

Toolbox

Hands-on setup and maintenance for tracking and ranging systems

The *Toolbox* assists to set-up, configure, monitor and update nanotron's Real-time location and ranging systems with a unified process and interface for both, Chirp and UWB.

The Toolbox can be used on-site during installation, configuration and set-up of nanotron's Real-time location and ranging systems as well as later for remote maintenance and troubleshooting. Device status, system performance, infrastructure layout and location data output can be assessed, visualized and optimized comfortably.

RTLS Tools

Setup, config and maintain the RTLS location engine nanoLES, tags (nanoTAGs) and anchors (nanoANQs).

VisiTool

VisiTool visualizes and supports analyzing tag and anchor positions. It supports local and global coordinate systems to ingest local floorplans or maps. It displays multiple sections and visualizes mixed 1D/2D deployments.

- ▶ Track people, assets and vehicle visually
- ▶ Live and playback tracking of tags
- ▶ Remote access for worldwide monitoring

nanoLES Controller

Real-time control & performance monitoring tool for the *nanoLES* location engine including:

- ▶ Real-time anchor health monitor
- ▶ Infrastructure connectivity monitor
- ▶ Location data logging

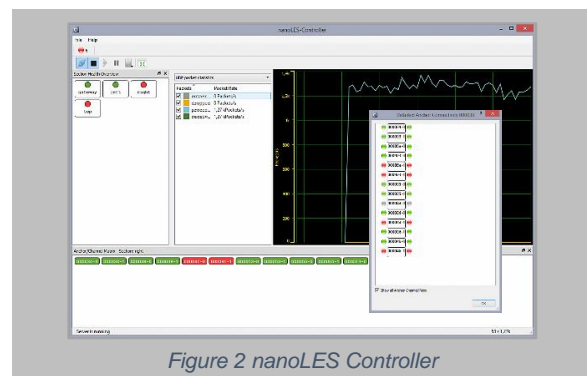
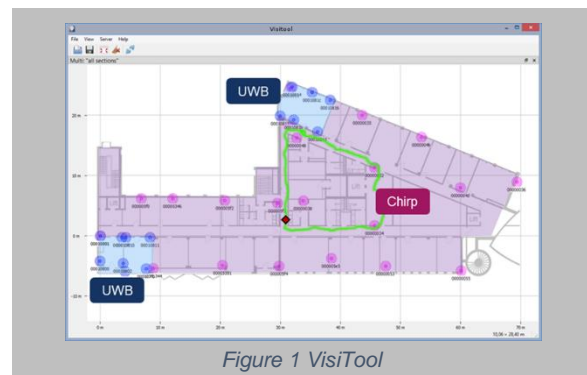
SLMP Server

Enables human readable access to the location information of the location engine nanoLES via an industrial standardized structured ASCII stream including position, section, ID, timestamp, etc.

VisiTool
nanoLES Controller
SLMP Server
nanoLES Configurator
nanoANQ Configurator

OTA Configurator

Sniffer



[SLMP protocol in ISO/IEC 24730-1](#)

nanoLES Configurator

Comprehensive tool facilitating the configuration of all essential parameters of the *nanoLES* location engine such as:

- ▶ Sections
- ▶ Anchor positions
- ▶ Anchor section assignment
- ▶ Network and antenna configuration

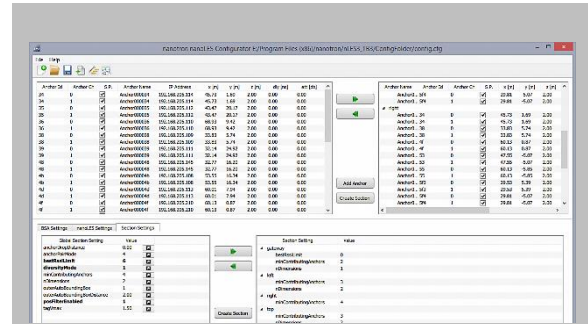


Figure 3 nanoLES Configurator

nanoANQ Configurator

The configurator tool facilitates remote updating and configuration of all anchors to maintain or expand the RTLS infrastructure enabling real-time discovery as well as setup and firmware updates of single or groups of anchors.

