



nanoLOC Ranging Kit II

Wireless Ranging and Zoning Evaluation Kit
Featuring Nanotron's nanoPAN 5375 RF Power Module

Real-Time Ranging and Zoning

The *nanoLOC Ranging Kit II (RK II)* demonstrates the superior ranging and communication capabilities of the *nanoLOC TRX Transceiver* from Nanotron. This kit provides two easy to use wireless devices for quickly performing ranging, zoning, and link quality testing in actual indoor and outdoor application environments.

Combining distance awareness with reliable wireless communication, this high performance 2.4 GHz evalua-

tion kit uses Nanotron's robust *Chirp Spread Spectrum (CSS)* communication technology. The kit is the ideal platform for verifying that *nanoLOC's* ranging characteristics meet individual customer requirements.

To demonstrate fast and easy modular product development, each *RK II* device uses the *nanoPAN 5375 RF Module* which integrates *nanoLOC* and all required RF components.

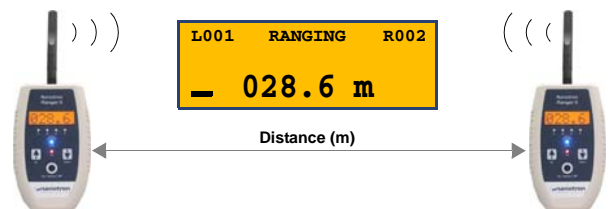


The *RK II* device operates in one of four modes: Ranging, Zoning (two types), and Link Quality Indication.



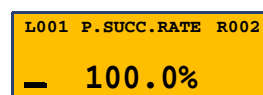
Ranging Mode

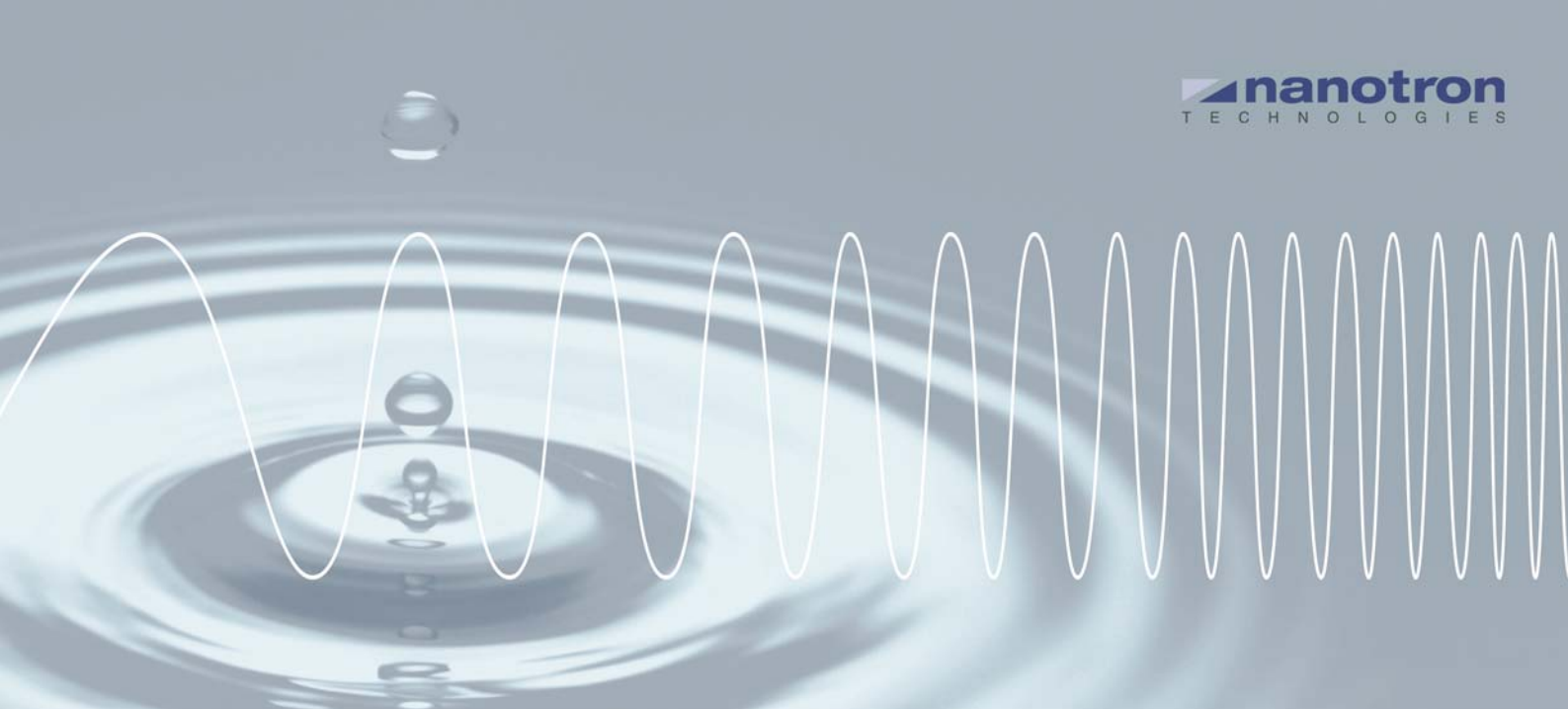
In Ranging Mode, *nanoLOC's* unique real-time ranging feature is demonstrated where both *RK II* devices measure and display their relative distances in meters.



