



World smallest high-resolution thermal imaging device!



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MICRO THERMAL IMAGING DEVICE

IWT 640 MICRO

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IWT 640 MICRO is the smallest thermal image device you have ever seen, with unrivaled weight and dimensions benefits.

Brief description

This ultra compact handheld device is unparalleled in weight and dimensions and consists of a thermal core with 640x480 pixel resolution, a high end computer, an OLED display of 800x600 pixel resolution. The 2.4 GHz radio interface to transmit pictures, graphic and text information can be provided as an option.

The device dimensions are 87.2 mm in length, 44.5 mm in width, and 28 mm in height. Its weight is max. 100 g. The state-of-art components and ingenious solutions are used in the micro thermal imaging device.

Distinctive features

- Significantly smaller dimensions in comparison with existing analogues
- It is highly competitive with “standard” size thermal imaging devices in surveillance and identification solutions
- State-of-art components and unique solutions are used
- Fine parameter adjustment: contrast, colour, detail enhancement, AGC algorithm
- Wireless control, transmission of pictures, graphical and text information via 2.4 GHz radio interface (optional)
- Convenient zoom: x2, x4, x8
- It fits comfortably into a patch pocket

Optional capabilities

The micro thermal imaging device is intended for comfortable detection, observation, and identification of endothermic objects.



This ultra small-sized device opens up new opportunities for:

- Fire fighting divisions
- Rescue teams
- Special forces

A special hand-free mounting bracket was designed for **IWT 640 MICRO** — a lightweight front mount (“in front of an eye”) with active headphones.

Basic specifications

Thermal core

Resolution	640x480
Pixel pitch	17 µm
Frame rate	9 Hz
Sensitivity	<50 mK
Spectral band	7.5 – 13.5 µm
Digital zoom	x2, x4, x8
Focal length	19 mm, manual adjustment
Field of view angle	32° x 26°
Colour pallets	Yes, 12 modes
Distance of human object detection	640 m
Human identification distance	160 m

Colour OLED display

Resolution	800x600 (full size)
Diagonal	0.5"
Eye relief	25 mm

Optional features

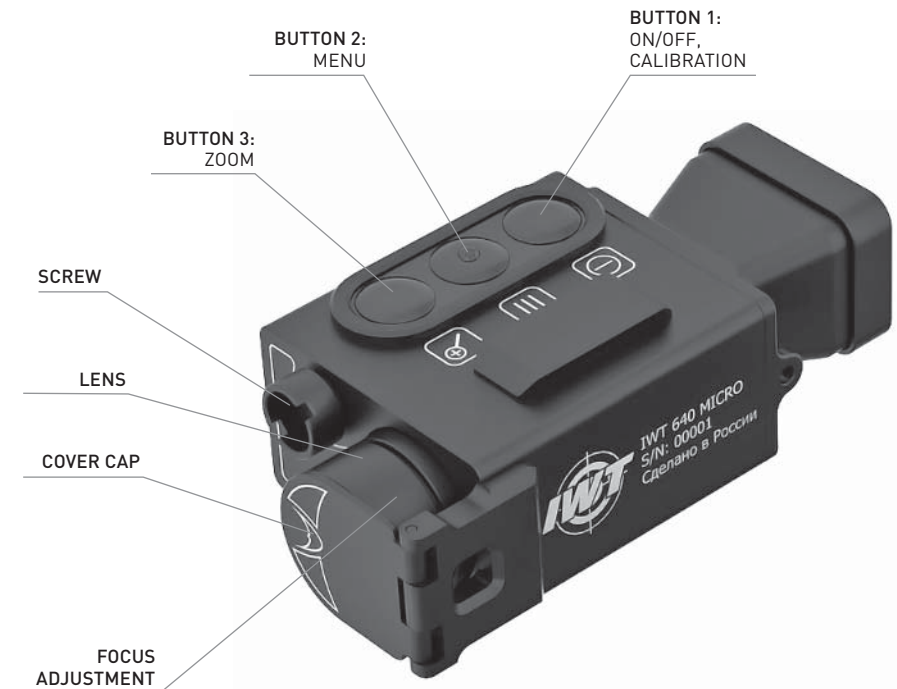
Radio interface 2.4 GHz	Yes
Front mount	Yes

