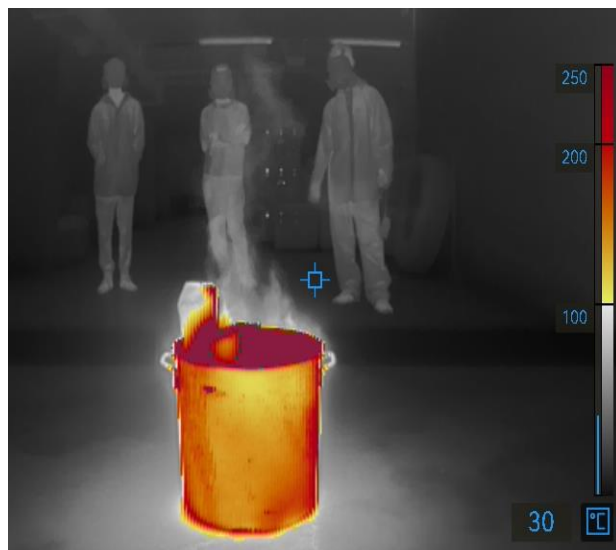
Fire Detection

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



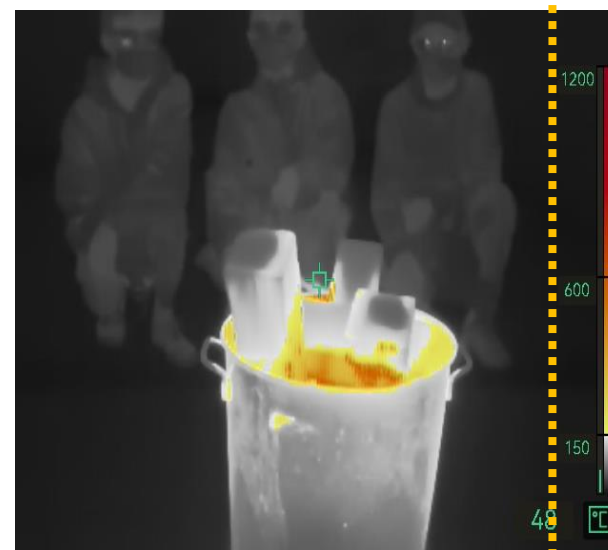
Rescue

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

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.

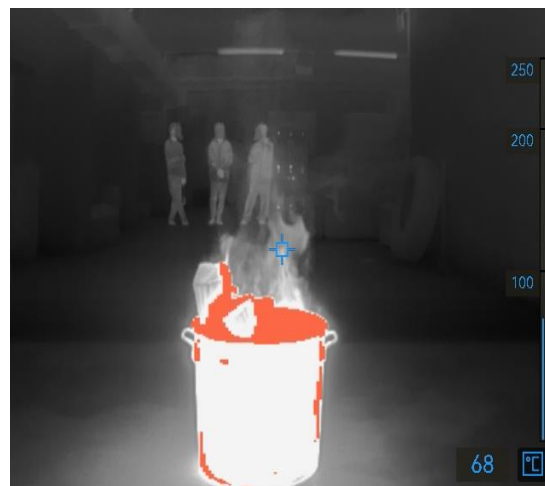
Black & White

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



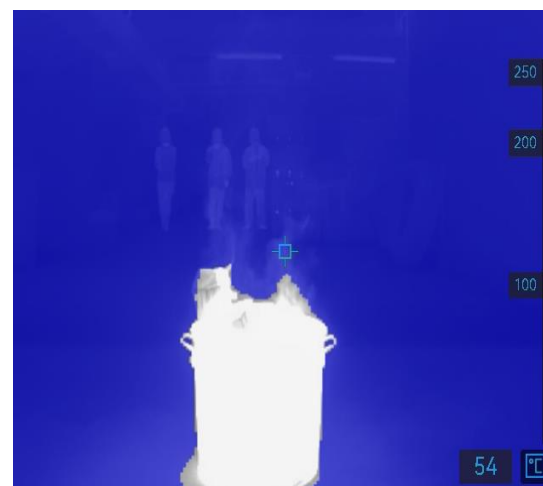
Hot Area

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.



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
Straps	Neck Strap	1
	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





