

# Laser Based Stand Alone Part Inspection System

## The Challenge

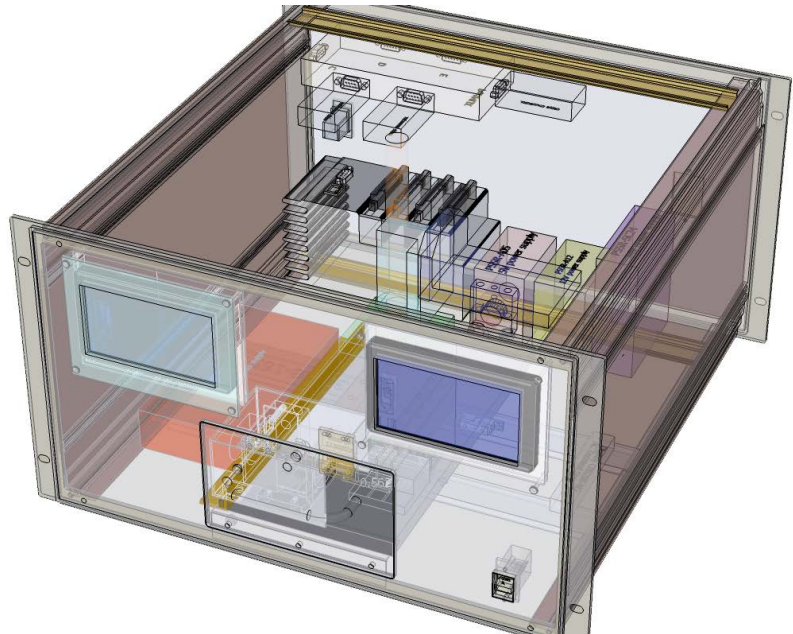
To automate the process of measuring the angles of a complex machined part, with the ability to measure and reproduce results across multiple units.

## The Solution

PVI Systems used a laser light source and motion control technology to create a stand alone part inspection system to scan machined parts. To simplify the use of the system, while still maintaining robust quality, the processing and control engine used was a National Instruments cRIO chassis with appropriate IO modules. The operator opens a sliding door and inserts the part. The system then automatically inspects the part and displays the results to the user with regards to the measurement and the pass/fail status of the part.

## Features

- Measures precision angles of machined parts
- Robust production part inspection
- Embedded NI cRIO controller
- Passed rigorous Gauge Reproducibility and Repeatability
- Deployed to multiple production facilities
- cRIO-9101 4-slot, 1 M Gate Reconfigurable Chassis for CompactRIO
- cRIO-9012 Real-Time PowerPC Controller for cRIO, 128 MB Storage



## Deployment

Multiple Units have been deployed across the United States for the manufacturer. The final system was a self contained 8U rack mount chassis with no external monitor or computer. The system was successfully run through a Gauge Reproducibility and Repeatability study by the customer and met their requirements for consistency across various units.



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