CONOTECH

INSTRUCTION MANUAL

AQUILA

THERMAL IMAGING MONOCULAR

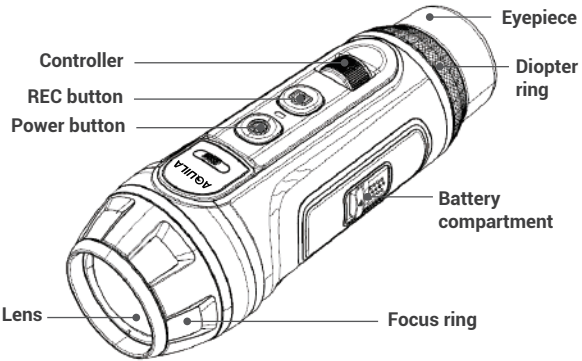


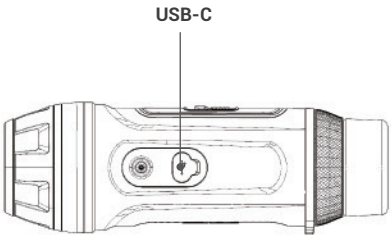
RoHS CE

Attention!

	**The proper usage of the device is important for safe exploitation! Therefore, reading carefully the present manual!**
	**If the device was left in storage for a longer period of time, before exploitation check its functionality.**
	**Disassembling of the device is prohibited, except in authorized repairing centers.**
	**The external optical surfaces should be clean at all times. Touching the optical surfaces with bare hands is not recommended.**
	**Sand and sea water can damage the optical coatings!**
	**Do not point the device directly at the sun!**
	**Image performance is dependent on scenery and atmosphere conditions. Contrast in the same image may vary as a function of the time of day due to the effect of the sun. For example, at sunset objects will have absorbed different levels of heat resulting in greater temperature differences and better contrast.**
	**When left in storage for a longer period of time, batteries have to be removed and stored in polyethylene bags to prevent contact with metal. (It is recommended to recharge the batteries every two to three months)**
	**Condensation can cause fogging of the optical surfaces! Condensation occurs when the temperature or humidity changes as follows:** **· When moving the device from cold to warm place or vice versa** **· In places with high humidity** **When equalizing the temperature of the device with the environmental, the condensation disappears. Use the towel to remove moisture.**
	**Clean the lens surfaces with the lens cloth or with the napkin!**

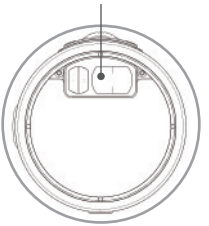
Appearance


Eyepiece
Controller
Diopter ring
REC button
Power button
Battery compartment
Lens
Focus ring


USB-C

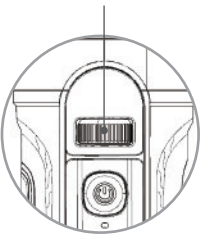
Laser in IR

(only available in Aquila LIIR series)



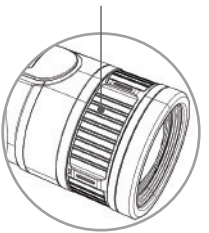
Focus ring

(only available in Aquila LIIR and Dual series)

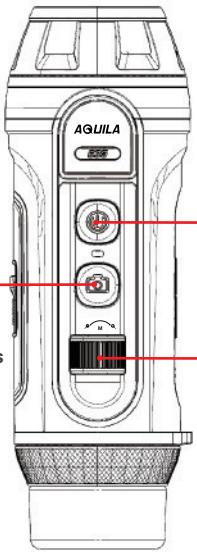


Dual FOV controller

(only available in Aquila Dual series)



⚠ ***NOTE***	All images used in this instruction manual are for illustrative purpose only. Actual product may vary due to product enhancement.（V.1.2）



Short press:
Take photos
Long press:
Record videos

Short press: **Standby mode**
Rangefinder
(only available in Aquila LIIR series)

Long press: Power On/off

Zoom-

Zoom+

Short press to active quick menu

Long press to active main menu

Calibration

Standby mode

For LIIR series, long press 1.5s, then rotate right to enter standby mode.

