


 PRICE:  
£1830

# Just what you need

*Chris Parkin* gets to grip with another thermal imager; the Kahles Helia TI-25

**The clean appearance immediately strikes you when first handling the Kahles.** There are just four controls in total, with only two being buttons. The rearmost one powers up the unit and it takes about seven seconds to come completely to life after a five-second hold. Once in operation, short presses move you through three colour palettes: white, black or red equalling hot. A three-second hold turns the unit off. The front button controls digital zoom, with short presses swapping between 1, 2 or 4x magnification above and beyond the 1.7x optical magnification applied by the 25mm objective lens.

Kahles also offers a larger, 35mm objective lens model for those wanting improved optical capability, should their budget allow. A longer hold of

the front button initiates the menu structure, which is clearly illustrated with minimal options to choose between. The first is five levels of screen illumination intensity, the second is five more of image contrast, the third selects automated or manual sensor refresh and the fourth controls automated positional screen on/off.

### There's more

Mechanical controls include the rear internal screen focusing wheel, used to adapt to your own eyes, followed by the front objective collar that focuses the thermal image onto the 384x288 pixel sensor with 17-micron pitch. Sensitivity is listed as <math><35\text{mK}</math>, with a 50Hz refresh rate to minimise any latency or staccato movement of quarry in motion.

The internal screen shows a mainly black and white design, with orange details characterful to Kahles themselves. Plus, there is a remaining power indicator icon in the upper right corner for the internal lithium-ion battery. This is charged using a supplied USB-C cable that plugs into the rubber covered underside port that shows a red/green, charging/charged light. Battery life is advertised at 8-hours, but this is dependent on internal screen brightness and actual operating temperatures, just like any battery. The unit is certified capable between  $-20/+50$  degrees, yet I suspect thermal imaging capability on warm-blooded quarry might be a bit of a challenge at high temperatures. Any unit is fundamentally dependent



**Note the ocular lens focus wheel for internal screen clarity. In use, the OLED screen showed superb optical clarity**



**Detail of the USB-C charging port**



**The rubber objective lens cap attached to the sling**

on temperature variation to apply 'texture' to what the sensor detects, before internal software processes it to be displayed on the OLED screen.

### Ergonomics

The external dimensions show a 198mm overall length, paired to an almost square profile of 68/63mm width/height. The warranty lasts three years, which seems comparable to market competition and the overall weight comes in at 430-grams. To be fair, I'm not keen on kit that is too small to remember where I put it, so I quite liked the hand-filling size with easy to reach, tactile access to the 13mm buttons up top, which can be felt through gloves, helping to avoid any accidental presses.

A neoprene padded neck strap is supplied and this threads into twin underside anchor points that encourage the unit to remain flat against your chest when slung around your neck. Being a monocular, I like the fact it is truly ambidextrous, with perfect functional equality from either eye at any time. Plus, there is a symmetrical, overall rectangular rubber eyecup connected to the ocular lens.

You can choose whether the unit automatically turns off when slung vertical and if you do, it prevents the internal screen illumination from shining up onto your chin and offering a ghoul-like appearance to any sharp-eyed quarry. It also saves battery life as well as your night vision between uses. If you stay manual, turning the unit on/off temporarily is a two-second operation, so I was happy either way and found the internal gyroscopic-type sensor fast to initiate and reliable in gauging orientation.

### Performance

The ocular lens reflects well upon the Kahles name, with superb clarity and



**Objective focusing is beneficial for I.D. but rarely immediately critical to initial detection if set around 100m**

consistent focus from all positions. You never find yourself unfocused on the screen due to switching eyes or after a minimal positional change.

I was getting a good 6-hour run time at 0 and 3-degree winter temperatures and found the image both well-textured, simple to control and perhaps most importantly, it showed evolution in the computational processing capability with respect to graduation of image texture/thermal gradient and exposure levels. This was most noticeable when scanning close to the skyline, where some full frame, 'metering' units dim down so much that you lose all foreground texture compared to the darkened, cold sky.

The field of view is broad, with a 26m span @100m when using the base, 1x digital/1.7x optical magnification. Plus, I was able to detect foxes beyond 500m over short foliage, with defined identification around 300-350m. The image tracking was smooth and I didn't feel the f1.0 objective lens was weak in terms of depth of field when scanning. I only occasionally tuned the focus to maximise detail for specific mid-range identification, otherwise leaving it well alone. Specifically, some closer range shooters will likely need to focus a little more regularly, but I hardly remember re-focussing for anything other than experimentation purposes between 75m and infinity.

I didn't miss Wi-Fi connectivity for smartphones and tablets or filmmaking capability, which can easily

become a voyeuristic distraction from the hunt. Here, your money buys excellent core functionality and although Chinese made, it certainly seems to align with the Kahles name for premium optics. They also assure 'waterproof' specifications if no specific 'IP' type rating.

### Conclusion

Kahles has targeted a simpler approach, which is more bang for your buck, and although no doubt sharing internal technologies with other brands, they clearly chose to keep the Helia a tool for hunters with intuitive simplicity the pure functional focus. It might not be a great 'showman' like those with video capability, but for the hunter, it's an ideal choice. More money buys more features and perhaps finer sensor capability, but we are close to the point here where you don't need more if remaining within sensible quarry engagement ranges. I have used weaker capability than this and shot no fewer foxes for the compromise. **GM**



**The control buttons remain tactile if wearing gloves and are silent**

### TECHNICAL SPECIFICATION

<b>Name:</b>	Kahles Helia TI-25
<b>Objective Lens:</b>	25mm, F1.0
<b>Sensor Resolution (pixels):</b>	384×288; 17µm
<b>Thermal Sensitivity - NETD (mK):</b>	<35
<b>Display Resolution (pixels):</b>	1024×768
<b>Display Frame Rate (Hz):</b>	50
<b>Field of View (m/100m):</b>	26
<b>Optical Magnification:</b>	1,7
<b>Digital Zoom:</b>	1x, 2x, 4x
<b>Battery Life:</b>	up to 8h
<b>Length x Width x Height (mm):</b>	198 × 68 × 63
<b>Weight (g):</b>	430
<b>Waterproof:</b>	Yes
<b>Focus:</b>	Manual
<b>Colour Modes:</b>	White Hot, Black Hot, Red Only
<b>Warranty:</b>	3-years
<b>Price:</b>	£1830
<b>Contact:</b>	Kahles - <a href="http://www.kahles.at/en">www.kahles.at/en</a>