AUSTRIAN INSTITUTE OF TECHNOLOGY

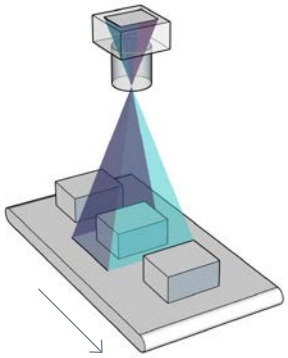
INLINE COMPUTATIONAL IMAGING

SUPPORTED ACQUISITION MODES

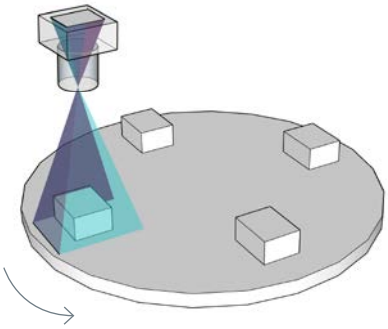
The AIT Inline Computational Imaging technology (ICI) combines light field (LF) and photometric stereo imaging techniques (PS) into a single sensor solution. It can be tailored to fit various application needs and meet specific requirements concerning optical and depth resolution, working distance, acquisition speed, and result quality.

ICI works for small and large objects with linear and rotational movements and can be used in various scanning modes to extend the inspectable field of view and volume.

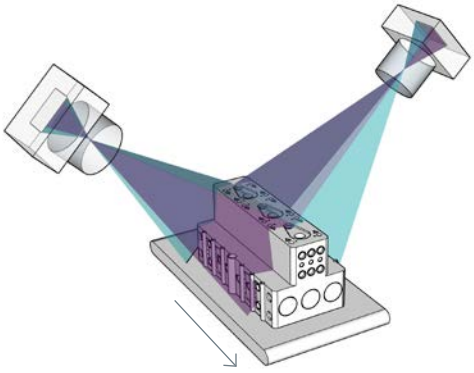
INLINE ACQUISTION MODES FOR NON-STOP MOTION



LINEAR MODE
Parts are inspected while moving beneath the sensor unit.

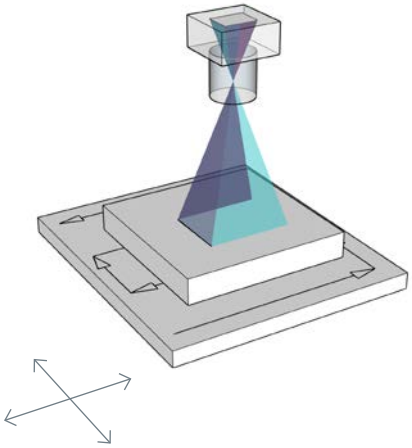


ROTATIONAL MODE
Inspection of circular objects or objects on index tables and turn tables.

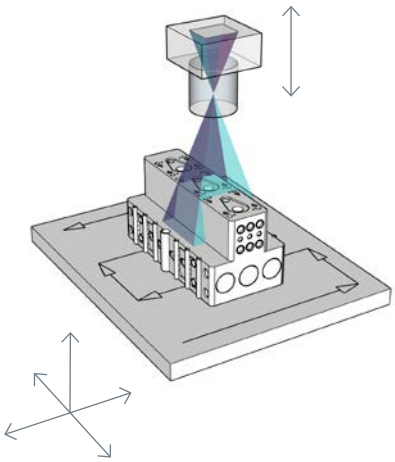


DUAL CAM MODE
Combination of multiple ICI sensor heads for scanning of large volumes and to better cope with occlusions.

SCANNING MODES FOR EXTENDING DOF AND FOV



XY-SCANNING MODE
Linear motion in two directions (x, y) enables lanewise scanning to extend the field of view (FOV).



XYZ-SCANNING MODE
Scanning in three dimensions (x,y,z) enables the extension of the FOV and depth of field (DOF) for reconstruction of large volume parts.

More on Inline Computational Imaging:

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