Press any buttons to exit standby mode. If not operated, AQUILA will turn off.

For others, short press to enter standby mode.

Take photo/video

Short press to take photos, long press to record videos.

Firmware update via APP

Easily keep your device at the forefront of technology with firmware updates directly through our dedicated app.

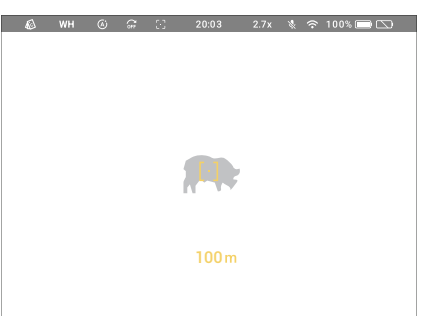
GET IT ON Google Play

Download on the App Store

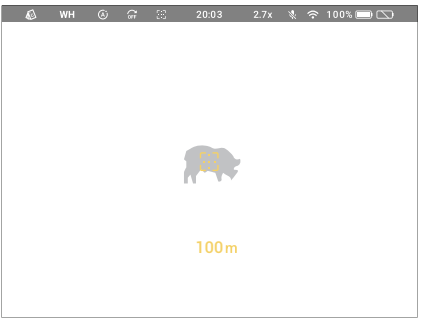
Laser rangefinder

(only available in Aquila LIIR series)

Short press ,then distance will be shown on the screen.

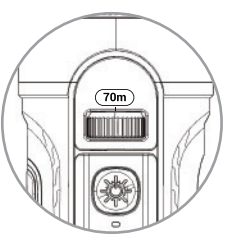


When in scan mode, aim ⊡ to the target, and the relevant distance will show up.



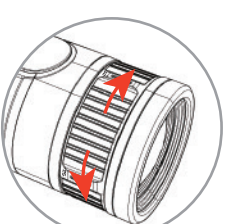
Focus adjustment (70m)
(only available in Aquila LIIR series)

The AQUILA LIIR series feature a precise focusing adjustment with a fin lever. When the focus reaches the 70m (76yd) mark, it aligns with a ridge on the device's housing. This design allows for quick and accurate focusing, even without directly looking at the AQUILA.

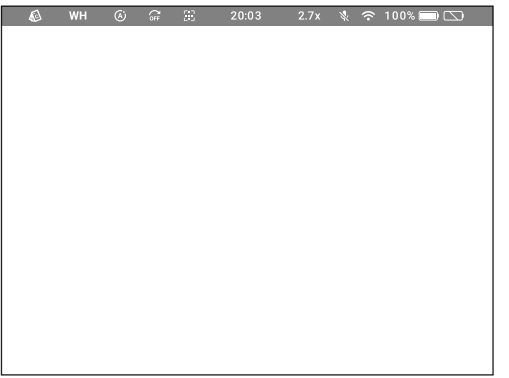


Dual-field of view
(only available in Dual series)

Use a wide FOV (19/25mm) for detection and a narrow FOV (38/50mm) for identification. Seamlessly switch between these dual views in 2 steps: set focus once, then twist the Dual-FOV controller to change views without refocusing for continued sharp image quality.



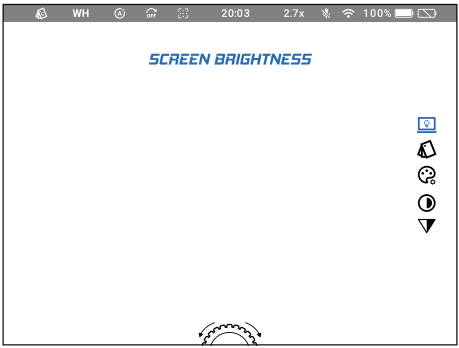
Status Display



The status bar is on the top of the display and shows information on the actual operating status of the AQUILA.

