



RealTrac Plant

Modular positioning system for industrial safety at the plants

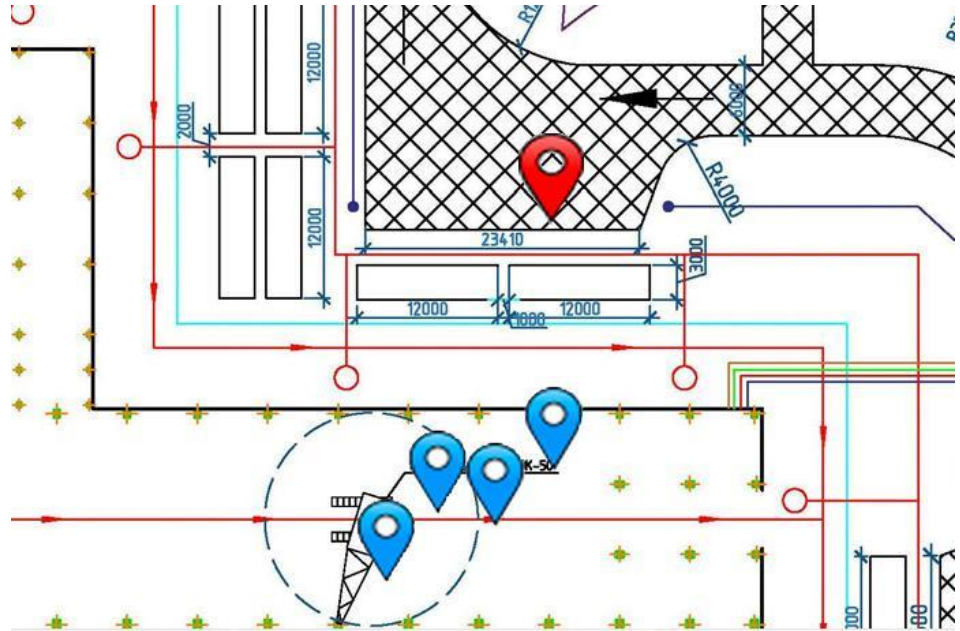


RealTrac Plant. Hybrid positioning

Hybrid positioning consists of:

