

# BLUEWRIST



Guide

Scan

Pick

Inspect

Robot & Vision Solutions

# BLUEWRIST INC.

## Products & Solutions

At **Bluewrist**, we strive to meet our customers' expectations to increase efficiency, improve production quality and reduce operating costs. This is accomplished through our leading technology, high technical performance, solution validation in production environments, competitive pricing and highly effective customer support.



**Bluewrist** offers innovative industrial automation solutions and products in the areas of robotics and machine vision. We work closely with customers and partners to deliver solutions in robot guidance, bin picking, flexible inspection, 3D scanning and robot calibration that are fast, reliable and easy to use.

### *Products & Solutions Overview*

**Bluewrist** is proud to offer innovative and cost-effective industrial products

#### **comXtream™**

Automation engine and communication software

#### **SPCWorks™**

Dimensional data control and reporting software application

#### **KinOptim™**

Robot calibration module

#### **ScanXtream™**

3D point cloud processing and viewing software application



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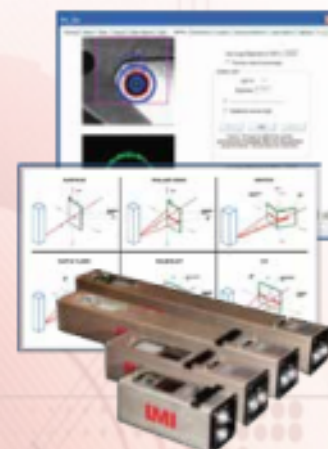
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# FlexiSight

**FlexiSight™** is an in-line integrated gauging solution using **comXtream™**, **SPCWorks™** and can optionally include **KinOptim™**. Beneficial features of this solution include:

- System available in Fixed, Robot (FMS) or Hybrid configuration in the same architecture using **comXtream™** process engine and **SPCWorks™** data management and reporting software
- Complete robot calibration solution for temperature compensation using **KinOptim™** option
- Plant-wide production data access for built quality monitoring and report generation
- Comprehensive interface to the line's PLC for alarms and results



## Applications

- Body in white, under-body, doors, hoods, decklids, frames, suspension cradles, etc.
- Gap and flush
- Motor compartment width variation

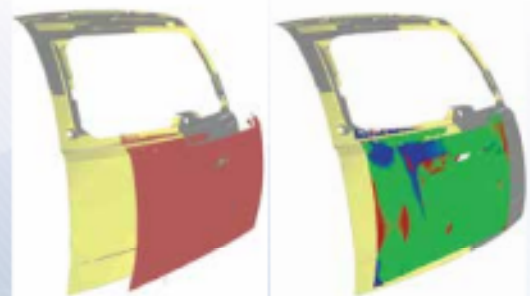


## SLS Platform

- LMI field proven sensor algorithms for the harsh industrial environment with 30+ years of experience
- Built in processing algorithms for a complete spectrum of measurement types
- Patented weld splatter sensor protection
- Built in temperature compensation
- Laser light sectioning and LED area illumination are all built into one compact sensor package
- Integrated SLS server for vision features setup
- Easy to mount and to configure mounting hardware and sensor

# FlexiScan3D

**FlexiScan3D™** is an in-line scanning-based dimensional inspection system. Using a 3D scanner mounted to a robot end-effector, **FlexiScan3D™** is capable of measuring the dimensional quality and detecting surface defects of various parts and assemblies during production. The robot accuracy is maintained through the use of an integrated and automatic robot calibration. During an inspection cycle, **FlexiScan3D™** collects point cloud data, automatically aligns them to the part CAD files and allows extracting geometric features such as holes, slots, surfaces, trim and hem edges, etc. The extracted data is compared to user-defined tolerances and then saved into the **comXtream™** database for reporting purposes.



## Features & Benefits

- Includes **comXtream™** process engine, **ScanXtream™** point cloud processing software and **SPCWorks™** data management and reporting software
- Complete robot calibration solution using **KinOptim™** option
- Reliable and capable of meeting production speed requirements
- Reduces process variation and improves quality
- Plant-wide production data access for built quality monitoring and report generation
- Fully integrated with the line's PLC for alarms and results
- Automatically extracts dimensional features such as holes, slots, surface points, studs, trim & hem edges, etc.



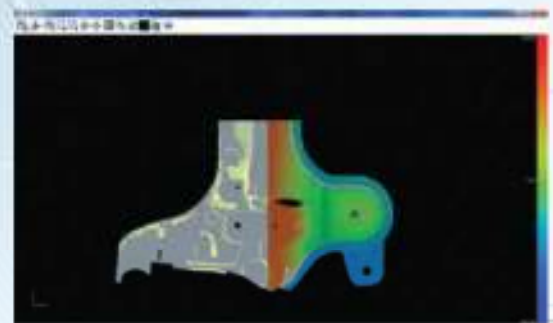
Before and after best-fit alignment



## SCANXTREAM

User-friendly 3D Point Cloud Processing & Viewing Software that is provided as a stand-alone application. It supports:

- CAD files (IGES, STL, VRML, etc.)
- Data streamed from **comXtream™**
- 3D point clouds from 3rd party software
- 6 D.O.F. best-fit alignment of point clouds of the part to the CAD model
- Exports point cloud data for 3rd party software
- Can be used by production, engineering or quality team members



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# EzRG

**EzRG™** is a generic robot guidance application solution using **comXtream™** software and offering many user frame (6 D.O.F.) calculation strategies, including:

- Best-fit of measurement results
- 3-2-1 fixturing
- User-frame formulas interpreter



## Features

- Various user frame calculation methods
- Unlimited number of custom user frames available for use
- A user-friendly graphical offsets interface allowing line users to modify offsets
- Averaging and history of user frames sent to the robots



## Applications

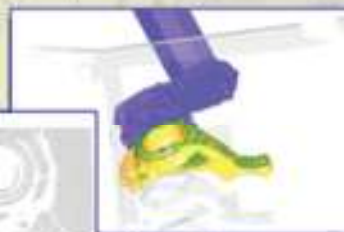
- Door, hood, lift gate, roof and trunk lids insertion and installation
- Glass insertion into the apertures (windshield, side windows, sunroof, etc.)
- Racking and de-racking
- Palletizing and de-palletizing
- Machining guidance (drilling, riveting, deburring, etc.)



# FlexiPick

**FlexiPick™** is an advanced generic bin-picking solution, featuring:

- Very short processing time (less than 2 seconds)
- Robust collision checks between parts and cell
- Reduce operating costs and save money
- Typical ROI in 1 to 2 years
- Eliminates the need for manual handling of assembly components and hardship in the case of heavy parts handling



3D scanner mounted to the robot

## Features

- Fully integrated with Pick3D
- Compares point cloud measurements to the CAD model
- Powerful noise filtering
- Checks for collision between gripper, parts and the bin
- Returns all possible gripping configurations
- Typical system accuracy of  $\pm 0.5\text{mm}$



3D scanner mounted to a linear axis



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