

## KREON Scanning Plugin

For Geomagic **Studio 5 and subsequent** releases,  
and Geomagic **Qualify 6 and subsequent** releases

This software plugin is created and supported by KREON Technologies, [www.kreon3d.com](http://www.kreon3d.com), for software products from Raindrop Geomagic, Inc., [www.geomagic.com](http://www.geomagic.com).

The KREON Zephyr scanners are 3D non-contact laser scanning devices from KREON Technologies that offer full scanning capabilities on any 3D coordinate measuring machine, fixed, portable, manual, or CNC. The purpose of this plugin is to integrate the scanning process and the post-processing of collected data into a single user interface and to eliminate the need to import data scanned by KREON Zephyr scanners into application software. With this plugin, data captured by KREON scanners and by the integrated contact probe can be transferred and visualized in Geomagic applications in real time.

This KREON plugin is optional in Geomagic software products.

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### Prerequisites for the KREON Plugin

This plugin enables Geomagic products to operate with the KREON Zephyr KZ 100, 50, and 25 scanners and the following arms:

- FARO Titanium 6 and 7-axis arms,
- FARO Platinum 6 and 7-axis arms,
- FARO Gold 6 and 7-axis arms,
- FARO Silver 6 and 7-axis arms,
- FARO Bronze Millennium 6 and 7-axis arms,
- ROMER CIMCORE 1000 6 and 7-axis arms,
- ROMER CIMCORE 3000i 6 and 7 axis arms,
- ROMER CIMCORE Stinger II 6 and 7-axis arms,
- ROMER CIMCORE Infinite 7-axis arms,
- GARDA arms,
- ROMER or AXILA arms,
- Most 3D CMMs (Coordinate Measuring Machines), manual or CNC.

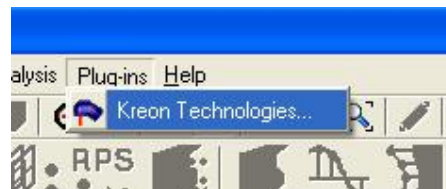
## Setting Up the KREON Plugin

1. Install Geomagic Studio 5, Geomagic Studio 6, or Geomagic Qualify 6.
2. The KREON Scanners and plugin operate identically with portable measuring arms or coordinate measuring machines.
3. If you are using the KREON plugin with a portable measuring arm, you must install the arm driver. If you are using the KREON plugin with a 3D fixed coordinate measuring machine, it is not necessary to install any software.
4. Go to [www.geomagic.com/support](http://www.geomagic.com/support), click the Plugins link, and download the KREON plugin. Unzip the file and find the KreonPlugin.dll
5. If your Geomagic application does not already have a PlugIns directory (such as C:\Program Files\Raindrop Geomagic\Geomagic Studio 6\PlugIns), create it now.
6. Copy the DLL to the PlugIns directory.

To use the KREON Plugin, no other software must be installed or running in the background.

## Activating the KREON Plugin in Geomagic Software Products

1. Switch on the arm or the 3D measuring machine.
2. Switch on the KREON ZEPHYR scanner.
3. Start Geomagic Qualify or Studio. With the KREON plugin, the interface is identical for both Geomagic products.
4. On the Plug-ins menu, select Kreon Technologies.



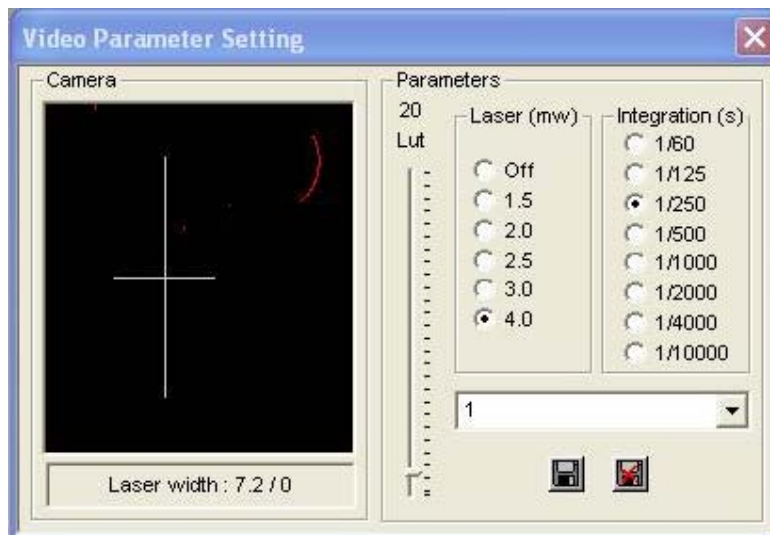
5. 2 or 3 seconds only are needed for the plugin to connect to the scanner.
6. The KREON plugin's menu appears.



