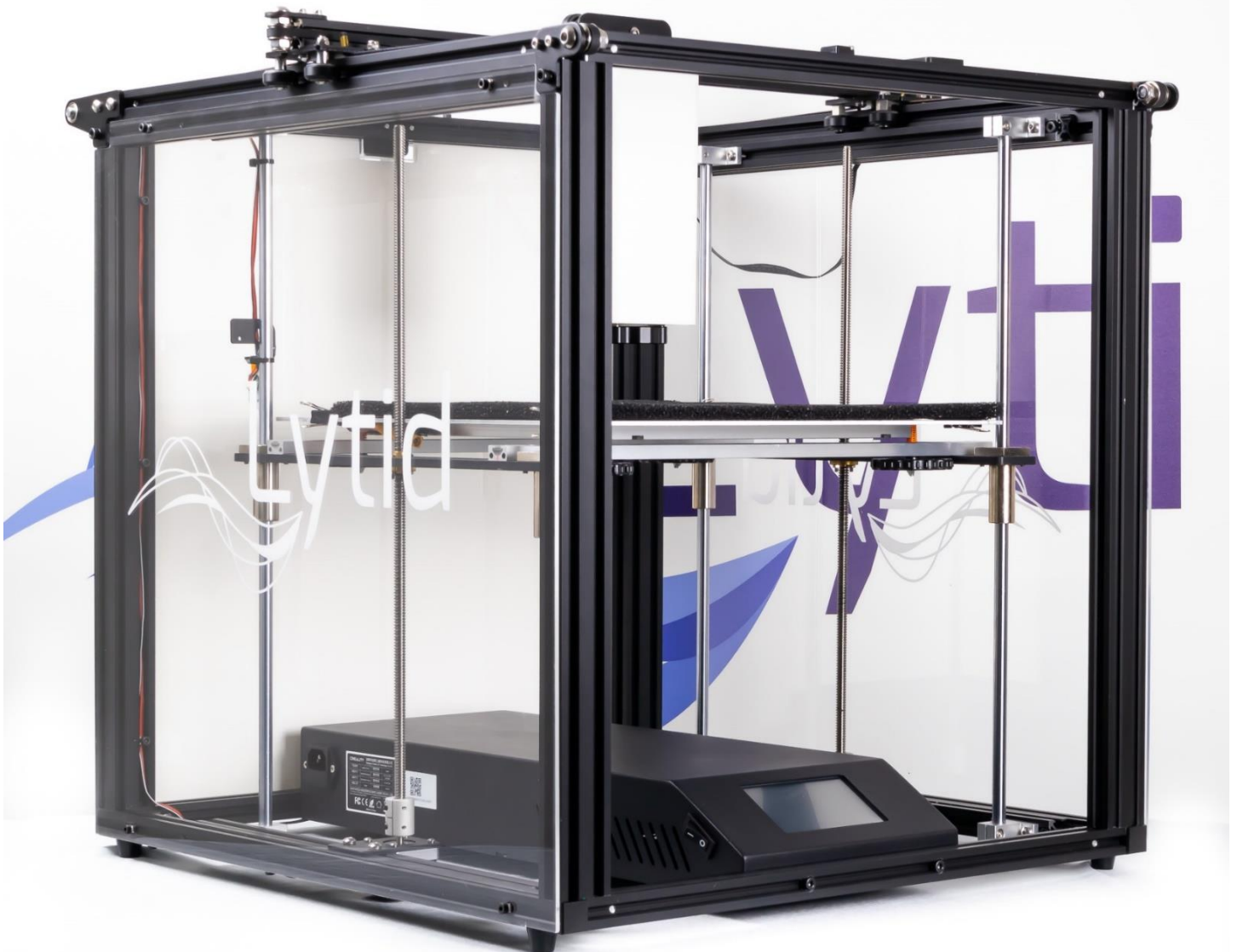


Inspection Product Line

TeraScan

The non-contact, non-invasive, in-depth 3D imager



TeraScan: an all-included solution

For an optimal user experience

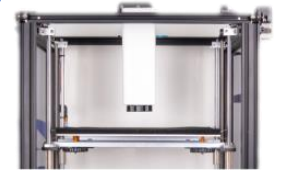
Sensors: Radar

120 GHz, 240 GHz & 300 GHz interchangeable FMCW radar sensor for optimized imaging



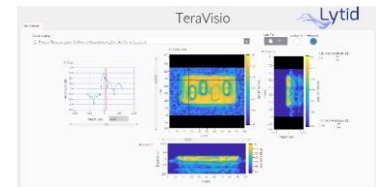
Frame: X-Y-Z Plotter

Fast and precise automated scanner for eased sample inspection



Software: TeraVisio ® 3D

The only dedicated FMCW radar data explorer and visualization software suite on the market



