



HEXAGON

NEXTSENSE

CALIPRI C4X

Data Sheet

## Measurement module "Track Geometry"



Doc. ID: CMM3004  
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**CALIPRI**  
C4X

# 1 APPLICATION

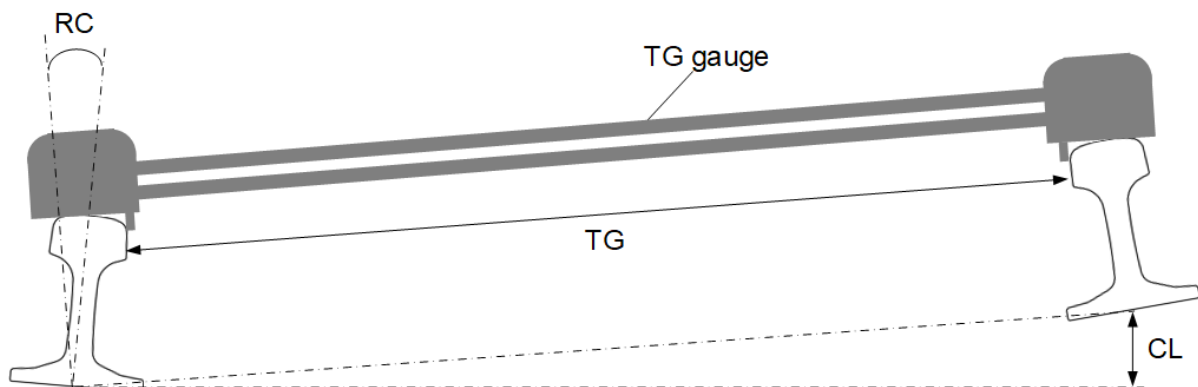
Track geometry data provide a significant contribution to track and train safety. For example, they are included in the calculation of the maximal possible speed on a track. By analyzing this data, irregularities of a track can be detected, maximal possible train speeds predefined, or maintenance work initiated. Even if the inspection of the track geometry with track measuring vehicles leads to missing or invalid measuring data, CALIPRI can be used as a compensatory measuring device.

CALIPRI and the track geometry module persuade through:

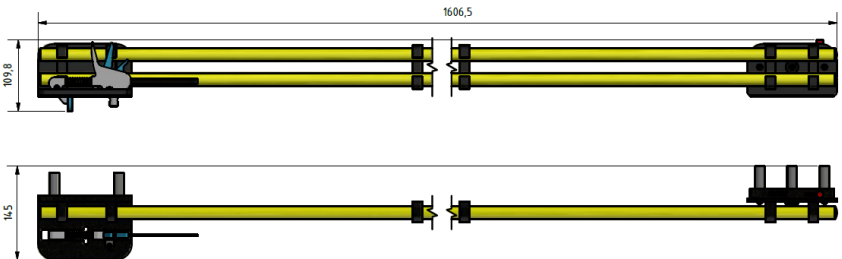
- Measurement of both track rails without turning the gage around (single gage positioning)
- Direct calculation of twist (height difference)
- Multiple applications: Additional measurement modules available, e.g., rail profile measurement module
- Direct data transfer via WLAN, instead of USB stick or SD card transfer
- Flexible interfaces for data export
- Low weight
- Patented CALIPRI measurement principle
- Accuracy requirements according to DIN 13848-4:2012

## Measured variables:

- TG – Track gauge
- CL - Cross level
- RC - Rail cant
- TW – Twist



## 2 TECHNICAL DATA

<b>Nominal track width</b>	1435 mm   56.50 in <sup>1</sup> (Measurement range: 1420 – 1485 mm   55.90 – 58.46 in)			
<b>Maximal deflection</b>	12°			
<b>Net weight</b>	3.3 kg   1165.04 oz			
<b>Dimensions</b>	 <p>63.3 x 4.3 x 5.7in   case 68.9 x 9.8 x 9.8 in</p>			
<b>Accuracy</b>		Absolute	Repeatability	Expanded measurement uncertainty (DIN EN V 13005:1999)
	Track gauge	±0.2mm   0.008 in	±0.1mm   0.004 in	0.5mm   0.019 in
	Cross level ≤ 50 mm	±1.5mm   0.059 in	±0.5mm   0.019 in	1.5mm   0.059 in
	Cross level > 50 mm	±2.0mm   0.079 in	±0.5mm   0.019 in	2.0mm   0.079 in
<b>Compatibility</b>	CALIPRI C40, CALIPRI C42 as of release 2018.4.0			
<b>Product ID</b>	CMM3004			

<sup>1</sup> Other gage widths available upon request.



### 3 SCOPE OF SUPPLY AND SERVICES

- Software license measurement module “Track Geometry”
  - 1 measurement method (RailGeometry)
  - By system expansion (in case of supplementary module purchase): activation via remote access
- Track geometry gage TG1435 (for regular track)<sup>2</sup>
  - Mechanical gage for track geometry measurement
  - 14 mm (0.04 in) pin length (other pin lengths available upon request)
  - Delivery in hard shell case for shipping and storage

### 4 ADD-ONS

- Measurement module “Rail”
  - For profile measurement of common vignole and grooved rail tracks
  - Product ID: CMM3001
- Measurement module “Equivalent Conicity”
  - To determine the running characteristics / runnability
  - Product ID: CMM1011
- GPS/LTE Expansion
  - For recording GPS data
  - Product ID: CAO3029

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<sup>2</sup> Other gage widths available upon request.

## 5 MEASUREMENT PROCESS



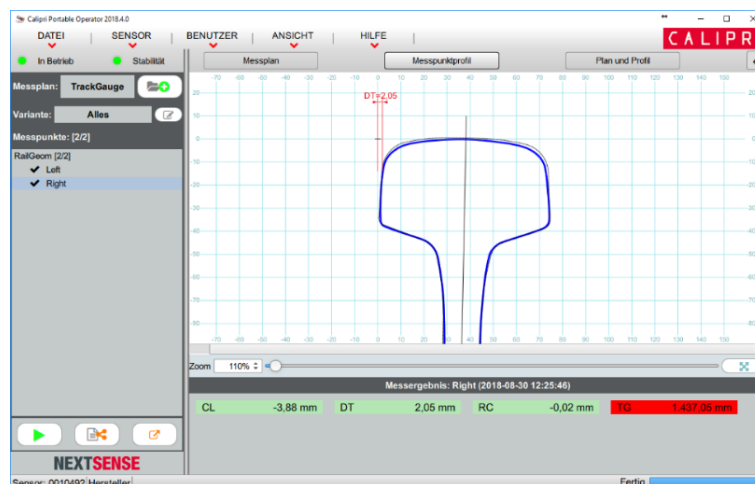
Applying the gage



Measurement of the right rail profile



Measurement of the left rail profile



Measurement result on tablet PC



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