non calibrated   **calibrated**
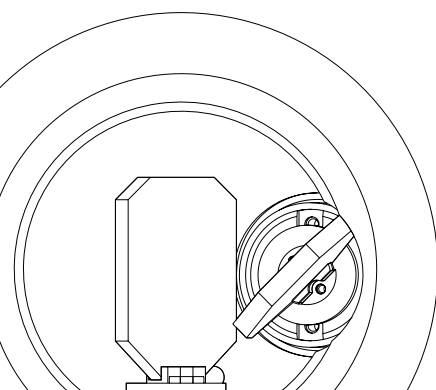
perfect solution for your workflow

2D scan systems with an F-Theta objective produce characteristically distorted image fields. This is particularly noticeable when marking repetitive, large-area grid patterns.
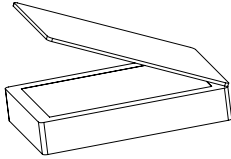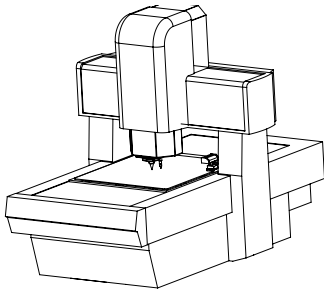
For SCANLAB scan systems used in conjunction with RTC boards, such image field distortion can be compensated by standard correction files.

RTC correction files don't take system-specific properties into account. For applications requiring highest accuracy, special software solutions are available to create system-specific correction files.

	Accuracy [1]	Effort	Software	Required hardware
RTC correction file	< 150 µm	low	-	-
CALsheet software	< 50 µm < 30 µm	moderate	CALsheet	digital camera / smartphone flatbed scanner
correXion pro software	< 20 µm	high	correXion pro	coordinate measuring device

[1] Typical values at f=163 mm

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Calibration Solutions

Solution	Tool	Accuracy [1]

RTC Correction File

Correction File   < 150 µm

The pre-calculated correction files are suitable for many laser scan applications, e.g. marking with normal accuracy requirements.

Workflow

- Load the supplied standard correction files (*ctb/*ct5) onto SCANLAB's RTC board
- RTC board calculates on the basis of correction file improved output values for scan head control

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CALsheet

Smartphone   < 50 µm

Creation of individual, system-specific correction files for applications with high accuracy requirements; ideal for simple and quick onsite checking and recalibration of a 2D scan system.

Workflow

1. Mark a pre-defined grid pattern

Flatbed scanner   < 30 µm

2. Place a transparent master (supplied by SCANLAB) onto the marked pattern
3. Capture an image of the marking plus master with a flatbed scanner or suitable digital camera
4. Generate an optimized correction file using the CALsheet software in conjunction with the captured image data

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correXion pro

Coordinate measuring machine   < 20 µm

For creating individual, system-specific correction files that achieve very high accuracy; especially for factory calibration when a coordinate measuring device is available.

Workflow

1. Mark a grid pattern
2. Determine the real position of every grid point with a coordinate measuring machine
3. Create a source file for the correXion pro software
4. Generate a new, system-specific correction file with correXion pro

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[1] Typical values at f=163 mm

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