Algorithms: High-End Signal Processing

High reliability radar signals processing algorithms for an enhanced and simplified user experience

See through with 3D THz radar imaging

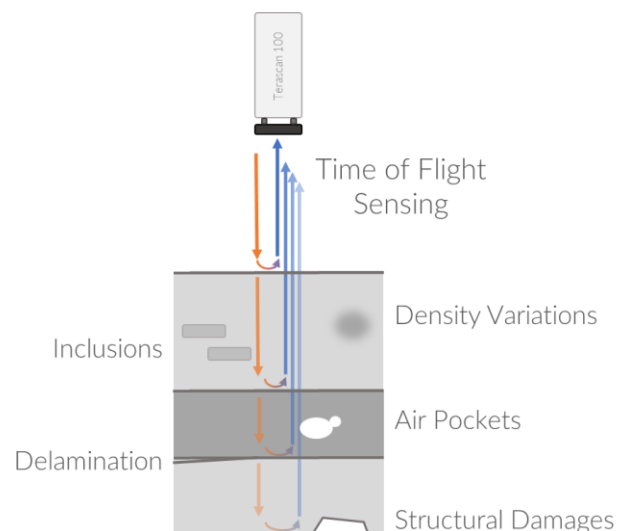
Terahertz radiations gather benefits from IR & microwaves. In addition of their harmless nature, their high penetration capability makes them ideal for in-depth inspection through a large variety of materials, ranging from polymers, to ceramics, woods or fabrics. Such contactless terahertz measurement tools are then naturally unique and promising for NDT inspection.

Through FMCW sensing and its inherent 3D inspection capability with time-of-flight access, the TeraScan product line offers a full volume control capability to ensure the detection and 3D localization of defects and artifacts, thanks to its high sensitivity. to subtle materials variations.

Suitable for a variety of challenges and problematics on a large panel of materials, it is a perfect tool for industrial monitoring tasks, during a manufacturing process or along the product's life cycle. Featuring typically up to 60 dB dynamic range, high quality imaging, with millimetric lateral resolution, makes the TeraScan unit a versatile all-around solution for 3D sensing measurement and imaging.

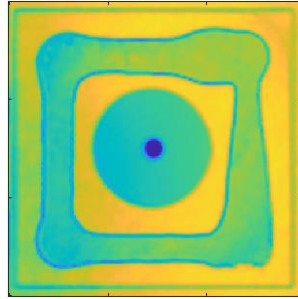
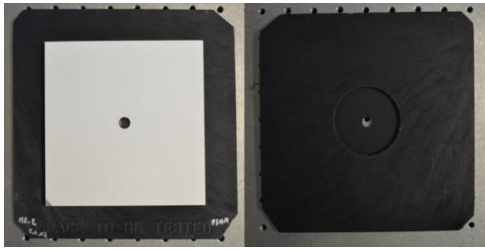
Highly suitable materials:

Polymers, Composites, Foams, Ceramics, Elastomers, Woods...



Typical samples and applications fields

Complex Polymer Structures



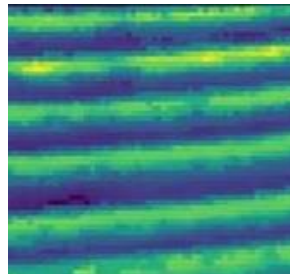
Type of defects: Watertightness of a glue seal & defects within polymer plates structure

Additional: Sample integrity, defect detection, health monitoring & volumetric metrology

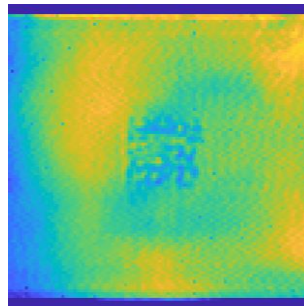
Wooden Materials and Composites

Sensing capability: Density mapping, water content & structural inspection

Additional: Inhomogeneities detection, fieldbus node dimensioning & inner structure inspection



Corroded Protected Metallic Plate



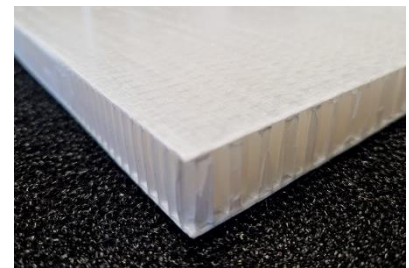
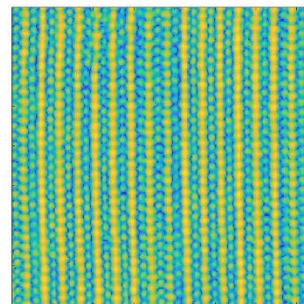
Type of defects: Corrosion marks under protective coating

Additional: Coatings delamination, impacts marks & metallic surface quality through protective layers