- **Tone adjustment**
- **Palettes**
- **Calibration mode**
- **Standby mode**
- **Rangefinder** (only available in Aquila LIIR series) /**Focal length** (only available in Dual series)
- **Real time**
- **Magnification**
- **Microphone**
- **WIFI**
- **Built-in battery level**
- **Built-in battery**
- **External battery**

Short press to enter the quick menu, long press to exit the quick menu.



Screen Brightness

Short press , then rotate to select the screen brightness from 1-5.

Short press to save and exit.

Tone Adjustment

Short press , then select the cold/warm mode.

Color Mode

Short press , then rotate to select the palettes.

Short press to save and exit.

Contrast

Short press , then rotate to select the contrast from 1-5.

Short press to save and exit.

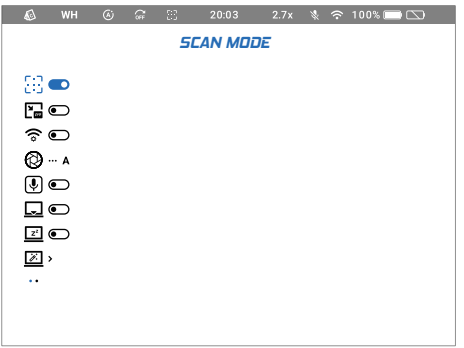
Sharpness

Short press , then rotate to select the sharpness from 1-5.

Short press to save and exit.

Main Menu

Long press to enter the main menu.



SCAN MODE

Short press to turn on/off scan mode.

PIP

Short press to turn on/off PIP.

WIFI

Short press to turn on/off WIFI.

Calibration Mode

Short press , then rotate to select the A, M, S.

Short press to save and exit.

A Automatic

M Manual

S Silent

Microphone

Short press  to turn on/off microphone.

Pure Mode

Short press  to turn on/off pure mode.

Auto Standby

Short press  to turn on/off auto standby.
AQUILA enters auto standby mode after 2 minutes of inactivity

Defective Repair

Cover the objective lens and short press to perform defective pixel repair.

Unit

Short press to select meter or yard.

Language

Short press to select the language,
then short press  to save and exit.

Device Info

It indicates the Model name, S/N, software version and hardware version.

Reset

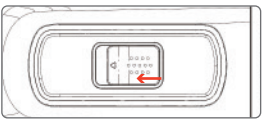
Short press to select No or Yes.

Power Supply

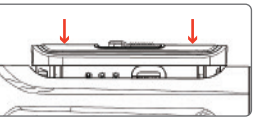
Removable battery

Please install the battery based on the positive and negative signs.
Replace the battery and close the compartment knob.

Open

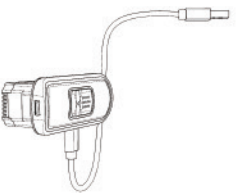


Close



Battery compartment

AQUILA battery compartment can function separately as a charger for 18500 batteries. Please be advised that the battery compartment must be removed to initiate charging. Upon connection with a USB-C cable, the charging process commences. The red light signifies that the battery is charging, and the green light indicates that the battery is fully charged.



Built-in battery

AQUILA is powered by a built-in rechargeable battery and a removable 18500 battery. When both type of battery are fully charged, AQUILA is powered by the removable battery. It will switch to built-in battery once the removable battery level is low. Replacing the external battery does not affect the operation of the AQUILA.

External power supply

External power can be supplied from an external source, such as a power bank.

Cable connection

Power supply /Charge built-in battery.

Storage and Transportation

- Before storing it, clean obligatory the device.
  (In case of moisture, dust or traces of dirt on its surface)
- Make sure that there are no traces of moisture, and the battery compartment is empty!
- It is also possible for a short period of time device to be stored in a suitable soft pack, bag or cartridge box.
- The premises in which the device is kept for long term have to be dry, enclosed, unheated and ventilated.
- During the storage should not be allowed exposure to aggressive environments, temperatures below -50°C and above +60°C, relative humidity greater than 80%, and prolonged periods of direct sunlight.
- Before each transportation, the product should be neatly packed in its original packaging (transport bag) and all other items and accessories should be carefully and steadily placed in the bag.
- You can ship the product with all types of transport at different distances and at altitude up to 12000m.

