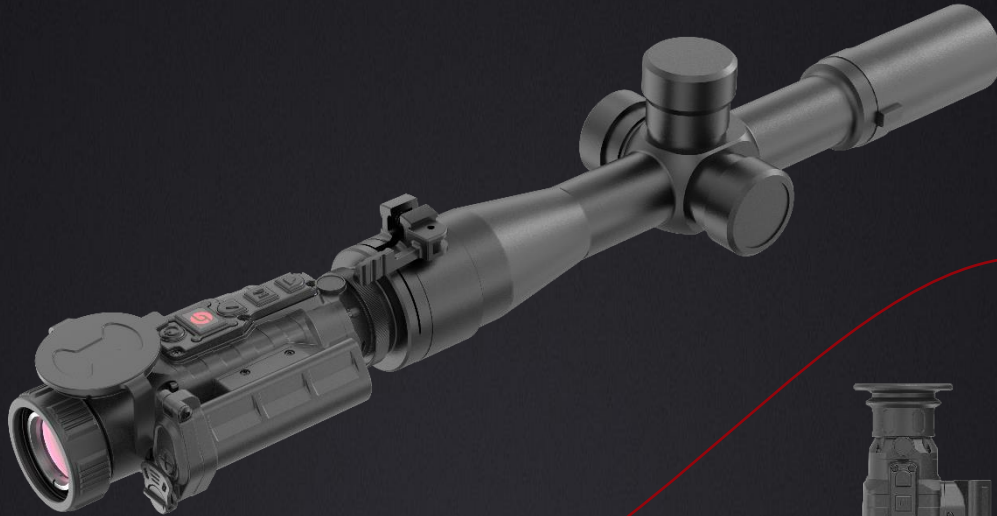# TA Gen2 Aquila Series Clip-on Thermal Imaging Attachment

Clearer and Longer, Capturing What You See

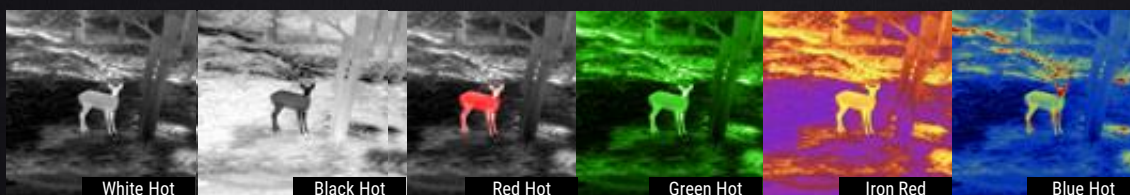## Introduce

Based on the self-developed 17 µm and 12 µm thermal detectors with 400×300 and 640x480 pixel resolutions repsectively, the TDE-Tech, PureIR algorithm, and HD OLED displays, the TA Gen2 Series offers sharp and detailed images while retaining the accuracy of the day scope. Suitable for scopes with different calibers from 40 mm to 70 mm, the TA Gen2 makes an thermal upgrade that transforms day scopes into potent thermal imaging aiming systems for 7 hours of non-stop operation in harsh conditions.

Features and Benefits

- o 400×300/640x480 IR resolution for clear images
- o TDE-Tech and PureIR algorithm for detail enhancement of targets
- o Fast and easy replaceable 18650 battery for 7 hours of operation
- o One-step installation and no re-zeroing
- o Wireless remote control for easy operation
- o IP67 dustproof and waterproof rated
- o 6 color palettes for tasks in changing conditions
- o A wide range of operating temperatures (-30 to 50℃)

