

# IntraSpect™ Mercury-Advanced Ultrasonic Acquisition System



## System

- One to six Inputs for six transducers or transducer pairs
- Up to 16 Data sets
- 1 GBit interface
- Each channel is independent (pulse width, pulse voltage, etc.)
- Pulse and Receive on different channels

## Pulser

- Square Wave pulser from 30 ns to 1000 ns in 10 ns steps
- Single or Dual mode selection
- 0 to 400 V pulse voltage in 50 V steps
- Low EMI type design
- 2kHz Rep Rate @ 400V 50ns Pulse.

## Receiver

- 100 dB dynamic range
- Bandwidth 500 kHz - 25 MHz
- Hardware high pass filters (300 kHz, 1.5 MHz, 3 MHz, and 5 MHz)

## Digital Signal Processing

- Sample rates from 1MSPS to 100 MSPS
- Low pass and high pass digital filters
- RF or Video rectified recording of data
- 14-bit Analog-to-Digital Converter

## Encoder Input

- Two encoder inputs for manual scanning.
- Supports single-ended or differential encoders

## Dimensions

- Size: 10.5" x 10.25" x 4.25" (267mm x 260mm x 108mm)
- Weight 8.7 Lbs. (3.9 Kg)

# Data Acquisition and Analysis Standard Features

## Data Recording Modes

- Full RF Wave Data Collection/Storage Mode
- Hardware Based, Positive, Negative, or Full Wave (Selectable) Video Detection Data Collection/Storage Mode
- Peak Amplitude/Time-of-flight Data Collection/Storage Mode
- Pulse-Echo, Pitch-Catch, or Through Transmission Modes
- Data Compression Features
- Video Detection Mode Provides Data Compression and Extends A-gate Width
- Permanent Storage of Test Setups
- Complete Digital Computer Control
- Interactive Graphics Emulate Conventional Ultrasonic Instruments

## Data Analysis Standard Features

- Multi-tasking Operation (UT and ET modes)
- Simultaneous A-, B-, and C-scan Display
- Scalable Screen Size
- C-scan Display
- Zoom Function
- Selectable as Peak & Time-of-Flight, Amplitude, Threshold Peak, Depth, dB Scale, Polarity, Power, or Ring-down Ratio
- Swap Axes Function
- Color Maps, Gates, and Variable Range can be altered for C-scan Display
- Time-of-Flight and Amplitude Based Statistics Functions
- Turntable related Polar C-scan View
- Interleave Function
- ASCII data conversion
- Hysteresis Correction Function
- Histogram Function
- Data Merge Function
- Annotation Function
- Auto Analysis Defect Sizing Function

## B-scan Display

- Zoom Function
- B and B'(D-scan) Mode Displays
- Color and Gray Scale Mode Displays
- Time-of-Flight Tip Diffraction (TOFD) Display
- Fast Fourier Transform (FFT) Function
- Operator definable Weld Overlays
- Calibrated Depth Measurement Function
- Curvature Correction Function
- Time Base Display Selectable as TOF or Metal Path

## A-scan Display

- Zoom Function
- RF or Video Display Mode
- Time Base Display Selectable as TOF or Metal Path
- TIFF Data Conversion Function
- Volumetric Projection Analysis

