Everything is transparent to TERA-1024 Linear terahertz imaging camera made by TeraSense

SAN JOSE, CA, USA, March 3, 2016 /EINPresswire.com/ --
Rising Curtain


TERA-1024 (256x 4) Linear THz imaging camera

THz or Terahertz radiation is the next gen technology. Also, known as sub-millimeter radiation it represents electromagnetic waves of wavelength ranging from 0.1 mm (or 100 µm) infrared to 1.0 mm microwave. This radiation lies in the Terahertz Gap sandwiched between microwaves and the infrared and shares some of the properties of both infrared and microwaves.

Invisible to naked eyes, Terahertz radiation can easily pass through many non-conducting substances like clothing, plastic materials, and ceramics but cannot traverse through water or metals. These unique properties makes THz more challenging and interesting than the other usual electromagnetic radiations.

Unlike X-rays THz radiation has no ionizing effect, and, therefore, this does not harm the cells and tissues. In view of this amazing property, THz radiation has much potential and can be used in medical diagnostic besides using for fault detection and security purposes. THz is a region that is not yet fully explored and the scientists are of the opinion that it can make revolutionary changes in health care and high speed wireless communication.

Terasense & THz radiation

Since its inception in 2008 Terasense has been dedicated to make use of the high potential of THz radiation and by means of their continuous research has developed a good deal of Terahertz imaging systems suitable for various applications in real life situations.

Terasense has patent protected THz semiconductor detectors that are suitable to use in ranges from 0.1 to 0.8 THz frequencies and these are very useful in making imaging systems.

The revolutionary product

Terasense has recently developed their linear THz imaging camera TERA-1024. Being provided with an enhanced version of software for supporting the scanning procedure, the product is designed primarily for research and tests in quality assurance, non destructive testing, while its sister product, TeraFAST-256-HS high speed line scanner (5000 fps) can easily support industrial monitoring of high speed industrial conveyor belt. This also satisfies some specific needs of various OEM applications.

TERA-1024 (256x 4) is manufactured for operating in the sub-THz and THz frequency ranges, most of the common materials are as transparent as anything to this. TERA-1024 linear sensor arrays have amazing responsiveness for brilliant imaging performances and have the following competitive advantages:

• Ensures uniform sensitivity from pixel to pixel
• Both standard and customized solution to meet specific needs
• Has user friendly plug-and-play design
• Enjoys CE certification of Compliance
• Cost effective

Terasense THz linear camera TERA-1024 makes use of wide sensor arrays and is provided with Terasense Viewer ® software for sub-THz imaging and has the following specifications.

• Number of pixels: 1024
• Size of the Pixel: 1.5 x 1.5 mm2
• NEP : 1 nW/√Hz
• Rate of image acquisition: up to 50 fps
• Effective imaging area: 384 x 12 mm
• Sync out: +3.3 V, female BNC connector
• Responsivity: 50 kV/W
• Interface: mini-USB
• Power: 5V (USB-powered)
• Dimensional measurements: 440 x 43 x 89 mm

Based on the Terasense® original patent protected technology, the Linear THz camera TERA-1024 is an updated version of the TERA series imaging systems that supports the THz scanning process with subsequent image integration and can operate within a temperature range of 10 - 40°C with humidity less than 80%. TERA-1024 has been successfully used in research for various applications and is all set to face new challenges.

Dmitriy Romanyuk
Terasense Group Inc.
+1 (408) 600-14-59
email us here
