HEXAGON

Captura 3.2.2/4.3.2/5.4.2

Fast-measuring, easy-to-use optical coordinate measuring machines

6K1638S06-04AB

A new vision for non-contact measurement

Product description

Captura is an optical coordinate measuring machine (CMM) designed to offer excellent price to performance ratio for the entry-level market. The Captura range supports multisensor measurements with vision sensors, laser sensors and confocal sensors. The standard machine is supplied with the vision sensor and its functionality can be extended with additional sensors. Captura's dynamic machine concept offers high positioning accuracy and is designed for fast measuring point acquisition and high-performance data capture. The CMM runs on Metus measurement software, a Hexagon-developed software providing a user-friendly interface and flexible operation modes.

Features

- High-precision granite construction to ensure long-term stability

- Three-axis full servo closed loop control system

- Grinding grade screw drive, accurate positioning, high motion accuracy

- High resolution 1/1.8-inch CCD colour camera (H 1920 x V 1440 pixels) with Gigabit Ethernet interface

- Customised CNC zoom with 6.5x magnification and 10 steps

- Magnification: 27x - 162x (24-inch screen)

- Navigator system

- Resolution of the scales: 0.4 μm

- Illumination for vision sensor

- Parallel LED backlight

- Six-ring and eight-segment LED ring light (white LEDs)

- Coaxial LED top light (optional)

- Joystick

Options

- Laser point and laser line sensors

- Chromatic confocal sensors
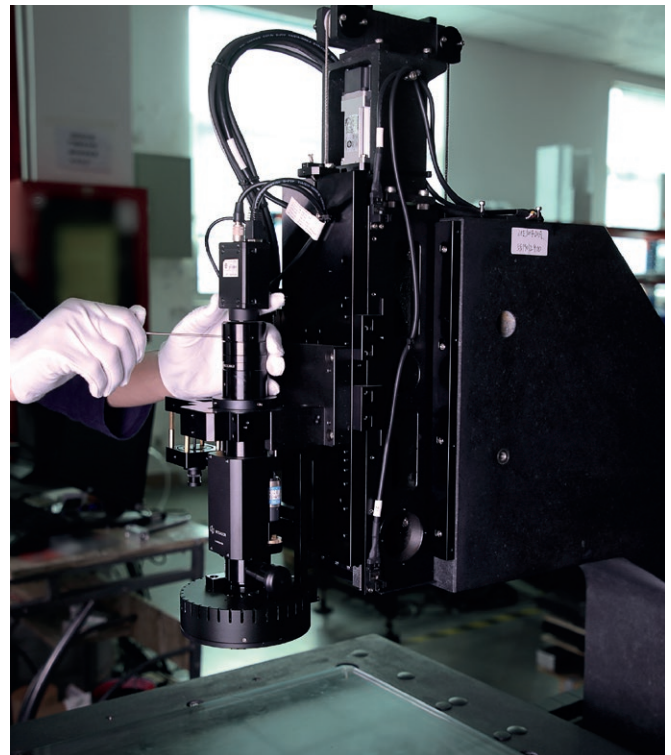
Technical data

Captura				
Model		3.2.2	4.3.2	5.4.2
Range (mm)	X	300	400	500
	Y	200	300	400
	Z	200	200	200
Dimension (L*W*H)		860×639×1650	1000×767×1650	1140×818×1670
Exy Accuracy (µm)		2.5+L/200	2.5+L/200	3.0+L/200
Ez Accuracy (µm) [1]		3.5+L/200	3.5+L/200	3.5+L/200
Working distance (mm)		93	93	93
Plate load (kg)		20	20	20
Machine weight (kg)		350	400	450

[1] Ez Accuracy checked with CWS sensor

Throughput

- Maximum traversing speed : 200 mm/s (X, Y axis), 80 mm/s (Z axis)

Environmental requirements

- Limits of permissible floor vibration < 5 x 10 m/s^2 corresponds to an amplitude of < 5 µm at 5 Hz

- Air humidity 40 % - 70 % RL, non-condensing

- Environmental temperature 20 °C ± 2 °C

- Permissible temperature gradient 0.8 °C/h, 1.0 °C/d, 0.6 °C/m

- Maximum installation height 2000 m above sea level

Supply data

- Input voltage power supply 220 V ± 10%

- Frequency 50/60 Hz ± 5%

- Power consumption 1000 VA

Applications

Optical CMMs are widely used to inspect glass panels, automotive and aerospace parts, plastic moulds, printed circuit boards and other electronic components, medical devices, watch and other jewellery parts, as well as for tooling.