Aquila Specification					
Model	Aquila 325	Aquila 335	Aquila 3D 19/38	Aquila 3D 25/50	Aquila 350LIIR
Main Characteristics					
Detector	Uncooled Vox				
Resolution	384x288				
Frame rate	50HZ				
Pixel	12μm				
Spectral range	8-14μm				
NETD	＜20mK				
Optical Characteristics					
Objective lens	25mm	35mm	19mm/38mm	25mm/50mm	50mm
Magnification	2.4x	3.3x	1.8x-3.7x	2.4x-4.8x	4.8x
FOV(H×V), m @100m	18.4×13.8	13×9.9	12.1×9.1 / 24.3×18.2	9.2×6.9 / 18.4×13.8	9.2×6.9
Close-up range	2m				
Dioptre adjustment	±5D				
Functions					
Smooth zoom	2.4x-10x	3.3x-13.8x	1.8x-7.5x / 3.7x-15.4x	2.4x-10x / 4.8x-20x	4.8x-20x
Palettes	8				
Audio recording	YES				
Firmware update via APP	YES				
Photo/Video	YES				
Display					
Type	OLED				
Resolution	1024x768				
External video	WIFI				
Built-in memory	32GB				
Power Supply					
Battery	Dual Battery				
External power supply	5V USB-C				
Operating time (at t=22°C)	10h				
Physical Characteristics					
Weight (without external battery)	≤540g	≤540g	≤570g	≤600g	≤560g
Dimension	≤φ61x179mm	≤φ61x179mm	≤φ61x205mm	≤φ61x205mm	≤φ61x193mm
Environmental Compatibility					
Ingress protection rating	IP67				
Operating temperature	-20℃～+50℃				
Storage temperature	-40℃～+70℃				
Laser Rangefinder (Only available in Aquila 350LIIR and 650LIIR)					
Safety class for laser equipment according to IEC 60825-1:2014	/				1
Measuring range	/				5-1200m
Measurement accuracy	/				± 1m

AquilaSpecification（640）				
Model	Aquila 635	Aquila 6D 19/38	Aquila 6D 25/50	Aqulia 650LIIR
Main Characteristics				
Detector	Uncooled Vox			
Resolution	640x512			
Frame rate	50HZ			
Pixel	12μm			
Spectral range	8-14μm			
NETD	＜20mK			
Objective lens	35mm	19mm/38mm	25mm/50mm	50mm
Magnification	1.9x	1.0x-2.0x	1.4x-2.7x	2.7x
FOV(H×V), m @100m	22×17.5	20.2×16.2 / 40.4×32.3	30.7×24.6 / 15.35×12.3	15.35×12.3
Close-up range	2m			
Dioptre adjustment	±5D			
Functions				
Smooth zoom	1.9x-10x	1.0x-5.2x / 2.0x-10.4x	1.4x-7.3x / 2.7x-14x	2.7x-14x
Palettes	8			
Audio recording	YES			
Firmware update via APP	YES			
Photo/Video	YES			
Display				
Type	OLED			
Resolution	1024x768			
External video	WIFI			
Built-in memory	32GB			
Power Supply				
Battery	Dual Battery			
External power supply	5V USB-C			
Operating time (at t=22°C)	10h			
Physical Characteristics				
Weight (without external battery)	≤540g	≤570g	≤600g	≤560g
Dimension	≤φ61x179mm	≤φ61x205mm	≤φ61x205mm	≤φ61x193mm
Environmental Compatibility				
Ingress protection rating	IP67			
Operating temperature	-20℃~+50℃			
Storage temperature	-40℃~+70℃			
Laser Rangefinder (Only available in Aquila 350LIIR and 650LIIR)				
Safety class for laser equipment according to IEC 60825-1:2014	/			1
Measuring range	/			5-1200m
Measurement accuracy	/			± 1m