FT31 – Competitive Analysis

FEATURE/PRODUCT	HIKMICRO FT31	FLIR K65 With NFPA® 1801:2021	FLIR K55	FLIR K45
				
IR Resolution	384 x 288 (110,592 pixels)	320 x 240 pixels	320 x 240 pixels	240 x 180 pixels
NETD	< 35 mK (@ 25°C, F#=1.0)	<30 mK @ 30°C (86°F)	<30 mK @ 30°C (86°F)	<40 mK @ 30°C(86°F)
Image Frequency	60 Hz		60 Hz	60 Hz
Field of View (FOV)	54.1°x40.2°		51° x 38°	
Display	800 x 480 Resolution, 4.3" LCD Screen	4 in. LCD, 320 x 240 pixels, backlit		
Color Palettes	Basic ,Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	IR image TI Basic fire-fighting mode Black-and-white fire-fighting mode Fire mode Search-and-rescue mode Heat detection mode Thumbnail gallery		
Object Temperature Range	-20°C to 1200°C (-4°F to 2192°F)	-20°C to 150°C (-4°F to 302°F) 0°C to 650°C (32°F to 1202°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)	±4°C(±7.2°F) or ±4% of reading, for ambient temperature 10°C to 35°C (50°F to 95°F)		
Video Recording	Yes	Yes	Yes	No
Battery Operating Time	Approx. 6 hours	Approx. 4 hours at 25°C (77°F) ambient temperature and typical use		
Protection Level	IP67, IEC 60529	IP 67 (IEC 60529)		
Working Temperature Range	Standard: -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	Standard: -20°C to 85°C (-4°F to 185°F) 150°C (302°F): 15 min 260°C (500°F): 5 min		




FT31 – Competitive Analysis

FEATURE/PRODUCT	HIKMICRO FT31	FLIR K53	FLIR K33
		 Only one button	 Only one button
IR Resolution	384 x 288 (110,592 pixels)	320 x 240 pixels	240 x 180 pixels
NETD	< 35 mK (@ 25°C, F#=1.0)	<30 mK @ 30°C (86°F)	<40 mK @ 30°C (86°F)
Image Frequency	60 Hz	60 Hz	60 Hz
Field of View (FOV)	54.1° x 40.2°	51° x 38°	
Display	800 x 480 Resolution, 4.3" LCD Screen	4 in. LCD, 320 x 240 pixels, backlit	
Color Palettes	Basic ,Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	TI Basic fire-fighting mode	
Object Temperature Range	-20°C to 1200°C (-4°F to 2192°F)	-20°C to 150°C (-4°F to 302°F) 0°C to 650°C (32°F to 1202°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)	±4°C (±7.2°F) or ±4% of reading, for ambient temperature 10°C to 35°C (50°F to 95°F)	
Video Recording	Yes	Yes	No
Battery Operating Time	Approx. 6 hours	Approx. 4 hours at 25°C (77°F) ambient temperature and typical use	
Protection Level	IP67, IEC 60529	IP 67 (IEC 60529)	
Working Temperature Range	Standard: -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	-20°C to 85°C (-4°F to 185°F) 150°C (302°F): 15 min. 260°C (500°F): 5 min.	




FT31 – Competitive Analysis

FEATURE /PRODUCT	HIKMICRO FT31	SEEK Reveal FirePRO X	SEEK FirePRO 200	SEEK FirePRO 300
				
IR Resolution	384 x 288 (110,592 pixels)	320 x 240	200 x 150 Resolution	320 x 240 Resolution
NETD	< 35 mK (@ 25°C, F#=1.0)	< 70 mK	< 35 mK with SV1	< 35 mK with SV1
Image Frequency	60 Hz	> 15 Hz FastFrame	> 25 Hz Frame rate	> 25 Hz Frame rate
Field of View (FOV)	54.1°x40.2°	Wide, 32 Degree FOV	27° x 35°	42° x 57°
Display	800 x 480 Resolution, 4.3" LCD Screen	2.4" Color with Corning® Gorilla® Glass	2.8" TFT 320 x 240 screen resolution	2.8" TFT 320 x 240 screen resolution
Color Palettes	Basic ,Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	3 Options (FIRE, SURVEY, & COLOR)	2 Options (FIRE, SURVEY)	2 Options (FIRE, SURVEY)
Object Temperature Range	-20°C to 1200°C (-4°F to 2192°F)	-4 to 1,022F (-20 to 550C)	-4°F to 1,022°F (-20°C to 550°C)	-4°F to 1,022°F (-20°C to 550°C)
Video Recording	Yes	Not mentioned	No	Yes
Battery Operating Time	Approx. 6 hours	Up to 3.5 Hours Thermal Imaging	6 hours in thermal only	6 hours in thermal only
Protection Level	IP67, IEC 60529	IP67	IP67	IP67
Working Temperature Range	Standard: -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	-4 to 140F (-20 to 60°C) No time limit -4 to 185F (-20 to 85°C) Up to 10 minutes -4 to 225F (-20 to 107°C) Up to 2 minutes	-4°F to 185°F (-20°C to 85°C) No time limit 302°F (150°C), 5min 500°F (260°C), 1min	-4°F to 185°F (-20°C to 85°C) No time limit 302°F (150°C), 5min 500°F (260°C), 1min

FT31 – Competitive Analysis

FEATURE /PRODUCT	HIKMICRO FT31	SEEK AttackPRO	SEEK AttackPRO+ With NFPA® 1801:2018
			