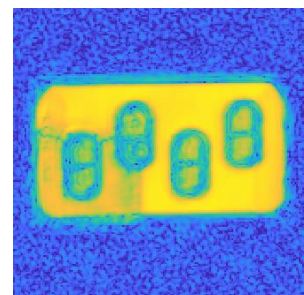
Honeycomb GFRP Composite Structures

Sensing capability: Honeycomb structural integrity & GFRP delamination

Additional: Internal water content, foreign bodies detection & alveoli inspection



Pharmaceutical Packaging



Type of defects: Missing pill within full packaging & Leaflet position

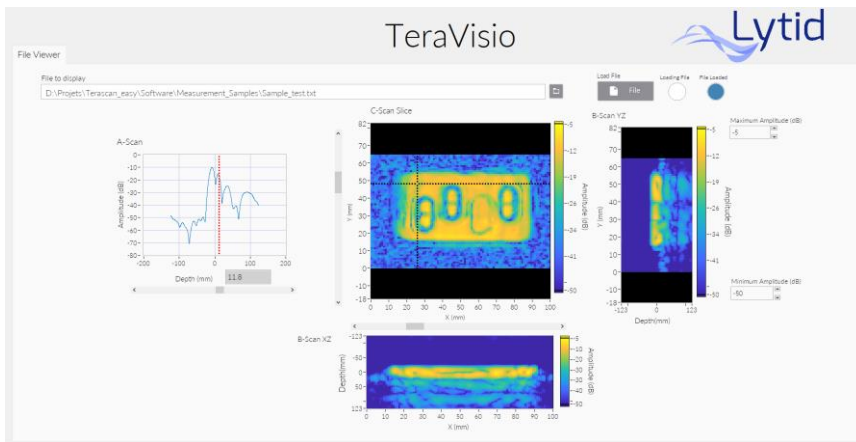
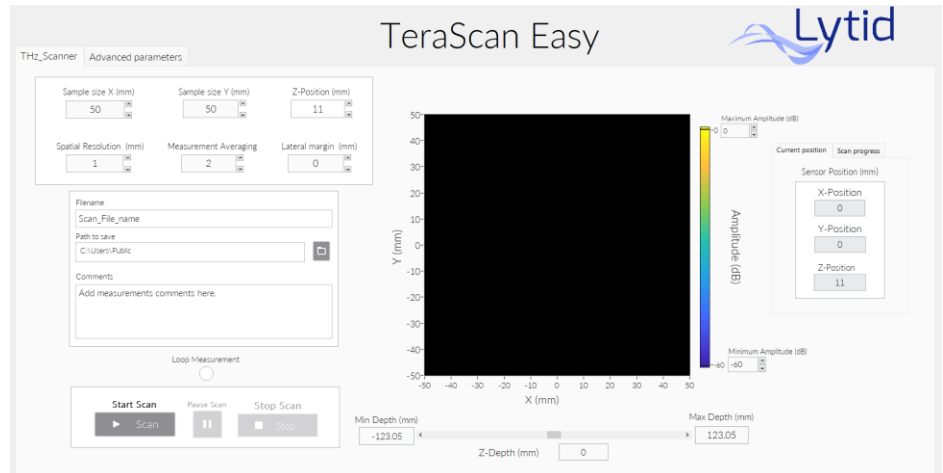
Additional: No alteration of the active molecules, internal & external packaging inspection, packaging seals integrity & pills count

Plug and play with dedicated software suite

TeraScan Easy is a dedicated control software for an optimized TeraScan unit handling and configuration. Its simplified interface ensures a quick evaluation of test samples.

Features

Scan size, spatial resolution, sensor automated detection, images pre-visualization, positioning



TeraVisio 3D is design as an intuitive tool to explore, visualize and exploit your 3D THz Radar data in order to perfect new evaluation methods and test procedures.

Features

Real time 3D data visualization, A, B and C-scans display, integrated data pre-processing, contrast adjustment

Technical specifications

Scanner Unit

Specifications	
Type	X-Y-Z Plotter
Imaging area	300 x 300 mm
Sample height	Up to 150 mm
Minimal step	0.5 mm
Footprint (h*w*l)	650 x 650 x 650 mm
Connectivity	USB 2.0 * 3

Sensor Transceiver

Specifications	Terascan100	Terascan200	Terascan300
Mode of operation	FMCW Sensing		
Frequency	0.12 THz	0.24 THz	0.3 THz
Minimal lateral resolution	1.8 mm	0.9 mm	0.7 mm
Working distance	50, 75, 100, 150 mm		
Acquisition rate	40 Pixels/s	12.5 Pixels/s	12.5 Pixels/s
Typ. dynamic range	60 dB	60 dB	40 dB

