



# ShaPix®

## Surface Detective™ Family

### Strategic Partner Program

**A rare opportunity for innovative leaders** in precision high-quality manufacturing to achieve the benefits of using the new “gold standard” for fast, economical, high-definition surface defect detection and metrology – with minimum investment.

*Coherix* offers manufacturing management decision-makers the opportunity to purchase a *ShaPix Surface Detective* configured to suit to their application under its *Leadership Partner Program*.

Under this program the ShaPix purchaser is offered a significant consideration from the list price of a *ShaPix Surface Detective* system. In order to qualify for this unique program, the purchaser will agree to any one of the following arrangements of mutual benefit to the purchaser and *Coherix*:

1. The purchaser places a blanket order for at least 5 *ShaPix Surface Detective* systems to be received by the customer in phased deliveries uniformly spaced over a 12 month period from the date of the initial system order and based upon acceptance of the first delivered system, or
2. The purchaser agrees to collaborate with *Coherix* during the 12 months following the initial system order to document a series of at least 5 publishable case studies demonstrating the economic benefits of employing the *ShaPix Surface Detective* system in the purchaser's manufacturing operations, or
3. The purchaser agrees to provide a suitably arranged and sized location and access in his manufacturing facility in which *Coherix* can provide outside demonstrations of system capability to outside visitors on a basis that does not interfere with the purchaser's manufacturing operations, or
4. The purchaser invests on a non-recurring engineering (NRE) basis in the development by *Coherix* of new (additional) *ShaPix Surface Detective* functional capabilities of interest to the purchaser and resalable by *Coherix* to other parties, or
5. The purchaser agrees to apply the first *ShaPix Surface Detective* system that it acquires to a new generic class of parts or assemblies that have not previously been employed with that family of systems.

***The breakthrough high-definition surface defect detection & metrology solution  
Making Process Performance Visible™ - Where Microns Matter™***

***Coherix®***, Inc, the World leader in Digital Holographic Imaging

**Notice:** This Leadership Partner program is designed to introduce the new *ShaPix Surface Detective* system & technology, for high-definition surface-dimensional defect detection and metrology to leading industrial companies across multiple industries and applications within those industries. *Coherix, Inc.* reserves the right in its sole discretion to terminate this program without notice at any time and whether to accept the specific program qualifications proposed by any prospective purchaser

# ShaPix® Surface Detective Specifications

## Performance Specifications

Maximum data points per view	over 4 million
Available instantaneous fields of view	300 mm 300 mm; 200 mm x 200 mm 100 mm x 100 mm or 50 mm x 50 mm
Maximum views combinable per surface	unlimited
Measurement time per view	1 minute or less/per surface view
Working depth of measurement (Z)	1 centimeter or more
Working Volume (Part/Assembly Size) Accommodated	up to 750mm x 750mm x 660 mm
Basic height (Z) repeatability	< 1 micron
Basic height (Z) accuracy	< +/- 1 micron
Lateral (X-Y) feature measurement accuracy	models with 15, 8, 5, or 3 microns
Lateral point (e.g., pore detection) capability	models for pore area > 1mm <sup>2</sup> , 0.5mm <sup>2</sup> , 0.3 mm <sup>2</sup> and 0.25 mm <sup>2</sup>

## Environmental Specifications

Ambient operating temperature	15-35 degrees C
Humidity	5-95% relative, non-condensing
Supply voltage	115V or 230V AC +/- 5%; 50Hz or 60Hz +/- 2%

Note: Micron-level defect detection and metrology using any methods or devices whatsoever must take into account the various static and dynamic physical effects which inherently affect the actual dimensions and observability of the parts and assemblies that are to be processed. These include vibration, shock and differential thermal effects.



## System Interfaces/Functions

Interfaces and Functional modes	CDROM data recording System calibration mode Analysis mode	Ethernet interface (optional) Surface measurement mode Data base storage retrieval function	“Memory stick” recording mode Defect Detection mode Feature Measurement mode
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The **Coherix® ShaPix® Surface Detective** performs high-definition 3-D detection and metrology of machined and other precision surfaces to detection deviations of global or zone flatness, waviness, parallelism, surface relationships, hole patterns, porosity and other surface dimensional characteristics with height (“Z”) repeatability and accuracy in the micron range. The range of any surface “height” measurement data set is several centimeters and the height of optimum measurement can be adjusted over a working volume of 380 mm to 660 mm or more as required by the application. Complete processing of a 300mm x 300 mm instantaneous field of view is completed in a minute or less, depending upon the variety of measurements desired for each surface. Programming is performed in minutes at nearly zero cost. Much larger surface areas are merged using **Coherix** proprietary stitching algorithms. **ShaPix** operates in a metrology laboratory, on the plant floor near the production line or, with appropriate part handling conditions, in an in-line situation.

## Equipment

The **ShaPix Surface Detective** senses and analyzes the work piece or assembly using a tunable laser interferometer. **ShaPix** Digital Holographic Interferometry Algorithms are applied to the sensor returns to create a detailed surface map consisting of up to more than 4 million XYZ data points The usable field of view of the **ShaPix** unit is approximately 300mm x 300mm x 380mm. The **ShaPix Surface Detective** Sensor Head Unit holds the interferometer and holds the parts or assemblies to be measured. The System Control Workstation holds the computer, laser, and controls. It is equipped with a color display, keyboard, mouse, and a local area network connection that allows **ShaPix** results to be viewed locally and manipulated from remote computers using the separate **ShaPix Analyzer** or the no-cost **ShaPix Viewer** software. Interfaces to plant automation are also provided as the application requires.

## Software

The **Coherix ShaPix Surface Detective Software** includes operator interface, sensor parameter controls, automatic defect detection and metrology tools, reporting, statistical analysis capability and 3-D color topographical visualization of the measured part surface

**For a detailed ShaPix® Surface Detective family model configured for your application, contact Coherix at 734-922-4061 or Fax 734-761-9193 or sales@coherix.com  
Coherix, Inc., 3980 Ranchero Drive, Ann Arbor, MI 48108-2775 <http://www.coherix.com>**