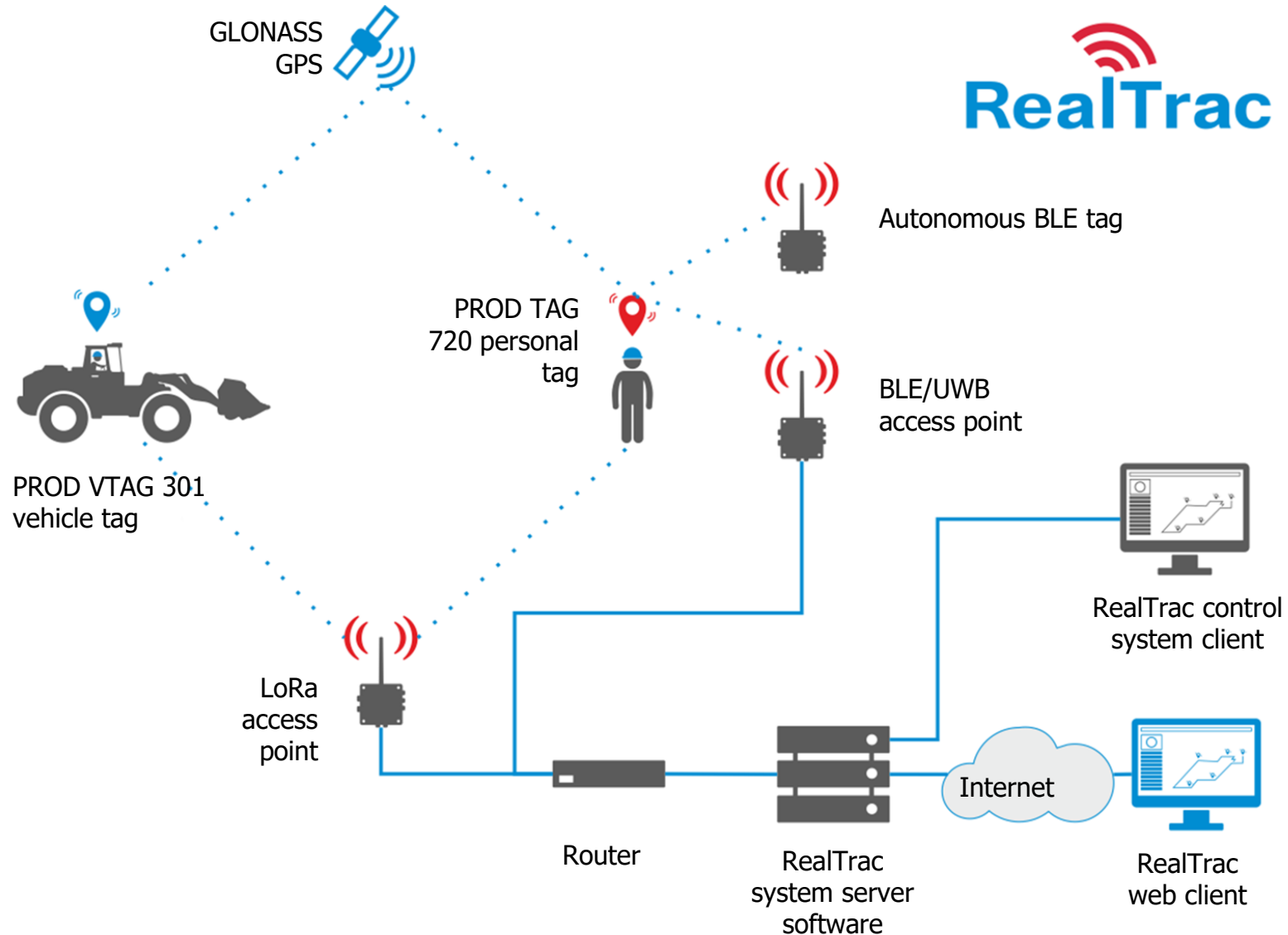


Zone positioning



Global positioning

RealTrac Plant. How the positioning system works



RealTrac Plant. How the positioning system works

Principle of operation:

- The main positioning device is the PROD TAG 720/730 personal tag.
- Location data is transmitted via LoRa or with PROD POINT 511/516 fixed access points.
- The tag can also receive alerts from the server about entering different zones with different access levels for each employee.
- The server processes the received data and visualizes it through the dispatcher's workstation.
- The dispatcher can send alerts, build reports and initiate alarms.

RealTrac Plant. Personal tag

PROD TAG 720 hybrid tag provides:

- Global positioning of personnel on the territory with an accuracy of 3m.
- Zone positioning of personnel inside buildings with zone accuracy of about 20 m.
- Data exchange rate with the server is 1 sec.
- The range of guaranteed data exchange with the server is up to 2.5 km.
- Panic button.
- Fall detection.
- Support of the Collision Awareness system.



Personal tag

PROD TAG 720

Hybrid positioning

BLE, UWB, GNSS

BLE precision: ~20 m.

UWB precision: 1 m.

GNSS precision: 3 m.

RealTrac Plant. Access point

PROD POINT 516 access point provides:

- Zone positioning of personnel inside buildings with zone accuracy of about 1 m.
- Data exchange rate with the server is 1 sec.
- The range of guaranteed data exchange between the tag and the access point is up to 45 m.
- PoE supply.



PROD POINT 516

Positioning tags in the
UWB radio visibility area

UWB precision: 1 m.
Discretization: 1 sec.

RealTrac Plant. LoRa base station

LoRa base station allows to:

- Provide information from personal tags at a distance of up to 2.5 km.
- Provide a sampling rate of 1 second with 100 personal tags.
- Combine LoRa stations into a network to provide continuous LoRa network coverage of the entire site.



LoRa

Transfer of data from personal and vehicle tags.

Range: up to 2.5 m.

Sampling rate: 1 sec.

Simultaneous sampling: 100 tags.