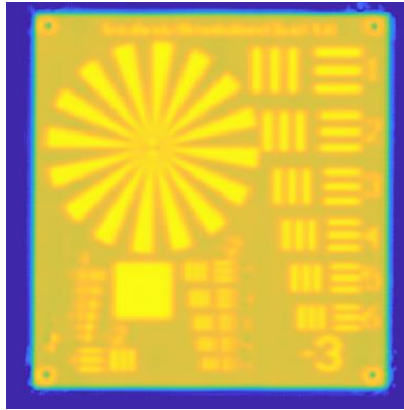
Lytid SAS
 10 rue A. Domon et L. Duquet
 75013 Paris - FRANCE
 @ : sales@lytid.com
 ☎ : +33 1 88 33 63 09
 www.lytid.com

US & Canada:
 Boston Electronics
 www.boselec.com
 shop.boselec.com
 thz@boselec.com
 +1.617.566.3821

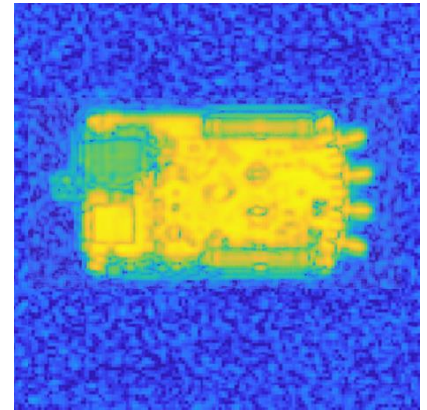

 Empower your application
 Published on Septembre 2023

Terascan100 : Fast, High Dynamic, highly penetrant sensing

Through its 120 GHz operation frequency, the **Terascan100** ensures an optimal transparency over a large variety of materials. Hence offering top performances, coupled to its high 60 dB dynamic range, while still ensuring good detection capabilities through its **1.8 mm** lateral resolution.



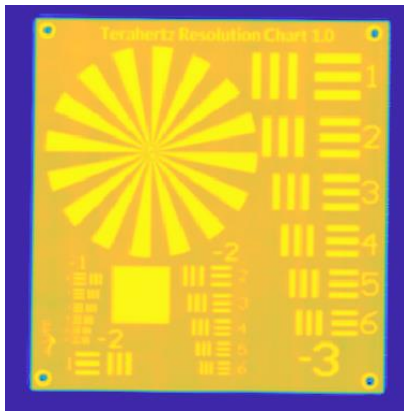
USAF Chart with Terascan100



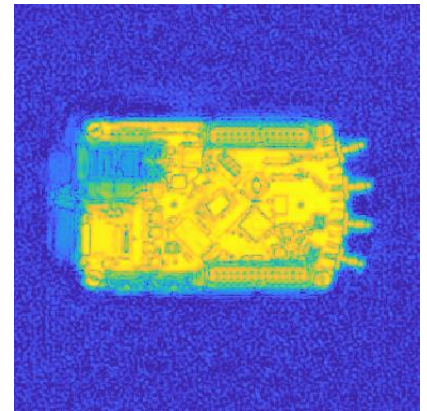
Integrated PCB with Terascan100

Terascan200 : High resolution, high dynamic imaging

With a lateral resolution reaching **0.9 mm**, by operating at 240 GHz, the **Terascan200** offers a great trade-off between resolution and achievable penetration depth within the material under inspection, thanks to its 60 dB dynamic range.



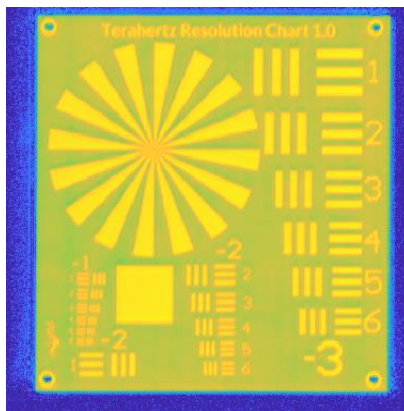
USAF Chart with Terascan200



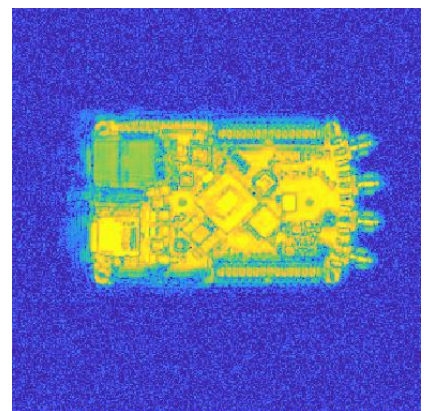
Integrated PCB with Terascan200

Terascan300 : Optimal sub-millimetric resolution

The **Terascan300** unit will bring forth the sharpest images with its **0.7 mm** lateral resolution, to reveal the smallest details for your inspection needs. Ideal with its 40 dB dynamic range, the 300 GHz operation frequency will ensure the highest material contrast.



USAF Chart with Terascan300



Integrated PCB with Terascan300