

DUO

Dual camera electro-optical portable coordinate measuring system

- **Portable 3D measurements**
- **Extremely accurate**
- **Best-in-class price/performance**
- **Easy to use**
- **Light-weight - 17 kg (38 lbs)**
- **Ideal for rough environments**



DUO is the top-of-range portable CMM system utilising Metronor's patented principle for electro optical coordinate measurements. DUO combines large volume and increased accuracy with the widest range of applications.

Extremely portable – the complete systems comes in a single, rollaway transport case weighing only 30 kilos (66 lbs) – DUO provides high-end coordinate measuring capability anywhere in the production process.

Using two cameras and a hand-held, wireless probe, DUO provides the capability to study any geometry-related issue in detail – compare tools, parts and assemblies to CAD or blue-print, use the LED application kit option to efficiently study stability, deformation and process repeatability, or take the system to the supplier or customer to investigate problems with interfacing parts. DUO also supports efficient alignment of objects in position and orientation (6DOF) for example in tool building or jig-less assembly.

DUO - like all Metronor systems - is designed for use in rough shop floor environments and exhibits industry-leading reliability and availability.

APPLICATIONS INCLUDE:

- Jig-less tooling
- Reverse engineering
- Prototyping
- As built documentation
- Tool and die inspection
- In-process inspection
- On-machine inspection
- Fixture inspection
- Deformation analysis
- Large assembly measurement
- Assembly alignment - in position and orientation
- Excess material verification in casting/forging
- On-machine alignment of parts for milling/machining
- Process repeatability verification
- Root cause analysis – check tool, parts, variation and interference in single session
- Tool building
- Tool certification

For more information: www.metronor.com

Technical Specifications

DUO

RANGE

Distance from sensors 1.5 - 15 m (5 - 50')

ACCURACY

U95 distance measurement accuracy +/- 0.025 + L/60000 mm

ENVIRONMENT

Operating Temperature	10 to 45°C (32 to 113°F)
Storage Temperature	-25 to 65°C (-13 to 150°F)
Operating Humidity	< 95% relative humidity, non-condensing
Pressure, Humidity, Temperature	No effect on measurement accuracy
Vibration Stability Control (option)	0 - 100 Hz, < 3 mm amplitude
No warm-up	

ELECTRICAL POWER

Auto switching (Battery operation optional) 100-240 V AC, 50-60 Hz

PACKAGING

System weight (excl. cases)	17 kg (38 lbs)
Shipping weight	30 kg (66 lbs)

COMPUTING UNIT

Type High performance laptop, Windows XP

SENSOR UNIT (2 INCL.)

Type	CCD-based digital camera
Optical settings	Fixed aperture and focus, factory optimized
Field of View	38° x 32°
Effective Resolution	640,000 x 512,000
Unit Net weight	0,80 kg (2 lbs)

PROBING UNIT

Type	Wireless Handheld, with quick-change styli
Material	Carbon fibre w/embedded active targets
Styli	User configurable set of 7 w/ titanium extensions/angles
Styli type	Ruby spheres (incl.), scribe tip (incl.), edge styli (opt.)
Hidden point capability	600 mm (24") - longer with optional probes
Unit Net weight	0.52 kg (1.2 lbs)