Link Quality Mode

In Link Quality Mode, the quality of the communication link is shown as a percentage value, which is the rate of successfully transmitted packets between the two *RK II* devices.

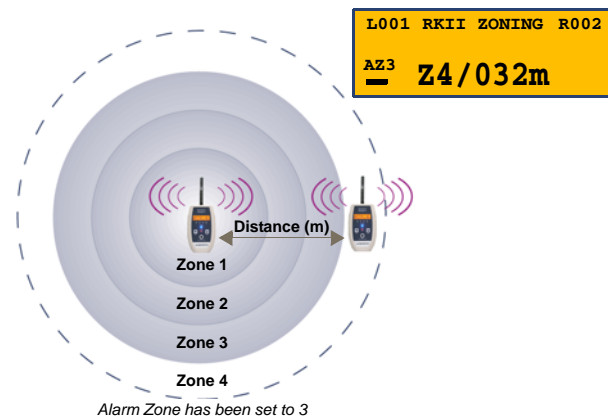




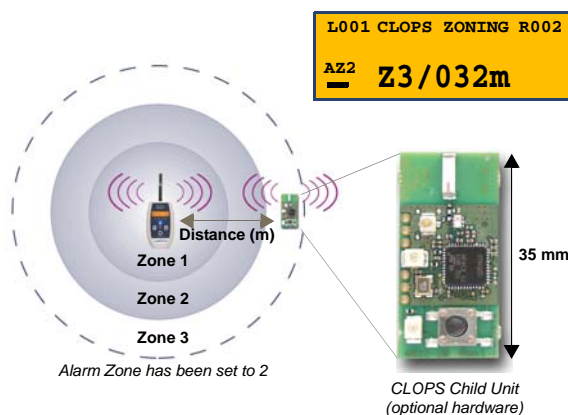
Two Zoning Modes – RKII and CLOPS

Using a set of customizable zones, both *RKII Zoning* and *CLOPS Zoning* modes provide an *in-zone* and an *out-of-zone* status of the remote device. The zone in which the remote *RKII* device is located is displayed on the local device. When the remote device has an out-of-zone status, an audio/visual alarm alerts the user.

RKII Zoning – This mode demonstrates the use of ranging in the *nanoLOC TRX Transceiver* for virtual safety zone, virtual fencing applications, and others.



CLOPS Zoning – This mode emulates the *Child Loss Protection System (CLOPS)* from *Nanotron*. It requires an optional CLOPS Child Unit as the remote device.



Technical Features

- Antennas 1 external antenna (SMA connector) and 3 internal chip antennas for diversity
- Power supply 2 AA alkaline batteries
- RF IC *nanoLOC TRX Transceiver*
- RF Module *nanoPAN 5375 RF Module*
- Applications Ranging and Zoning preflashed
- LEDs 6 LEDs (Power-on, RF Link, Zones A to D)
- Indicators Out-of-Zone (acoustic), Low Battery (in LCD), and Out-of-Range
- Max. output power +20 dBm for extended range
- Output power range 300 μ W to 100 mW
- LCD Display High contrast dot matrix with background illumination
- Range up to 1000m (3280ft)¹
- Distance resolution 10 cm
- Accuracy typ. 1-2 m¹
- Device addresses Selectable from 1 to 254
- Weight (without batteries) 136 g
- Dimensions (without antenna) 140 x 85 x 25 mm

1. Communication range and accuracy are quoted for unobstructed line of sight conditions. Actual values are subject to type of terrain, electromagnetic interference, height, and obstructions. These values are often less than the maximum possible.

Ordering Information

Number	Description
KNRKII	nanoLOC Ranging Kit II
MN5375V1	nanoPAN 5375 RF Module
BNCL11CP	nanoLOC CLOPS 1.2 Child Unit Board
KN5375P2	nanoPAN 5375 Primer2 DK

For our complete product line and to locate an authorized distributor in your area, visit www.nanotron.com.

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