

ACOUSTOCAM Specifications

IMAGING

Field of View	1.0" Instantaneous
Array Elements	120 x 120 (14,400)
Pixel Size	100 Microns
Video Rate	30 Frames/Second
Output Format	Rs170
Depth Precision	10 Nanosecond
Display	2.5" LCD
Dynamic Range	70 dB Instantaneous
Angle of Incidence	0° to 30°, user adjustable
Ultrasonic Mode	Longitude or Shear
Lens	F/1 Two Element Acoustic Lens

FREQUENCY

Operating Frequency 1 MHz to 8 MHz

POWER

AC Operation AC Adapter 110/240 VAC,
50/60 Hz (Universal
Power Supply)

PHYSICAL (Head Only)

Weight 4 Lbs (1.8 Kg)
Dimensions 9.7" x 9.0" x 4.5"

SOFTWARE

Software Acoustovision™ Camera
Control Software

STANDARD EQUIPMENT

System Camera Head, Control Unit,
Cables, Software, Manual

WARRANTEE

Term 1 year warranty included;
extended options available

Imperium, Inc. was formed in 1996 to supply products which generate images which can be easily understood by end users. The scope of the targets includes both organic and non-organic materials. The company was formed in 1996 by Dr. Marvin Lasser, the Former Chief Scientist of the U.S. Army and Director of Research for Ford/Philco. Funding was raised from a number of sources, predominantly from government contracts, including several Phase II SBIR contracts until the first product launch in 1999. Research and development has continued as different embodiments of the technology evolved. Imperium now has built a strong resource base of engineering, production, and marketing experience. Our headquarters in Silver Spring, Maryland now has full semiconductor processing capabilities, in addition to electronics testing and assembly facilities and on-site machine shop services.



 **imperium**

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 **imperium**
ADVANCED ULTRASONIC IMAGING

ACOUSTOCAM I500

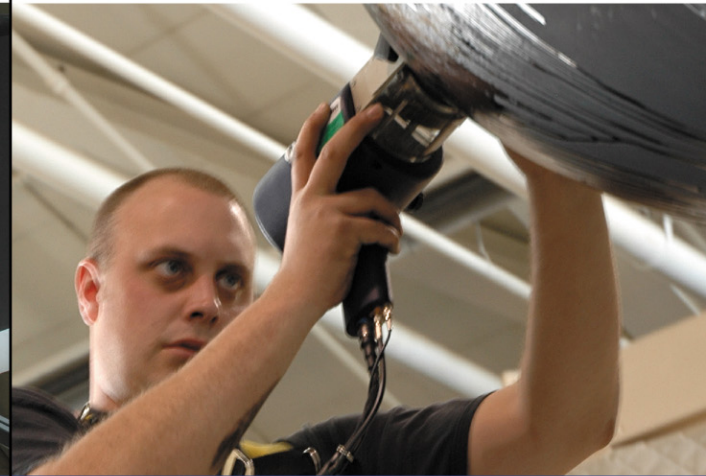
ACOUSTOCAM I500

Imperium is the sole provider of an ultrasound camera, a breakthrough in ultrasound imaging that is substantially more understandable, useable, and affordable than anything currently on the market. Compared to existing systems, Imperium's Acoustocam I500 is higher resolution, easier to interpret, and lower cost than conventional ultrasound technology. Since 1996 Imperium, Inc. has been a leading supplier of advanced ultrasound technology to medical and industrial OEMs, integrators and resellers. Imperium's patented Digital Acoustic Video™, or DAV™ technology, represents a vast improvement over current ultrasound techniques. Our line of DAV™ powered Acoustocam™ imaging cameras represents a low cost, high resolution approach to ultrasound imaging. No special training is required for DAV™-users to create unprecedented clear real-time images of subsurface features. DAV™ powered devices are faster, safer, less expensive, and easier to operate than today's options. OEM's will experience increased sales, profits and customer satisfaction with the Acoustocam I500.



Acoustocam Display

Multi-Angle Portable Ultrasound Camera



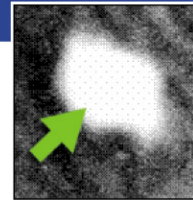
APPLICATIONS

Industries Served

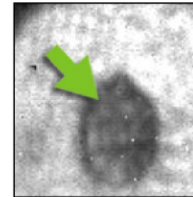
- Aerospace
- Aircraft
- Petrochemical
- Power
- Nuclear
- Automotive
- Semiconductor
- Marine

Materials

- Composites
- Metals
- Microelectronics
- Plastics



Defect images



Cost Effective. Easy-to-Use. Speckle Free.

The AcoustoCam™ is easy to operate. Users place ultrasound gel on the area under investigation, then apply the AcoustoCam™ probe to the area and begin imaging. Other advantages include:

- Low cost
- Minimal training required
- Real time
- Non-invasive
- Speckle-free
- X-ray type image

instant

The Acoustocam Imaging System generates real-time video images. The user no longer has to read A-scans or wait for C-scans. Imperium's instant C-scan and A-scan technology means flaws can be seen over an area instantly at a user selectable depth.

intuitive

Imagery is presented for viewing on an LCD in real-time. Interpretation is much easier than conventional A-scan systems or mechanical C-scanning system. A real-time C-scan and A-scan are presented for the user.

simple

The Acoustocam is a true "Point and Shoot" system. The user simply sprays some water or gel on the part in question and begins generating images. Images of areas of interest can always be instantly stored for later review and comparison.

flexible

The same system could be used with multiple frequencies by simply switching transducers. The user can also switch between straight beam and angle beam for shear wave imaging. Now an image and an A-scan can both be captured simultaneously.