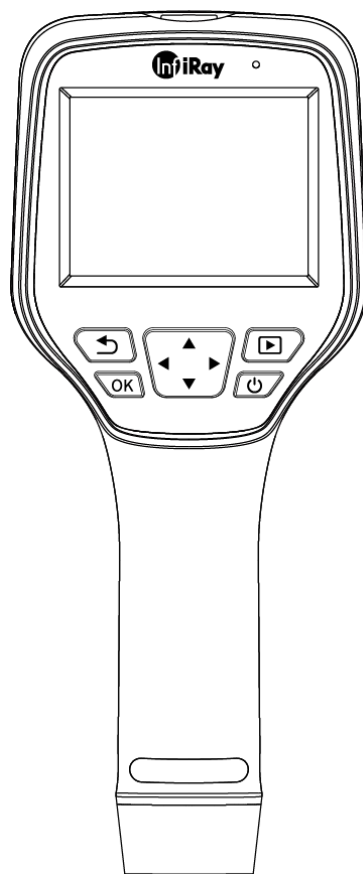# M300G&M600G

Handheld Thermal Camera

Technical Data V1.0.5

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1. Overview

1.1 Update Comments

Our manuals are updated several times per year. Please visit our website to access the latest manuals.

1.2 Authorized Release Notes

The authorized release of this manual is the Chinese version. In case of disagreement due to translation errors, the Chinese version shall prevail. If there is any update in the future, the Chinese version will be revised first.

2. M300G Technical Data

General Description
With built-in up to 110,000 pixels (384*288) infrared detector, M300 series handheld temperature measurement thermal camera can provide clearer temperature images, more accurate and stable temperature measurement data; At the same time, it is equipped with smart touch screen, manual focusing lens, dual optical imaging, and multiple analysis functions, which can ensure accurate test results, efficient diagnosis and processing.

Advantages
1. Manual focusing is supported. Through manual precise focusing, small targets of 1mm can be distinguished (at a distance of 0.1m from the observation target). 2. Custom point/line/area temperature analysis is supported, and temperature measurement range can reach -20℃～+550℃. 3. Powerful image fusion function, together with 5 million visible light camera, can provide more comprehensive information, making it easier to observe under complex conditions. 4. Wi-Fi transmission is supported. When connecting to mobile APP, analyzing and sharing temperature screen and temperature measurement data at any time is available. 5. Intelligent PC analysis software can reset the measurement settings, and generate a test report with one key, which is convenient for data analysis. 6. With 3.5-inch LCD capacitive touch screen and battery quick-release design, it also support use of tripod and handheld mobile mode. 7. With laser indication, it can quickly locate the measurement target; High and low temperature intelligent alarm in the full frame and custom alarm temperature are available

2.1 M300G

Thermal Module	
Detector Type	VOx Uncooled FPA detector
Resolution of Detector	384*288
Response Band	8～14µm
Pixel	12µm
NETD	35mK
IFOV	1.98mrad
Frequency	25Hz
Focus	6.2mm
FOV	43.7°*31.9°
Focus Mode	Manual focus
Temperature Measuring Range	-20 ℃～ 150 ℃ , 100 ℃～ 550 ℃
Temperature Measuring Accuracy	±2% or ±2℃

Camera Functions	
Temperature Measuring Mode	Center spot/hot and cold spot tracking and temperature display
Custom Point/Line/Area Temperature Measurement	Movable spot/line/area temperature measurement, up to 10 spots, 10 areas,10 lines
Temperature Measuring Unit	Celsius, Fahrenheit, Kelvin
Emissivity Setting	Adjustable between 0.01 and 1.0, step length 0.01
Ambient Temperature Setting	-10℃～50℃, step length 1℃
Distance Setting	1～20m, step length 1m
Digital Zoom	1×, 2×, 4×
Visible Light and Dual Fusion	Available (thermal, dual-spectrum fusion, visible light, PIP)
Palette	7 palettes
Temperature Alarm	Alarm when the temperature is above or below the threshold in the full frame

Camera Functions	
Temperature Scale	Manual/Auto
Laser Indicator	Available
Digital Camera	5 MP
Image/video Storage	Jpg images with temperature data in thermal and visible light modes；H.264 videos without temperature data
Annotation Function	Make voice annotations through microphone.
Language	English, Polish, Russian, Korean, Hungarian, Brazilian Portuguese, German, French, Spanish, Italian, Turkish, Traditional Chinese
Display Size	3.5 inch touchscreen (480*640)
Special Functions	Scan the QR code to name the image
Storage Card	Standard 32GB MicroSD card
Battery Type	Rechargeable and detachable Lithium battery
Power Interface	USB Type-C
Connecting Methods	USB, Wi-Fi
Charging Time	3 hours
Operation Time	4 hours
Battery Management	Auto shutdown: 5 minutes, 10 minutes, 20 minutes, off

Others	
Analysis Software	PC（Infrared analysis software）or mobile （IOS/Android APP）
Tripod mounting interface	1/4″-20-UNC
Operation Temperature	-10℃～+50°C
Storage Temperature	-20℃～+60°C
Relative Humidity	10% ～95%,non-condensing
Drop	2m
Encapsulation	IP54 (IEC 60529)
Shock and Vibration	Shock 25g(IEC 60068-2-27); Vibration2.5g(IEC60068-2-6)
Dimensions(L*W*H)	258.4*105.1*102.3mm