Application

- o Outdoor Adventure
- o Search & Rescue
- o Marine Navigation
- o Law Enforcement

| White Hot | Black Hot | Red Hot | Green Hot | Iron Red | Blue Hot |

Specifications

Model	TA421	TA431	TA451	TA621	TA631	TA651
Infrared detector						
Detector type	VOx					
Detector resolution and pitch	384 × 288, 17 µm			640 × 480, 12 µm		
Spectral range	8 to 14 µm					
NETD	≤40 mk					
Frame rate	50 Hz					
Lens						
Focal length	25 mm; F1.1	35 mm; F1.2	50 mm; F1.2	25 mm; F1.0	35 mm; F1.0	50 mm; F1.0
Focus	Manual					
Field of angle	14.9°×11.2°	10.7°×8°	7.5°×5.6°	17.5°×13.1°	12.5°×9.4°	8.8°×6.6°
Optical zoom	1x					
Digital zoom	1x, 2x and 4x			1x, 2x, 4x and 8x		
Power						
Battery type	Single 18650 battery					
Battery life	≥ 7 hours					
Interface						
Video interface	LEMO					
External expansion	External Display, Bluetooth remote control and Picatinny					
Mechanical interface	Picatinny					
Display						
Display type	0.39'' OLED			0.5'' OLED		
Resolution	1024 × 768			800 × 600		
Eyepiece	Exit pupil distance ≥ 10 mm, Exit pupil diameter ≥ 20 mm			Exit pupil distance ≥ 20 mm, Exit pupil diameter ≥ 20 mm		
Video output	Analog video					
Functions						
Scene modes	Enhanced, Highlight and Natural					
Color palettes	White Hot, Black Hot, Red Hot, Green Hot, Iron Red, Blue Hot					
Hot spot tracking	Available					
Compensation modes	Shutter and scene compensation					
System						
Start up	10 s					
Environmental						
Operating temperature range	-30°C to 50°C					
Storage temperature range	-45°C to 70°C					
Humidity	10 % to 95 % non-condensing					
Shock	500 G at 1 ms half sine pulse (as per IEC60068-2-27)					
Vibration	5Hz - 200Hz - 5Hz 0.15mm (as per IEC60068-2-6)					
Encapsulation	IP67					
Certification	IP67, FCC, CE, RoHS, EAC, WEEE, un38.3, Certification for Air transport					
Physical						
Weight	≤475 g	≤490 g	≤550 g	≤540 g	≤550 g	≤660 g
Size (L × W × H)	153×57×79 mm	157×58×79 mm	178×62×83 mm	161×57×79 mm	161×60×79 mm	177×66×87 mm
Standard	Device×1, Eye mask×1, Carry bag×1, 7-pin LEMO to USB cable×1, Battery charger×1, 18650 battery×1, Quick start guide×1, Warranty card×1					
Optional	External eyepiece, Adapter ring, Picatinny rail, Bluetooth remote control (with hook-and-loop fastener), 7-pin LEMO to USB and AV cable					

Cover ring adapter	
A	Weight 70g, Compatible with 38/40/42/44/46mm
B	Weight 80g, Compatible with 48/50/52/54mm
C	Weight 90g, Compatible with 56/58/60/62/64mm

Specifications

Detection Range **Recognition Range**

TA421

	Detection	Recognition
Vehicle (2.3m×2.3m)	1700	700
Human (1.8m×0.5m)	700	350
Deer (1.5m×0.5m)	590	290
Boar (0.9m×0.7m)	450	220

TA431

	Detection	Recognition
Vehicle (2.3m×2.3m)	2400	1000
Human (1.8m×0.5m)	1000	500
Deer (1.5m×0.5m)	820	400
Boar (0.9m×0.7m)	620	300

TA451

	Detection	Recognition
Vehicle (2.3m×2.3m)	3000	1400
Human (1.8m×0.5m)	1400	700
Deer (1.5m×0.5m)	1180	590
Boar (0.9m×0.7m)	880	450

TA621

	Detection	Recognition
Vehicle (2.3m×2.3m)	2400	1000
Human (1.8m×0.5m)	1000	500
Deer (1.5m×0.5m)	830	420
Boar (0.9m×0.7m)	620	320

TA631

	Detection	Recognition
Vehicle (2.3m×2.3m)	2800	1400
Human (1.8m×0.5m)	1400	700
Deer (1.5m×0.5m)	1150	580
Boar (0.9m×0.7m)	880	450

TA651

	Detection	Recognition
Vehicle (2.3m×2.3m)	3300	2000
Human (1.8m×0.5m)	2000	1000
Deer (1.5m×0.5m)	1650	830
Boar (0.9m×0.7m)	1250	630

*Technical parameters are subject to change without notice. For the latest information, please visit our website:
www.guideir.com