The configuration consists of:
- Premium hardware GRP 1000
- High-performance software Amberg Survey Basic
- Optional: Amberg Track Geometry Record (TGR)
- Robust and guaranteed precision thanks to GRP Fidelity
- First-class customer support

### System use and typical system performance

#### Survey applications

- **Typical project applications**
  - As-built surveys for documentation and planning of railway line refurbishment and upgrading
  - Track as-built data acquisition for subsequent analyses and utilisation

- **System use**
  - Open track
  - Light rail
  - Industrial tracks

- **Typical surveying performance**
  - Track survey with total station: 800 – 1200 m/h
  - Track survey with GPS: 3000 m/h
  - As-built data (export)
    - further formats on request
    - ASCII
    - DXF
    - LandXML

#### System approval

- **CE Conformity**
  - EN 61326-1:2013
  - EN 61000-6-2:2005
  - EN 60825-1:2014
  - EN 13848-4
  - Directives 2014/30/EU
  - Directives 2014/35/EU
  - Directives 2011/65/EU

- **GRP System FX approvals from**
  - Network Rail / London Underground (UK), Deutsche Bahn (DE), SNCF (FR), OBB (AT), RFI (IT), Adif (ES), ProRail (NL), Infra治病 (BE)

#### Extract of references

Amberg’s railway surveying solutions have proven their high performance all over the world. Demanding projects have been successfully realised in e.g. Germany, Austria, Belgium, the Netherlands, Denmark, France, Italy, Spain, Greece, Turkey, Australia, United Kingdom, Saudi Arabia, UAE, Korea, USA, FR, China.
Amberg Survey GRP 1000
System performance and technical data

Amberg Survey
Map your line. Highly efficient system for as-built surveying of existing railway lines including powerful interfacing for selective data transfer to other applications and subsequent analyses.

**Project data management**
- Line dedicated project data management as basis for structured inventory surveys, data processing and data transfer.
- Individual definition of coding schemes.
- Project cockpit for preparation of efficient and easy practicable fieldwork.

**Surveying**
- Powerful and integrated acquisition of current track coordinates and corresponding track parameter (gauge, superelevation).
- Direct assignment of codes and comments to single measurements as basis for efficient post-processing.
- Reliable control of ongoing measured values and progress of measurement.

**Data evaluation**
- Automatic analysis and merging of single measuring sections.
- Calculation of additional parameter e.g. versines, curvature, slope, twist and detailed track axis according to pre-defined reference parameter.
- Structured data export using the code information in LandXML, DXF and ASCII format, e.g. for further processing in Bentley Rail Track.
- Direct interface for further utilisation in other Amberg Rail applications.
- TGR option.