IR Resolution	384 x 288 (110,592 pixels)	320 x 240	320 x 240
NETD	< 35 mK (@ 25°C, F#=1.0)	< 35 mK with SV1	< 35 mK with SV1
Image Frequency	60 Hz	> 25 Hz Fast Frame	> 25 Hz Fast Frame
Field of View (FOV)	54.1° x 40.2°	57° x 42°	57° x 42°
Display	800 x 480 Resolution, 4.3" LCD Screen	3.5" Color with Corning® Gorilla® Glass	3.5" Color with Corning® Gorilla® Glass
Color Palettes	Basic ,Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	2 Options (TIBASIC-default, and TIBASIC+)	2 Options (TIBASIC-default, and TIBASIC+)
Object Temperature Range	-20°C to 1200°C (-4°F to 2192°F)	-4 to 1,022°F (-20 to 550°C)	-4 to 1,022°F (-20 to 550°C)
Video Recording	Yes	NA	NA
Battery Operating Time	Approx. 6 hours	>6 Hours	>6 Hours
Protection Level	IP67, IEC 60529	IP67	IP67
Working Temperature Range	Standard: -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	-4 to 131°F (-20 to 55°C) - no time limit up to 302°F (150°C) - max 15 min up to 500F° (260°C) - max 5 min	-4 to 131°F (-20 to 55°C) - no time limit up to 302°F (150°C) - max 15 min up to 500F° (260°C) - max 5 min

FT31 – Competitive Analysis


FEATURE /PRODUCT	HIKMICRO FT31	Bullard TXS	Bullard QXT	Bullard NXT With NFPA® 1801:2021
				
IR Resolution	384 x 288 (110,592 pixels)	320x240	320 x 240 or 240 x 180	320x240
NETD	< 35 mK (@ 25°C, F#=1.0)	<60mK	< 30 mK	< 30 mK
Image Frequency	60 Hz	30 Hz	60 Hz	60 Hz
Field of View (FOV)	54.1° x 40.2°	40° V x 50° H	31° V x 40° H	31° V x 40° H
Display	800 × 480 Resolution, 4.3" LCD Screen	3.5"	3.5"	3.5"
Color Palettes	Basic ,Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	Colorization White-Hot and Super Red Hot (yellow-orange-red gradient) for temperatures above 500° F/260° C	Colorization White-Hot and Super Red Hot (yellow-orange-red gradient) for temperatures above 500° F/260° C	Colorization White-Hot and Super Red Hot (yellow-orange-red gradient) for temperatures above 500° F/260° C
Object Temperature Range	-20°C to 1200°C (-4°F to 2192°F)	1022° F/550°C	1100° F/600°C	1100° F/600°C
Video Recording	Yes	Not mentioned	Yes	Yes
Battery Operating Time	Approx. 6 hours	Approx 6 hours at 20°C in routine conditions	7-8 hours in routine conditions	7-8 hours in routine conditions
Protection Level	IP67, IEC 60529	IP67	IP67	IP67
Working Temperature Range	Standard: -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	4°F/-20°C Continued operation 300°F/150°C 15 minutes 500°F/260°C 5 minutes	4°F/-20°C Continued operation 300°F/150°C 15 minutes 500°F/260°C 5 minutes	4°F/-20°C Continued operation 300°F/150°C 15 minutes 500°F/260°C 5 minutes


FT31 – Competitive Analysis


FEATURE /PRODUCT	HIKMICRO FT31	Keison X380N With NFPA® 1801	AVON MI-TIC-EL With NFPA® 1801:2021	LEADER TIC 4.3 With NFPA® 1801
				
IR Resolution	384 x 288 (110,592 pixels)	384 X 288	320x240	384 x 288
NETD	< 35 mK (@ 25°C, F#=1.0)	<50mK	<50mK (<0.05°C)	<50mK (<0.05°C)
Image Frequency	60 Hz	Not mentioned	60Hz	60Hz
Field of View (FOV)	54.1° x 40.2°	50° x 35°	55° x 37.5°	51° x 40°
Display	800 x 480 Resolution, 4.3" LCD Screen	3.5" LCD	3.5"	4" LCD
Color Palettes	Basic ,Black Hot, White Hot, Fire Detection, Rescue, Hot Area, Cold Area, Building	Three: Hot Spot Tracker, Cold Spot Tracker, High Resolution Detection	Fire, Fire Plus*, Overhaul*, Size-Up	3 colouring modes as standard: Fire, Search and Inverse + 2 optional colouring modes: Cold and Multicolour.
Object Temperature Range	-20°C to 1200°C (-4°F to 2192°F)	-40°C to 1000°C	-40°C to 760°C (-40°F to 1400°F)	-40° to +1150°C
Video Recording	Yes	Yes	Yes	No
Battery Operating Time	Approx. 6 hours	>3.5 hours	4 hours	>4h (1 batt)
Protection Level	IP67, IEC 60529	IP67	IP67	IP67
Working Temperature Range	Standard: -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	120°C for 20min 260°C for 8min	-20°C (-4°F) and +85°C (185°F) At 150°C (300°F) for 15 minutes At 260°C (500°F) for 5 minutes	150°C for 15min 260°C for 5min


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