Weight	670g（incl. battery）
Certificates	CE/FCC/UKCA/RoHS
Accessories	5V 2A power adapter (with various plugs to fit global regions), USB cable, SD card, battery×2, QSG, battery charger, calibration certificate, packaging list, hard transport case

3. M600G Technical Data

General Description
With built-in up to 320,000 pixels (640*512) infrared detector, M600 series handheld temperature measurement thermal camera can provide clearer temperature images, more accurate and stable temperature measurement data; At the same time, it is equipped with smart touch screen, manual focusing lens, dual optical imaging. Compared with M300 series, three palettes, electronic zoom, timed photographing, alarm photographing, and real-time temperature analysis function are added, which can ensure accurate test results, efficient diagnosis and processing.

Advantages
1. Manual focusing is supported. Through manual precise focusing, small targets of 1mm can be distinguished (at a distance of 0.1m from the observation target). 2. Custom point/line/area temperature analysis is supported, and temperature measurement range can reach -20℃～+550℃. 3. Powerful image fusion function, together with 5 million visible light camera and 10 palettes, can provide more comprehensive information, making it easier to observe under complex conditions. 4. Real-time temperature analysis function is available. 5. Wi-Fi transmission is supported. When connecting to mobile APP, analyzing and sharing temperature screen and temperature measurement data at any time is available. Intelligent PC analysis software can reset the measurement settings, and generate a test report with one key, which is convenient for data analysis. 6. With 3.5-inch LCD capacitive touch screen and battery quick-release design, it also support use of tripod and handheld mobile mode. 7. With laser indication, it can quickly locate the measurement target; High and low temperature intelligent alarm in the full frame and custom alarm temperature are available. Timed photographing and alarm photographing are supported.

3.1 M600G

Thermal Module	
Detector Type	VOx Uncooled FPA detector
Resolution of Detector	640*512
Response Band	8～14μm
Pixel	12μm
NETD	35mK
IFOV	1.31mrad
Frequency	30Hz
Focus	9.1mm
FOV	48°*38°
Focus Mode	Manual focus
Temperature Measuring Range	-20 ℃～ 150 ℃ , 100 ℃～ 550 ℃
Temperature Measuring Accuracy	±2% or ±2℃

Camera Functions	
Temperature Measuring Mode	Center spot/hot and cold spot tracking and temperature display
Custom Point/Line/Area Temperature Measurement	Movable point/line/area temperature measurement; Regional temperature measurement displays hot spot tracking; line measurement displays the maximum temperature, and the regional temperature measurement displays the highest, lowest, and the average values; supports up to 10 points, 10 areas,10 lines
Temperature Measuring Unit	Celsius, Fahrenheit, Kelvin
Emissivity Setting	Adjustable between 0.01 and 1.0, step 0.01
Ambient Temperature Setting	-10℃～50℃, step 1℃
Distance Setting	1～20m, step 1m
Digital Zoom	1×, 2×, 4×, 8×
Image Mode	Thermal, dual-spectrum fusion, visible light, PIP
Palette	10 palettes
Temperature Alarm	Alarm when the temperature is over the threshold of the highest and lowest temperature in the full frame

Camera Functions	
Temperature Scale	Manual/Auto temperature range
Laser Indicator	Available
Digital Camera	5 MP
Electronic Zoom	Available in visible light and thermal mode.
Image/video Storage	Jpg images with temperature data in thermal and visible light modes; H.264 videos without temperature data
Annotation Function	Make voice annotations through microphone.
Language	English, Polish, Russian, Korean, Hungarian, Brazilian Portuguese, German, French, Spanish, Italian, Turkish, Traditional Chinese
Display Size	3.5-inch touchscreen (480*640)
Special Functions	Auto/manual naming, scan the QR code naming
Storage Card	Standard 32GB MicroSD card
Battery Type	Rechargeable and detachable Lithium battery
Power Interface	USB Type-C
Connecting Methods	USB, Wi-Fi
Charging Time	About 3 hours
Battery Operating Time	About 3 hours
Power Management Interfaces	Automatic shutdown: 5 minutes, 10 minutes, 20 minutes, off)

Others	
Analysis Software	PC（Infrared analysis software）or mobile （IOS/Android APP）
Tripod mounting interface	1/4″-20-UNC
Support for Tripod	Available
Operation Temperature	-10℃～+50°C
Storage Temperature	-20℃～+60°C
Relative Humidity	10%～95%,non-condensing
Fall	2m
Encapsulation	IP54 (IEC 60529)
Shock and Vibration	Shock 25g(IEC 60068-2-27); Vibration2.5g(IEC60068-2-6)
Dimensions(L*W*H)	258.4*105.1*102.3mm
Weight	670g（incl. battery）
Certificate	CE/FCC/UKCA/RoHS
Accessories	5V 2A power adapter(with various plugs to fit global regions), USB cable, SD card, battery×2, QSG, battery charger, calibration certificate, packaging list, hard transport case

4. Structural Drawings

4.1 M300G

4.2 M600G