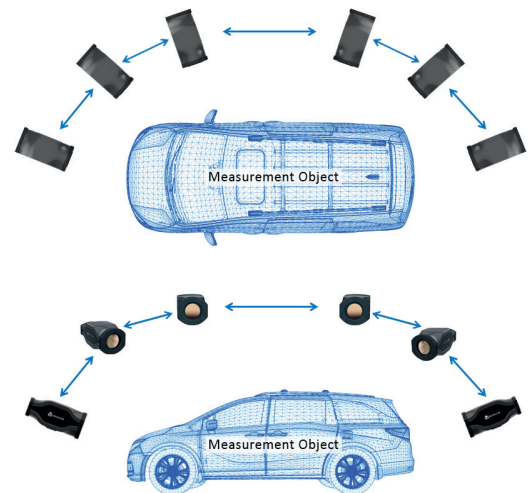


METRONOR MultiCam

Combine multiple cameras into one global photogrammetry and extend the measurement volume of your Metronor DUO

- EXTEND YOUR MEASUREMENT VOLUME
- INCREASE THE MEASUREMENT ACCURACY
- BUILD YOUR OWN MEASUREMENT CELL
- EXPAND THE SYSTEM ACCORDING TO YOUR PROJECT NEEDS, ADD MORE CAMERAS AS NEEDED



The Metronor DUO system has been on the market since 1989 and has proven its consistency and repeatability over several decades in various industrial segments and applications. With new developments and technologies, its functionalities can now be extended into the MultiCam network.

With MultiCam you can build your own measurement cell and configure the size and measurement coverage completely to your own needs. Both Metronor probing and scanning technology can be used in the MultiCam set up, giving you full flexibility. Single LEDs from the Metronor LED Kit can also be integrated, as well as stability modules to counter temperature drifts within the building. This way your Metronor measurement cell is ready 24/7 for any task.

MultiCam has already been proven by several important integrators having installed large-volume guidance and tracking solutions. The installations, largely in automotive, are running continuously both near line and inline 24/7/365.

MultiCam can also be used to extend the measurement volume of the portable Metronor systems to facilitate large volume coverage even without a dedicated measurement area. Our ability to synchronize cameras is fast and intuitive, which makes the set up easy and the camera positions perfectly adjustable to any measurement object.

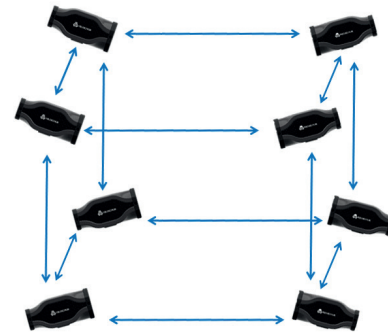
APPLICATIONS INCLUDE:

- Reverse engineering
- Prototyping
- Fixture inspection
- As-built documentation
- Tool and die inspection
- Deformation analysis
- Large assembly measurement
- Excess material verification in casting/forging
- Process repeatability verification
- Root cause analysis – check tool, parts, variation and interference in single session
- Tool building
- Tool certification
- Jig-less tooling

For more information: www.metronor.com

Working with Metronor MultiCam

- Set up the cameras in the room with the help of the camera viewer in the Metronor software
- Perform the “bar dance” to set up the global photogrammetry for the camera network
- The measurement volume accuracy is continuously updated as “bar dance” data is acquired. If higher volumetric accuracy is needed, take more “bar dance” orientations until requirements are met.



If environmental conditions change over time, stability units can be added. The stability units compensate for temperature shifts over longer periods of time. The stability modules have gone through extensive testing in heat chambers to compensate a wide range of temperature shifts. Advanced algorithms will correct for camera movements caused by temperature variation or the impacts of other physical conditions.

Technical Specifications

METRONOR DUO

PERFORMANCE SPECIFICATIONS FOR DUO PROBING

For scanning specifications, see the M-Scan 120 datasheet

Range	Distance From Sensors	1.5 to 15 m (5 to 50')
Accuracy	U95 Distance Measurement Accuracy	+/- (0.020 + L/70000) mm
		Pilot customers have reported typical accuracy improvements of at least 30% when using MultiCam compared to the Metronor DUO specifications.

HARDWARE SPECIFICATIONS

Environment	Operating Temperature	10 to 45°C (50 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
	No Warm-up	
Electrical Power	Auto Switching (Battery operation optional)	100-240 V AC, 50-60 Hz
Packaging	System Weight (excl. case)	17 kg (38 lbs)
	Shipping Weight	30 kg (66 lbs)
Computing Unit	Type	Laptop, Windows 11 Professional 64 bit
Sensor Units	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 fiber 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)