Physical parameters

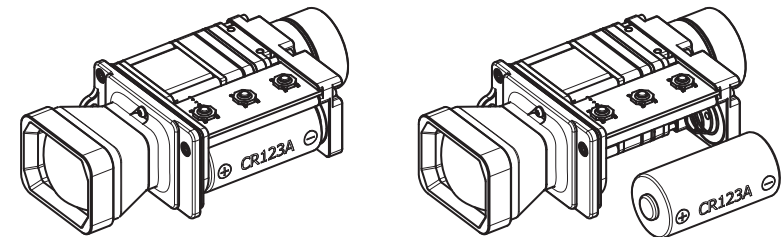
Casing protection rate	IP66
Dimensions	87.2x44.5x28 mm
Weight	120 g maximum (including batteries)
Operating temperature range	from -40°C up to +65°C

Operation manual

The thermal imaging device has the following control elements:



Install the **CR123A** battery before the use of the device or replace it if discharged. In order to do this, undo the **SCREW** as the below picture indicates, remove the protecting cover, and install the battery. Batteries must be inserted correctly with respect to their polarity.



- In order to switch on the device, press and hold **BUTTON 1 (ON/OFF CALIBRATION)** within 2-3 seconds until the screen starts up.
- **The thermal core needs to be calibrated after switching on or when necessary (nonuniform image illumination). For this, shut the lens, press BUTTON 1 (ON/OFF CALIBRATION), and then remove the cover cap.**
- Adjust the lens focus by turning the lens of the device for a clear and sharp image, if necessary.
- There is a battery charge indicator and a charge level in percentage terms in the bottom right corner of the display (average one battery operating time is 2 hours).
- In order to switch off the device, press and hold **BUTTON 1 (ON/OFF CALIBRATION)** during 2-3 seconds until the display is off.
- In order to zoom an image, press **BUTTON 3 (ZOOM)**. Every time you touch the button the zoom changes cyclically as x2 – x4 – x8 – x1.
- In order to view the menu, press and hold **BUTTON 2 (MENU)** during 2 seconds. Use the following buttons for navigation: 1 – DOWN, 2 – SELECT/RETURN TO MAIN MENU, 3 – UP. In order to exit the menu, press and hold **BUTTON 2** during 2 seconds.

Menu item	Value range	Default
DispBright (display brightness)	From 0 up to 100%, step 5	70%
DispContr (Display Contrast)	From 0 up to 100%, step 5	65%
Contrast (the contrast of the microbolometer. It's applicable only for the Auto Bright AGC algorithm)	From 0 up to 100%, step 5	10%
Palette (colour palette of an image)	WhiteHot, BlackHot, Fusion, Rainbow, Globow, Ironbow2, Sepia, ColorI, Icefire, Rain, RedHot, GreenHot	WhiteHot
DDE	From 0 up to 100%, step 5	30%
Preset (preset of parameters. It's applicable only for the Plateau hist AGC algorithm)	Default, Low Scene Contrast, Outdoors, Indoors, Face Detection	Default
AGC	Auto Bright, Plateau hist	Auto Bright
Reset (resetting to the factory default settings)		

Pressing the menu button switches the modes of the device cyclically:

- INDOORS
- OUTDOORS
- DAY
- NIGHT
- DETECTION
- SURVEILLANCE

Each mode has its own preset settings of the device, which boot automatically:

	INDOORS	OUTDOORS	DAY	NIGHT	DETECTION	SURVEILLANCE
DispBright	75	75	75	75	75	75
DispContr	50	50	50	50	50	50
Contrast	5	5	5	5	5	5
Palette	WhiteHot	WhiteHot	WhiteHot	WhiteHot	WhiteHot	WhiteHot
DDE	20	20	20	20	20	20
Preset	Indoors	Outdoors	Default	Low Scene Contrast	Face Detection	Default
AGC	Plateau hist	Plateau hist	Auto Bright	Plateau hist	Plateau hist	Auto Bright
Timer	On	On	On	On	On	On

All parameters are stored in non-volatile memory of the device and remain unchanged after the power is off.