## KREON Plugin Functionalities

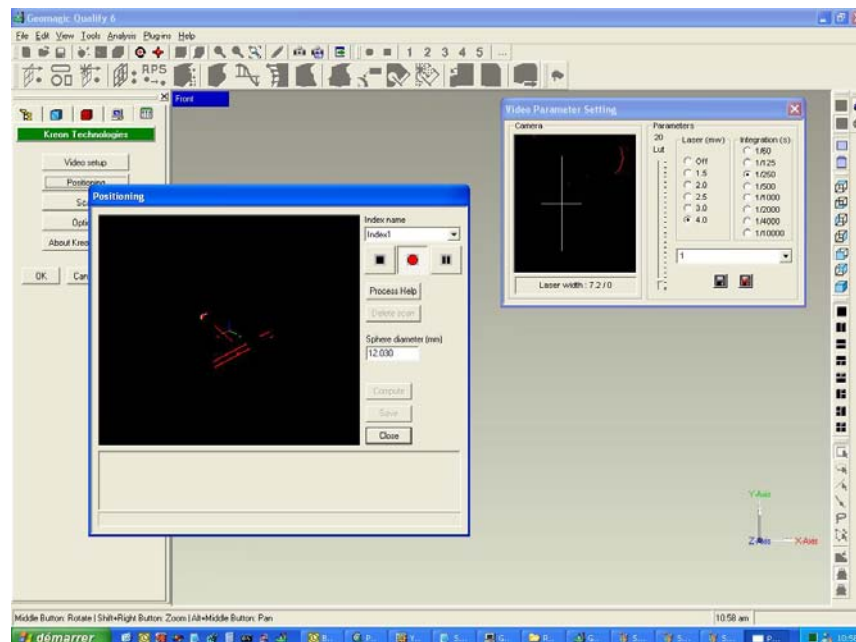
### Video Setup

This menu allows the operator to set up the scanner. Laser power and integration time are some of the parameters that can be adjusted in this menu. Scan parameters can be optimized for a part's characteristics. For example, parameters will vary for a black, a shiny, or a white part.



### Positioning

This menu enables the positioning of the scanner. Calibrating the scanner must be done each time the scanner is attached to a new measuring machine. The positioning process is the scanning of a sphere. The operator is assisted throughout this process by online help.



## Scanning

This menu allows the operator to scan and visualize a part in real time. It also controls the scanner and data display.

The KREON plugin allows the operator to adjust several parameters *during* scanning:

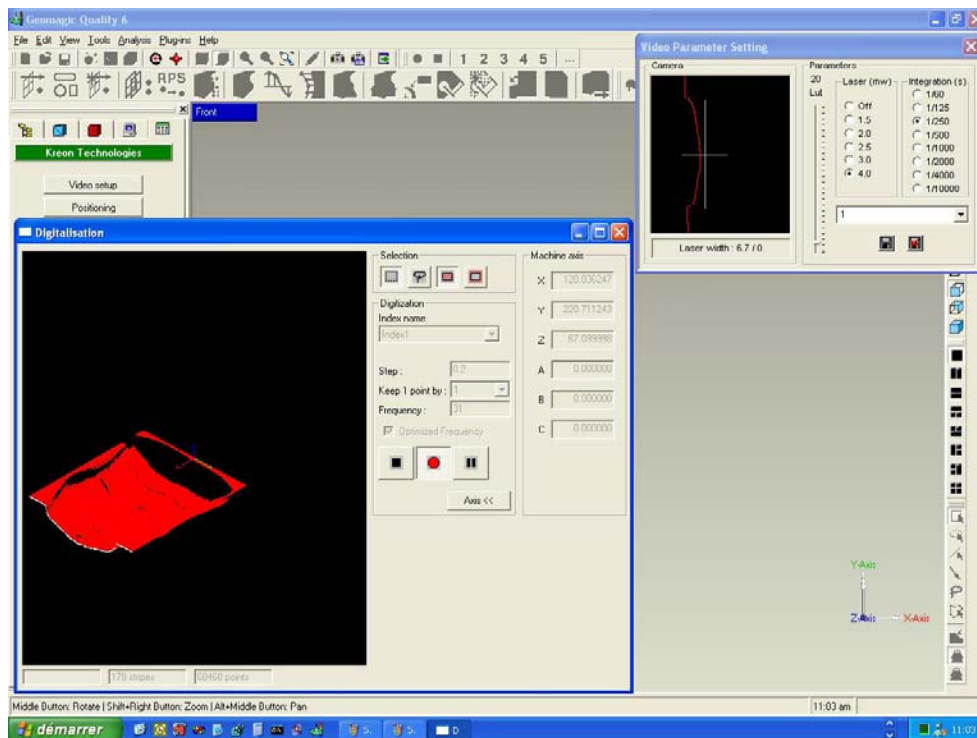
- **Frequency:** scan frequency can be adjusted, in the range 2 to 60 Hz,
- **Pitch:** pitch is the minimal distance between two lines. The unit of measurement is millimeters or inches.
- **Decimation:** decimation is the number of points per line. Adjusting this parameter is recommended. It is most useful if you want to scan a large part (such as a complete car).

When using a 3-axis Coordinate Measuring Machine (CMM), the operator can change the PH 10 index and show the value of the axes.

During scanning, the KREON plugin tools also enable:

- rotating the scan,
- zooming on specific areas,
- cleaning the scan.

These tools provide the ability to delete scan points beyond a specified scan angle, such as those near the sides of a part at a given position of the scanner. This results in cleaner data.



Three buttons enable easy and friendly interaction with the KREON ZEPHYR scanner.

- **Run** puts scanner into data collection mode,
- **Pause** puts scanner on hold. Scanning can be resumed afterwards,
- **Stop** stops the scan when the data collection process is complete. This permits immediate visualization of scanned data in the Geomagic Studio or Qualify software.

## Options

This is the configuration menu. The user can specify the Coordinate Measuring Machine (CMM) that is in use:

- All FARO arms,
- All ROMER CIMCORE Arms,
- Garda Arms,
- Romer Arms,
- And most Coordinate Measuring Machines (CMMS).

The choices of KREON ZEPHYR scanner are:

- KREON ZEPHYR KZ -100,
- KREON ZEPHYR KZ - 50,
- KREON ZEPHYR KZ - 25.

In the options menu, graphical parameters can also be adjusted.

## About the KREON plugin

Provides information about the plugin version.