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**New ‘free-run mode’ in CARTO 2.1 software extends XM-60 functionality**

Building on the launch of the Renishaw XM-60 multi-axis calibrator in September 2016, the new release of CARTO 2.1 software brings valuable new functionality. The XM-60 measurement process originated from an established laser calibration process of setting up targets, capturing data while the machine pauses at each target and reporting to international standards. Whilst this is an essential way to calibrate, the versatility of the XM-60 hardware provides an opportunity for an alternative measurement process that’s perfect for on-the-fly investigations. Visitors will be able to see XM-60 on Renishaw's stand at EMO Hannover 2017, Germany (18th–23rd September, hall 6, stand B46).

The new ‘free-run mode’ in CARTO 2.1 software allows users of the XM-60 calibration system to capture data immediately, without having to define the positions, or even the number of targets. The software displays straightness (horizontal and vertical), pitch, yaw and roll errors against linear position. Triggering can be manual (with a keypress), automatic (based on stability of position) or continuous (captured during motion at a user-defined interval).

An example of one of many applications that would significantly benefit from ‘free-run mode’ is during machine tool assembly. The mode can be used to check the straightness and roll of an axis before moving to the next stage of assembly, and all before the control system is complete. Stage manufacturers will also see a benefit in what is the fastest method of measuring six degrees of freedom from geometric errors. Stage manufacturers will also see a benefit in what is the fastest method of multi-axis measurement.

CARTO release 2.1 is available to download free of charge from [www.renishaw.com/carto](http://www.renishaw.com/carto).

For further information on Renishaw’s calibration and performance monitoring products, visit [www.renishaw.com/calibration](http://www.renishaw.com/calibration).

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