

NET Scan is a mobile software solution (app and web portal) for the 3D capture and documentation of open trenches and the infrastructure installed within them.

Using the sensors of an Apple Pro smartphone, particularly photo/video and LiDAR (Light Detection and Ranging, a laser-based 3D scanning technology), the 3D model is captured from all angles with the mobile device while walking along the open trench.

The Following Hardware Is Required for NET Scan

Hardware Kit (NET Scan Kit):

- iPhone Pro
- GNSS receiver (for centimeter-level positioning with RTK)
- Accessories and charging cable
- SIM card with data plan
- Carrying case

Selected Features and Workflows

App (NET Scan)

The **NET Scan App** enables highly precise digital capture of open trenches, utility routes, and infrastructure directly on the construction site. By combining LiDAR technology, high-precision GNSS positioning, and mobile data capture, a georeferenced digital twin of the construction site is created and can be processed immediately in NET Cloud.

- **3D Trench Capture:** Creation of precise 3D scans of open trenches and infrastructure using LiDAR technology directly on the smartphone.
- **GNSS Positioning:** Centimeter-level georeferencing of all scans through the combination of an external GNSS receiver and an RTK correction service.
- **Photo Documentation:** Capture of georeferenced photos for comprehensive documentation of construction progress and installed infrastructure.
- **Object and Utility Documentation:** Capture of point and line objects, including technical attributes, directly within the 3D model.
- **Measurement Data Capture:** Capture of precise geometries as a basis for quality control, surveying, and construction documentation.
- **Evidence Documentation:** Capture of surfaces before, during, and after construction work for documentation and acceptance purposes.
- **Scan Post-Processing:** Addition of attributes, comments, and further information prior to synchronization.
- **Cloud Synchronization:** Upload of all scans, photos, and object data for immediate further processing in NET Cloud.

Web Portal (NET Cloud)

NET Cloud serves as the central platform for managing, quality-assuring, and evaluating all data captured with the NET Scan App. Through the browser-based web portal, projects, scans, and documentation are available to all authorized project stakeholders in near real time and can be further processed for planning, construction supervision, and documentation.

- **Project Management:** Management of projects, construction sections, and scan assignments with a centralized project overview.
- **Interactive Map View:** Visualization of all scans, photos, and objects on digital maps with various basemaps and layers.
- **3D Viewer:** Visualization of 3D scans with measurement functions and cross-sectional views for quality control.
- **Data Editing:** Editing of vector, attribute, and geometry data to correct and supplement information.
- **Document Management:** Centralized management of scans, photos, documents, and other project files.
- **Export Functions:** Export to common GIS and CAD formats (e.g. Shape, DXF, KML), provision of orthophotos, and telecommunications exports.
- **Quality Assurance:** Verification of construction work using 3D scans, photos, and measurement data directly in the browser.
- **Ticket and Task Management:** Documentation and tracking of defects, queries, and tasks.
- **User and Role Management:** Management of users, roles, and project-specific permissions.
- **System Integration:** Integration with the TKI NET Suite as well as connections to external GIS, CAD, and documentation systems.

Technical Information

Software & Cloud Licensing Model

- **Annual Subscription License:** All NET Scan licenses are provided as annual subscription licenses and include use of the software and the included system services.
- **NET Scan Kit License:** Each NET Scan Kit includes a license providing authorized users with access to the NET Web Portal.
- **Additional Web Portal Licenses:** Additional licenses for access to the NET Web Portal can be purchased for further back-office users.
- **System Fee:** The system fee is included in each license and covers operation of the platform as well as provision of cloud and system services.

Support

- **Telephone hotline:** Mon–Fri, 07:00–17:00 (local time)
- **Ticket system:** 24/7 submission, processing during business hours
- **Available separately:** Extended support, individual project assistance, and custom software modifications

Hardware Warranty

- **Warranty:** The NET Scan Kit is covered by a voluntary **12-month** manufacturer's warranty against defects in materials and workmanship.
- **Warranty Exclusions:** The warranty does not cover damage resulting from improper use, accidents, unauthorized modifications, or unauthorized repairs.
- **Warranty Service:** In the event of a valid warranty claim, the affected hardware will be **repaired or replaced** at the manufacturer's discretion.

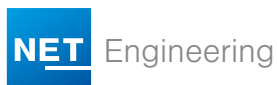
Positioning Accuracy

- **Accuracy:** Under optimal operating conditions and with an available RTK fix, a positioning accuracy of less than 1.5 cm can be achieved. The actual achievable accuracy depends on environmental and reception conditions.
- **Dependencies:** The achievable positioning accuracy depends on environmental and reception conditions (including satellite visibility, multipath effects, weather, RTK availability, and mobile network connectivity). A specific level of accuracy therefore cannot be guaranteed in all operating conditions.

Combination Products



Captured scan data is directly available in NET Build for construction coordination, construction progress tracking, and billing-related documentation.



By directly transferring captured as-built data into network planning, planning processes are accelerated and the effort required for data capture is reduced.



Included web portal for viewing scans.

Please contact us for further information.

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