

AcoustoCam™ i600 Specifications



General

Dimensions (W x H x D)	Camera: 7.8" x 3.5" x 3.0" (19.8 cm x 8.8 cm x 7.6 cm) Controller: 12.5" x 8.0" x 3.5" (31.7 cm x 20.3 cm x 8.8 cm)
Weight	Camera: 1.3 lbs. (0.6 kg) Controller: 6.0 pounds (3.2 kg)
Camera Cable	8.0' (2.4 m) length; customized lengths to 20' (6.1 m)
Data Storage	1 gigabyte RAM; 120 gigabyte hard drive
Battery	Rechargeable 14.4 volt lithium-ion; 90 minute battery life; built-in charger
Power Requirements	110/240 VAC; 50/60Hz
Hardware & Software	Intel Atom 1.86GHz processor; Microsoft Windows XP Pro
Test Modes	C-Scan: pulse-echo A-Scan: pulse-echo, dual element

Inputs/Outputs

Display	High brightness TFT color LCD; SVGA; 800 W x 600 H; 6.75" W x 5.25" H; 8.4" diagonal (17 cm x 13 cm; 21.6 cm)	Sunlight readable
Display Modes	C-Scan, A-Scan, combined C/A scans	Normal & full screen
Software	AcoustoVision™	Touchscreen GUI
Ethernet	100 BaseT	(1) RJ45, F jack
Wireless (Optional)	802.11 a/b/g (supports remote NDI system)	(1) 4.25" antenna
VGA Controller	VGA 800 W x 600 H	(1) 15-pin HD D-sub, F
USB	USB 2.0	(1) USB jack

C-Scan

Acoustic Lenses	Three element F/1 lens set
Acoustic Field of View	1.0" x 1.0" (2.5 cm x 2.5 cm) instantaneous, 20" x 16" maximum scan
Imaging ASIC Array	Patented Digital Acoustic Video™ Version 6.0
Array Elements	120 x 120 (14,400 pixels)
Pixel Size	100 microns
C-Scan Video Rate	30 frames per second
X/Y Spatial Resolution	600 microns (0.6 mm) @ 5 MHz
Thickness Range	0" to 3.0" (0 cm to 7.5 cm)
Dynamic Range	60 dB instantaneous
Depth Resolution	10 ns
Image Acquisition Range	Variable delay from 0 μs to 250 μs
Image Acquisition Length	Variable detection window from 0 ns to end of range in 10 ns increments
Match Gates	C-Scan gate start/width can match to A-Scan gate start/width
X,Y Defect Sizing	User calibrated grid or point-to-point manual sizing
Angle of Inspection	0 degree
Image Capture	C-Scan, A-Scan, combined C/A-Scans
Image Capture Type	PNG; on-board storage up to 100,000 image capture files
Video Capture Type	MPEG-3; 60 s max. record time/file; on-board storage up to 50,000 files

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A-Scan	
Gain	0 to 60 dB
Maximum Input Signal	5 Vp-p
Receiver Input Impedance	10 MΩ ± 5%
Receiver Bandwidth	0.1 to 20 MHz @ -3 dB
A-Scan Rectification	Full, half, none
Receiver Delay	0 to 0.2 μs
Digital Filter Settings	Yes
Reject	Variable from 0% to 100% FSH
Time Corrected Gain	Up to 5 reflected peaks can be used for calibrating TCG
Amplitude Measurement	0% to 110% full screen height with 0.125% resolution
Measurement Rate	30 Hz (equivalent to PRF)
A-Scan Gate Start	Variable over entire displayed range
A-Scan Gate Width	Variable from gate start to end of displayed range
A-Scan Gate Height	Variable from 1% to 100% FSH
Gate Type	Peak, Flank, Zero Crossing, Back Wall
Alarms	Alarm feature for 2nd reference cursor
Acoustic Velocities	Pre-installed, editable library of 40 commonly inspected materials plus user added materials

Pulser	
Pulses per Burst	Up to 20 square wave pulses
Pulser Voltage	0 V to 1000 V
Pulse Repetition Frequency	250 Hz
Pulser Rise Time	< 15 ns
Bandwidth	Adjustable from 0.5 MHz to 5.0 MHz

2-Dimensional Scanning & Stitching	
Encoder	1.25" (31.75 mm) diameter wheels; 20 steps/mm resolution
Scanning Software	AcoustoVision™
Scan Imaging Features	Real-time display; image auto-correction; on-board storage up to 600,000 scans
Scan Area	12.0" x 12.0" (50 cm x 50 cm) per image
Scan Speed	6"/second

Certifications & Environmental Qualifications	
ASTM E317-06a	Standard Practice for Evaluating Performance Characteristics of Ultrasonic Pulse-Echo Testing Instruments and Systems
ASTM 1324-11	Standard Guide for Measuring Some Electronic Characteristics of Ultrasonic Testing Instruments
Boeing	Standard Guide for Measuring Some Electronic Characteristics of Ultrasonic Testing Instruments
Operating Temperature	Normal Operating Temperature: 32 °F to 122 °F (0 °C to 50 °C) Camera Head Contact Temperature: Up to 200 °F (93 °C)