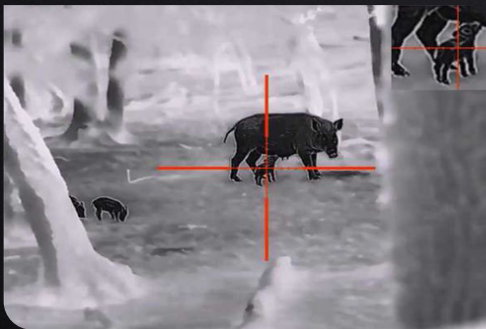# TU Gen2
Thermal Imaging Scope

Unlock Hidden Detail with HD AMOLED Display

Introduction

The TU Gen2 Series is equipped with a high-sensitivity thermal sensor of 12μm and a 1440×1080 HD AMOLED display. Paired with the robust PureIR image algorithm, it provides users with a more vivid and detailed visual experience. The product has undergone meticulous optimization in its detailed design, elevating user-friendly operation. Furthermore, the battery life has seen a substantial extension, resulting in a 20% increase in duration.

Features and Benefits

o HD AMOLED display for higher image quality and reduced visual fatigue

o The PureIR algorithm for high-sensitivity thermal images

o Super long battery life of up to 12 hours

o OTA firmware upgrade by connecting to the APP

o Photo and video recording to keep the best moments

o IP67 encapsulation, resistant to 800G shock

o User-friendly improved left-hand operation experience and optimized opening direction of USB cover

Applications

o Night hunting

o Law enforcement

o Search & Rescue

o Personal security

Specifications

Product model	TU431	TU451	TU631	TU651
Sensor				
Type	Uncooled VOx Infrared Detector, 8 to 14 µm			
Resolution	400×300, 12 µm		640×480, 12 µm	
NETD	≤30mK			
Frame rate	50 Hz			
Lens				
Focal length	35 mm, F1.0	50 mm, F1.0	35 mm, F1.0	50 mm, F1.0
Field of angle	7.8°×5.9°	5.5°×4.1°	12.5°×9.4°	8.8°×6.6°
Optical zoom	2.65x	3.78x	1.65x	2.36x
Digital zoom	1x ~ 4x		1x ~ 8x	
Focus	Manual			
Display				
Display type	0.39'' AMOLED			
Resolution	1440×1080			
Eyepiece	Exit pupil distance ≥ 48 mm; Diopter ± 4; Zoom: 14x			
Video output	Digital video			
Range Performance				
Detection range	1000 m	1400 m		2000 m
Functions				
Scene modes	Enhanced, Highlight and Natural			
Color palettes	White Hot, Black Hot, adjustable Red Hot , Green Hot, Iron Red, Blue Hot			
Recording function	Photo/Video			
WIFI	2.4G			
Supported Application	TargetIR			
Firmware OTA	Upgrade device firmware via app connection			
Others	PIP, Hot spot tracking, Rough ranging			
Power				
Battery type	Single 18650 battery (built-in) and customized battery (external)			
Operating time	≥ 12 hours			
Interface				
USB	USB Type-C			
Video interface	micro HDMI			
Mechanical interface	Picatinny			
Tube diameter	Standard 30 mm			
System				
Language settings	English / Russian / German / French / Italian / Spanish / Japanese / Korean / Polish			
Memory capacity	128GB			
Environmental				
Operating temperature	-30°C to 50°C			
Storage temperature	-40°C to 70°C			
Humidity	10 % to 95 % non-condensing			
Shock	800 G at 1 ms half sine pulse (as per IEC60068-2-27)			
Encapsulation	IP67			
Certification	FCC, CE, RoHS, EAC, un38.3			
Physical				
Weight	≤990g (without eye mask and battery)			
Size	≤377×107×69 mm (without eye mask)			
Standard	Device, lens cap, eye mask, 5V2A adapter (US, Britain, Australia and Europe), Desktop charger, customized battery×2, Extended clip×2. USB Type-C cable, micro HDMI cable, Quick start guide			
Optional	Bluetooth remote control, Customized battery, Extended bracket			

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