

# FARO Visual Inspect and Visual Inspect AR

## FARO inspection solutions for streamlining manufacturing processes

**FARO**<sup>®</sup>



### KEY FEATURES VISUAL INSPECT

**INTUITIVE TOUCH FUNCTIONS:** The user operates by simple App gestures. This simplifies the handling of zooming, translating and rotating the 3D data. Even complex multi-step functions are quickly accessible via the context menu, which depends on the current selected 3D element.

**MEASURING:** Based on the intelligent measuring functions, the user is able to interact with the 3D data to get additional useful details concerning the feature of interest. This information helps the operator to manage tasks more efficiently. Absolute and relative measurements of points, edges and surfaces as well as radii and angles are available and easy to access.

**SECTIONING:** Comprehensive functions allow real time or step-by-step sectioning of parts and assemblies. Depending on specific needs, users can choose different section views such as 2D or 3D and filled or unfilled.

**DOCUMENTATION:** The real time creation and addition of annotations such as texts and images in the 3D viewer allows the user to mark errors or to add advice for other users. Additionally the operator can define status (unchecked, checked and wrong) for special features. The annotations and the results of such inspections are collected in protocols (xlsx format) and can be exported for follow-up processes.

**QR SCAN:** The user can open the 3D data by scanning a QR code placed on the corresponding part (or assembly). This facilitates and optimizes the workflow because it is not necessary to know the name of the part. This allows a significant efficiency gain, especially in the case of hundreds of parts, which have to be checked.

FARO Visual Inspect is a powerful mobile solution to control production processes. It allows for intuitive viewing as well as the use of complex 3D data of parts and assemblies and additional information such as process and workflow details on an iPad.

Visual Inspect AR expands the functionality of Visual Inspect and provides innovative Augmented Reality to the base package.

The Visual Inspect CAD Interface allows operators to convert 3D data into a highly compressed format for optimal data management in Visual Inspect. This powerful CAD converter is also the basis for the incredibly fast loading of huge data sets.

Operators have an intuitive and mobile tool to support and improve efficiency in their production processes.

### BENEFITS

- ▶ **Mobility:** Availability of complex 3D data and Augmented Reality in all working environments, independently from time and location.
- ▶ **Cost-effective alternative:** The use of the App on the iPad and FARO software provide a cost-effective alternative to other more expensive Augmented Reality solutions.
- ▶ **Modular solution:** The usage possibilities can be customized to perfectly fit the specific customer needs: From simple viewing to complex Augmented Reality scenarios – everything is possible by choosing the appropriate package.
- ▶ **Ease of use:** Modern data handling concepts, touch functionalities and context related functions allow intuitive control of the system.

## KEY FEATURES VISUAL INSPECT AR

### AUGMENTED REALITY WITH MARKERS

With the tablet's integrated camera, an overlay of the as built object with virtual 3D data, including all process and workflow information, can be realized in real time. The precise match between virtual and real world is guaranteed by a simple marker alignment system placed by the user. The markers are then reliably and automatically identified from the App even in poor lighting conditions.

### AUGMENTED REALITY WITHOUT MARKERS

Connect 3D points on a CAD model with 2D points in one corresponding image to create a precise overlay without markers. This enables an efficient overlay process even in difficult environmental conditions, e.g. when marker placement is not possible because of space limitations or the assembly is very large.

### LOCATION AND TIME INDEPENDENT OVERLAY

Operators can take pictures on-site and overlay CAD data and pictures at a later time. Additionally, overlays are saved and can be reproduced anytime and anywhere.

### EXTERNAL CAMERA

Users can use an optional external high-resolution camera system to ensure an even more accurate overlay.

## INDUSTRIES AND APPLICATIONS

### INDUSTRIES:

- Automotive
- Aerospace
- Shipbuilding
- Manufacturing
- Mould, Tooling and Die
- Building and Construction

### APPLICATIONS:

- Inspection of Parts, Dies and Moulds
- CAD-to-Part Comparison
- Component Alignment & Assembly
- Incoming Goods Inspection / Quality Assurance
- Installation / Construction Space Testing
- 3D Documentation and Inspection of Technical Building Equipment

## VERSION COMPARISON

Capability Comparison	Visual Inspect	Visual Inspect AR
Touch functionalities	X	X
Measuring	X	X
Sectioning	X	X
Documentation	X	X
QR Scan	X	X
Augmented Reality with markers		X
Augmented Reality without markers		X
Location and time independent overlay		X
External camera		X

## SPECIFICATIONS

### VISUAL INSPECT AND VISUAL INSPECT AR

#### Data

**Input:** mwpak

**Output:** mwpak, xlsx

### VISUAL INSPECT CAD TRANSLATOR

#### Minimum Requirements

**Hardware:** Intel Core i5 Processor

256 GB Hard Drive

OpenGL capable graphic card

4 GB RAM

**Software:** Windows 7, 64bit system

#### Data

**Input:** 3DXML, ACIS, native CATIA, IGES, Inventor, JT 8.x and 9.x, NX, Parasolid, ProE / Creo, Solid Edge, SolidWorks, STEP, STL, VDA-FS, XCGM

**Output:** mwpak