Glass

Medical implants

Flexible printed circuits

01

02

05

03

04

Plastics

Smartphone housing
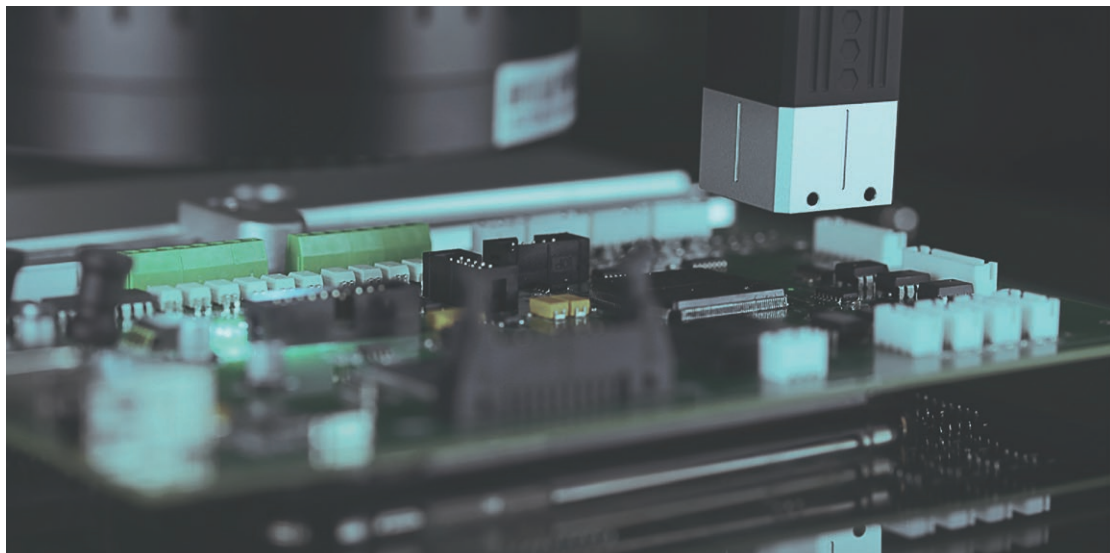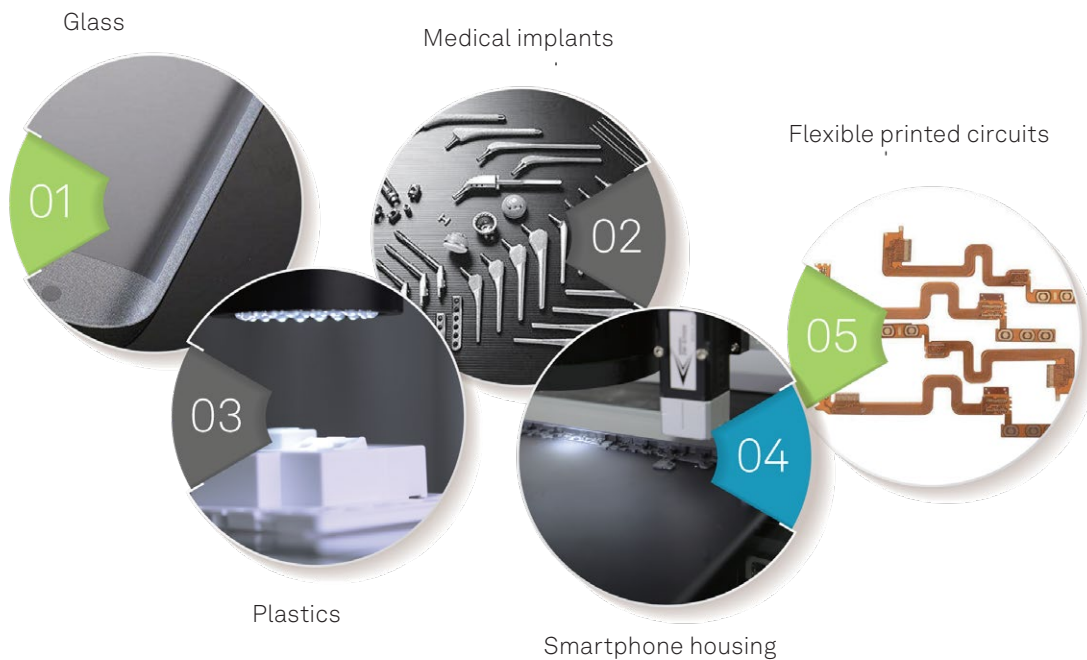
Introduction to Metus

Metus is a dedicated measurement software for 2.5D multisensor measurement, developed in-house by Hexagon. The software has its roots in the world-renowned PC-DMIS metrology software. Metus was designed by a specialist team of metrology software developers committed to providing the highest standard of precision measurement in an easy-to-use software package.

The Metus user interface uses ribbon-based, dockable command panels to provide a user experience consistent with the Microsoft Office GUI standards. Commonly-used functions are available from one single view, removing the need for repetitive clicking, dragging and panel adjustments to find key action buttons, menus or hardware controls.

Key features

- CNC program editing and data refresh
- Multiple coordinate systems
- Powerful image processing
- Real-time data reporting
- Measurement step sequence repetition
- Auto focus
- CNC program sharing

- Image stitching
- DXF, Gerber CAD drawing importing
- Calculator function
- Laser scan function
- Multisensor support
- Inspect interface
- Navigation system

Metus interface

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Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.