



THE KINEXON E-PAPER TAG

Real-time localization with integrated e-Ink display

The KINEXON ePaper Tag is the Ultra-Wideband basic component for a paperless material and goods handling in industry.

The ePaper solution combines high-precision UWB localization technology with smart process visualization. The KINEXON ePaper Tag can be placed on workpieces and load carriers without leaving any residue to track their entire value-added process. In addition, an integrated display automatically informs about production steps that have already been completed and those that are still pending. As a result, all information is digitized, repeated and printing processes are eliminated.

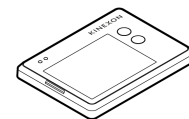
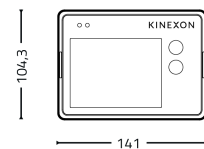
KINEXON ePaper solution is flexible and provides complete control and maximum flexibility for dynamic production.

USE CASES

The combination of high precision real-time localization and smart visualization is the key to a paperless production:

- ePaper-based workflow-instructions for shop floor employees
- Real-time interaction through configurable button (e.g. signal for replenishment)
- Dynamic labeling with current status of the product or material
- Digitization of all production & process relevant information

DIMENSION [mm]



KEYFACTS

RF SPECIFICATIONS

| | |
|--------------------------------|---|
| Positioning Principle | Real Time Location System (RTLS), Radio-based, Ultra-wideband (UWB) |
| Frequency range | UWB (IEEE 802.15.4a): 3 - 5 GHz, 6 - 7 GHz |
| Positioning Update Rate | Configurable, typically 1 Hz in motion, 0.1 Hz in standstill |
| Positioning Data | 3D (x, y, z) |
| Positioning Accuracy | < 20 cm (depending on environment), MAE |

PHYSICAL SPECIFICATIONS

| | |
|-------------------------|---|
| Display | 4.2", 85 x 64 mm (400x300 pixel) 2-color: black/white, update time 3 s (25 °C) 3-color: black/white/red, update time 14 s (25 °C) |
| Button | Two buttons for manual event trigger (event sent via RF) |
| Indicators | Two LEDs (Status and Action) |
| Accelerometer | 3-axis, +/-2 g to +/-16g, up to 200 Hz |
| Battery | Built-in 10 Ah replaceable Li primary battery |
| Battery Lifetime | Up to 5 years (depending on update rate) |
| Material | Acrylonitrile styrene acrylate (ASA) |
| Weight | 197 g |
| Dimensions | 141 x 104,3 x 14,2 mm (168,8 x 104,3 x 24,6 mm including mounting bracket) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|--|--|
| Operating Temperature | 0 °C to + 50 °C incl. battery |
| Storage Temperature | -20 °C to +30 °C incl. battery |
| Protection Class | IP67 |
| Regulatory Compliance (cert. ongoing) | FCC Part 15 subpart C 15.250 (for indoor and outdoor use) ETSI EN 302065-1 ETSI EN 303883 ETSI TS 103361 SRRC Draft EN 301 489 - 1, -33 EN 61000-4-2, -4-3 EN 62479 1999/519/EC UN 38.3 IEC 62133 |