- ▶ Real-time filtered auto anchor discovery
- ▶ Supports maintaining and expanding the RTLS infrastructure (Chirp/UWB)
- ▶ Setup and firmware updates of anchors

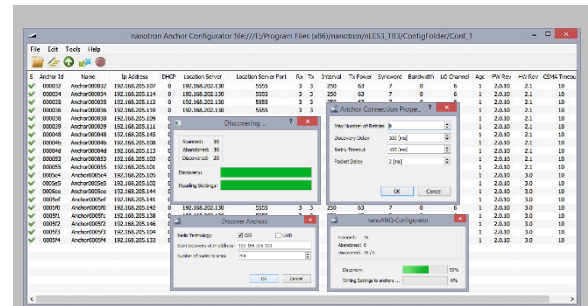


Figure 4 nanoANQ Configurator

OTA Configurator (RTLS & Ranging)

OTA Configurator

Remote config of multiple tags wirelessly to simplify setup and maintenance of deployments.

- ▶ Over-the-Air and automated tag config
- ▶ Works with any nanoTAG or *swarm bee* based device with serial interface like DK+
- ▶ Auto discovery and automated batch-configuration minimizes maintenance efforts



Figure 5 OTA Configurator

Sniffer (RTLS & Ranging)

Sniffer-c or Sniffer-u (Chirp or UWB)

Monitors and captures the RF communication of any nanotron Chirp or UWB radios and transceivers as well as any 3rd party UWB device implementing nanotron BLINK protocol.

- ▶ Network traffic can be filtered and logged
- ▶ Packet types are distinguished by color
- ▶ Comprises of Sniffer GUI and a pre-flashed DK+ board for either Chirp or UWB

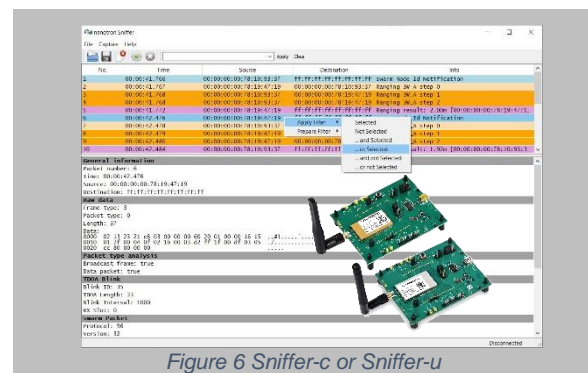


Figure 6 Sniffer-c or Sniffer-u

Ordering Information

Order No.	Description
KN01TB3	RTLS Tools (Toolbox 3.1)
SNO3SWAT	OTA Configurator Recommended for: <ul style="list-style-type: none"> • <i>swarm</i> bee LE V3 DK+ • <i>swarm</i> bee LE V2 DK+ • <i>swarm</i> bee ER DK+
SNSWABEES	Sniffer-c V2 Includes: <ul style="list-style-type: none"> • Sniffer GUI • <i>swarm</i> bee LE V2 DK+ • Sniffer-c-v2 firmware (pre-flashed)
KN03SNILE	Sniffer-c V3 Includes: <ul style="list-style-type: none"> • Sniffer GUI • <i>swarm</i> bee LE V3 DK+ • Sniffer-c-v3 firmware (pre-flashed)
KN02SNIER	Sniffer-u Includes: <ul style="list-style-type: none"> • Sniffer GUI • <i>swarm</i> bee ER DK+ • Sniffer-u firmware (pre-flashed)
BN02SWBLP	<i>swarm</i> bee LE V2 DK+
BN03SWBLP	<i>swarm</i> bee LE V3 DK+
BN01SWBEP	<i>swarm</i> bee ER DK+

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About nanotron, An Inpixon Company

Nanotron Technologies GmbH, an Inpixon company (Nasdaq: INPX) is a leading provider of electronic location awareness solutions. If knowing what, where and when is mission-critical to your business, rely on nanotron with Location Running.

Nanotron's solutions deliver precise position data augmented by context information in real-time. Location Running means, reliably offering improved safety and increased productivity, 24 hours a day, 7 days per week: Location-Awareness for the Internet of Things (IoT).

Subject to change without notice.