CorDEX

Adaptive Thermal Blending (ATB) - what is it?

Whether you intend to review your findings at a later date or share them with others, infrared images alone can be confusing and hard to understand. That's why at CorDEX, we created Adaptive Thermal Blending (also known as ATB). With ATB, only the key aspects of the infrared image are blended into the high resolution visual image giving you a crisp, clear, easy to understand picture.

The Adaptive Thermal Blending feature also works in low light. Unlike other imaging blending techniques which combine visual data with thermal, ATB works in the opposite way. By relying upon the high resolution digital sensor as the main image capture tool rather than the thermal, it's possible to create a real-time blended image that is far less affected by low light scenes - a common problem with infrared cameras using digital images and edge detection.

With ATB, if the digital camera can see the target the thermal camera data can be overlaid. Digital imaging cameras with ATB can not only see hot spots, they can see cold spots too! Identify and localise poor insulation, faulty HVAC ducting along with the usual electrical and mechanical problems by not only selecting an ATB mode to show hot spots, but cold areas as well. In fact, ATB enabled tools from CorDEX are so powerful, both high and low ATB modes can be run simultaneously in real time.

Infrared images, even high resolution or advanced multi-spectral shots can be confusing. A lot of unnecessary thermal data information is provided to the thermographer that makes the task of identifying the location of a problem a challenge. Adaptive Thermal Blending, exclusively from CorDEX Instruments, allows users to define the temperature at which ATB enabled tool begin blending the infrared image through a high resolution visual image.

With ATB, you get the power of infrared measurement exactly where you need it. Enable either ATB High or ATB Low then input a blend threshold and the camera will only blend thermal data falling above or below that threshold, leaving the remaining image purely visual. This unique technology maximizes the power of both technologies; infrared temperature measurement at a problem location with high resolution visual imagery for simple, accurate area identification.

Ever tried a thermal imaging camera which overlays a visual image with a thermal image? With this technology, the alignment of the two images types is critical. Poor alignment can lead to poor fault diagnosis or even worse the potential to miss a problem altogether.

Unfortunately, sensor alignment changes with a number of factors the main obstacle being distance changes; a closeup shot may have a different alignment error than one from further away. With low resolution, fixed focus sensors, this isn't so much of a problem as target distances can be quite limited.

ToughPIX DIGITHERM however, incorporates a high resolution, motorised focus, digital camera as its primary sensor. This allows wide area, long range shots to be captured along with closeups with extreme detail, both augmented by thermal data. To achieve this breakthrough in image alignment, both visual and thermal sensor package orientation are strictly controlled during the manufacturing process, this, combined with an onboard alignment feature allow users to fine tune the visual and infrared sensor alignment in real time, ensuring that regardless of your scene, you can be sure of that perfect image every time.

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