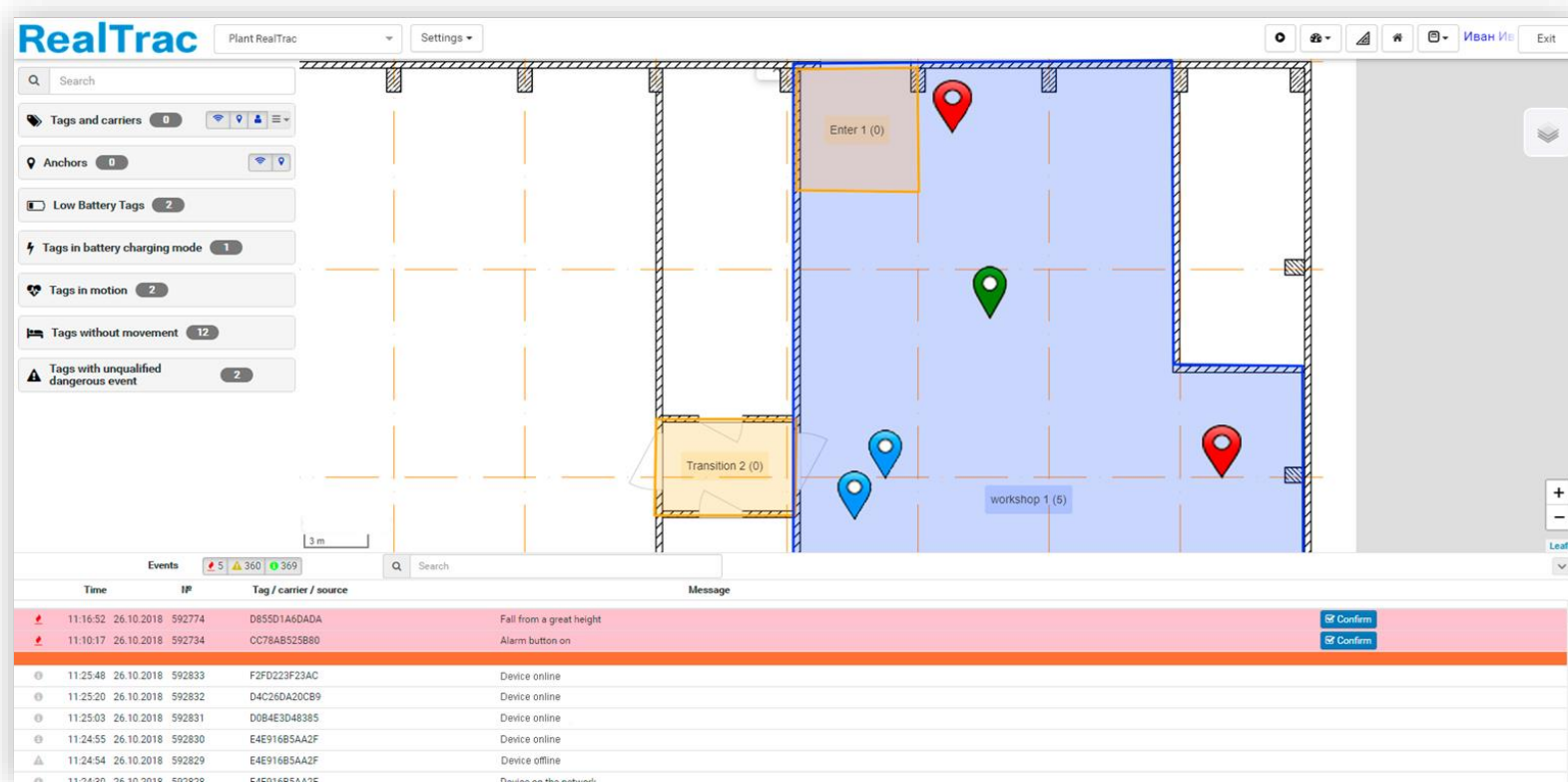
Positioning. Server.

- Analytical alerts (including heat maps for personnel and vehicles, time spent in certain areas, equipment tracking and its operation, etc.)
- Sending alerts to the control room (including people falling, entering the danger zones, etc.)
- Sending voice messages and critical alerts.
- Storing the monitoring and voice communication data.
- Remote access to factory systems (e.g. ventilation).*
- Integration with other systems (e.g. CCTV).*
- The server can be on-site, off-site, even cloud based.

* Coming soon

Positioning. Web interface

- Real-time or on-demand tracking of personnel and vehicles on the company map.
- Displaying alerts and service messages.
- Browser-based, so most web-oriented devices have access.



The screenshot displays the RealTrac web interface. The top navigation bar includes the 'RealTrac' logo, a dropdown menu for 'Plant RealTrac', and a 'Settings' button. On the right side of the top bar, there are icons for user profile (Iван Ив) and an 'Exit' button. The left sidebar contains several filter panels: 'Tags and carriers' (0), 'Anchors' (0), 'Low Battery Tags' (2), 'Tags in battery charging mode' (1), 'Tags in motion' (2), 'Tags without movement' (12), and 'Tags with unqualified dangerous event' (2). The main area shows a blue floor plan map with several location pins: a red pin at 'Enter 1 (0)', a green pin in the center, a blue pin at 'Transition 2 (0)', and another red pin at 'workshop 1 (5)'. A scale bar indicates 3m. The bottom section features an 'Events' table with columns for Time, IP, Tag / carrier / source, and Message. Two critical events are highlighted in red: a fall from a great height at 11:16:52 and an alarm button on at 11:10:17. Other events include device online and offline status for various tags.

Time	IP	Tag / carrier / source	Message	
11:16:52	26.10.2018	592774	D855D1A6DADA	Fall from a great height
11:10:17	26.10.2018	592734	CC78AB525B80	Alarm button on
11:25:48	26.10.2018	592833	F2FD223F23AC	Device online
11:25:20	26.10.2018	592832	D4C26DA20CB9	Device online
11:25:03	26.10.2018	592831	D0B4E3D48385	Device online
11:24:55	26.10.2018	592830	E4E916B5AA2F	Device online
11:24:54	26.10.2018	592829	E4E916B5AA2F	Device offline
11:24:20	26.10.2018	592828	E4E916B5AA2F	Device on the network

RTT EUROPE Novi Sad

Vase Stajica br.18, apartment 8,
Novi Sad, Republic of Serbia, 21000



RealTrac International

Via Cetta 8
CH-6946 Ponte Capriasca
Switzerland

+41 91 228 05 29

[real-trac.com](https://www.real-trac.com)