

REACHING
THROUGH
DUST
AND RAIN



Confidex Viking™ beacons for Smart Industries

Identify. Sense. Locate.
RELIABLE DATA BUILT ON
RELIABLE LINKS.

Confidex is the world's leading manufacturer of high-performing contactless smart tickets, industrial beacons, RFID & NFC tags and specialty labels – the key enablers for short-range wireless IoT and real-time location and optimization solutions that make industrial supply chains, transactions, asset tracking and authentication of goods and people more efficient and secure.

AT RFID TOMORROW
CONFIDEX INTRODUCES
CONFIDEX VIKING™,
THE INDUSTRIAL GRADE
MODULAR BEACON FAMILY

First clan of Vikings arrives before snow: Developer kits available from November 2017

Rest of the tribe follows during winter: Volume deliveries during Q1/2018



www.confidex.com

PRODUCT DATASHEET

Confidex Viking™



Reliable industrial grade beacon for industrial identifying, sensing and locating applications.

ELECTRICAL SPECIFICATION

Device type

Beacon based on Bluetooth Low Energy Tag

Air interface protocol

Bluetooth 4.2

Compatible with Wirepas Connectivity

NFC: ISO/IEC 14443A

Compliance

FCC-ID: 2AMK9-CFXBLE-1

Operational frequency

ISM: 2.45 GHz

NFC: 13,56 MHz

SOC

Nordic Semiconductor NRF52832

Memory configuration

512 kB FLASH, 64 kB RAM

Configuration interface

NFC interface for fast deployments and configuration

Sensor

Built-in temperature sensor; other sensors by request

Sensitivity

-96 dBm sensitivity (Bluetooth Low Energy)

Read range*

Up to 200 m / 650 ft. Measured on and off metal.

Battery type

2 x CR2477 coin battery for maximal lifetime

Applicable surface materials

Can be attached to any surface

* Read ranges are measured in laboratory environment and there can be some variation in real application.

MECHANICAL SPECIFICATION

Encapsulation materials

High quality PC/ASA

Weight

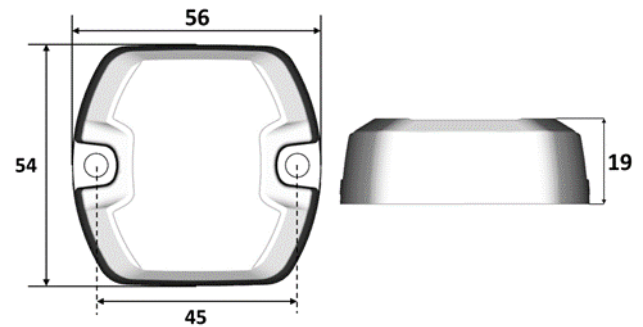
45 g

Delivery format

Single

Tag dimensions

56 x 54 x 19 mm / 2.20 x 2.13 x 0.75 in



ENVIRONMENTAL RESISTANCE

Operating temperature

-20°C to +60°C / -4°F to +140°F

Water resistance

Good, tested 5 hours in 1m deep water (IP68)

ESD immunity

±8 kV according to EN 61000-4-2 (air discharge)

±4 kV according to EN 61000-4-2 (contact discharge)

Chemical resistance

No physical or performance changes in:

- 168h Motor oil exposure
- 48h Salt water (salinity 10%) exposure
- 48h Sulfuric acid (10%, pH 2) exposure
- 48h NaOH (10%, pH 13) exposure

Generally good resistance with moderate concentrations of acids, alcohols, alkalis, detergents and cleaners.

Acetone should be avoided

Expected lifetime

Up to 5 years (depending on operating mode)**

** Beacon lifetime in nominal mode is optimized for long term use, and is highly affected by operating mode parameters and ambient temperature. Configured TX power level and advertisement interval have influence on lifetime.

Values in the table are the best recommendations; resistance against environmental conditions depends on the combination of all influencing factors, exposure duration and chemical concentrations. Thus, product's final suitability for certain environmental conditions is recommended to be tested. Contact Confidex for more specific information.



Confidex Viking™ supports following Eddystone™ frame types:

Eddystone™-UID frame broadcasts 16-byte Beacon ID composed of a 10-byte namespace and a 6-byte instance.

Eddystone™-URL frame broadcasts a URL using a compressed encoding format.

Eddystone™-TLM frame broadcasts telemetry information as temperature.

Eddystone™-EID frame broadcasts and encrypted ephemeral identifier that changes periodically. Eddystone™-EID frame operating mode requires service for resolving the ephemeral ID. Please contact Confidex for more information.

INSTALLATION INSTRUCTIONS

Confidex Viking™ can be attached with several fixing methods:

1. Mechanical fixing – Screw

Mechanical fixing is recommended to be used in every application that includes risk for high mechanical stress or low temperature during tag fixing. Screw size M5 is to be used for fixing.

2. Mechanical fixing – Cable tie



Plastic or metallic cable ties can also be used for fixing Confidex Viking™. Maximum width of cable tie is 4 mm.

3. High performance acrylic adhesive (optional)

When background adhesive is ordered the tag is delivered with adhesive attached. When mounting the tag with its adhesive background, clean and dry the surface for obtaining the maximum bond strength. Ideal application temperature is from +21°C to +38°C (+70°F to +100°F), bond strength can be improved with firm application pressure and moderate heating from +38°C to +54°C (+100°F to +130°F). Installation at temperatures below +10°C (+50°F) is not recommended.

ORDER INFORMATION

Product number: 3002063

Product name: Confidex Viking™

Availability: Please contact Confidex Smart Industries Sales at www.confidex.com/contact-us

For additional information and technical support, please contact Confidex Ltd.

DISCLAIMER

THE MATERIALS, PRODUCTS AND SERVICES ARE SOLD SUBJECT TO ITS STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, CONFIDEX MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN CONFIDEX STANDARD CONDITIONS OF SALE, CONFIDEX AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.

Each user bears full responsibility for making its own determination as to the suitability of Confidex products, materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished systems incorporating Confidex products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Confidex.



PRODUCT DATASHEET

Confidex Viking Tough™



Reliable extra durable industrial beacon for identifying, sensing and locating applications.

ELECTRICAL SPECIFICATION

Device type

Beacon based on Bluetooth Low Energy chipset

Air interface protocol

Bluetooth 4.2

Compatible with Wirepas Connectivity

NFC: ISO/IEC 14443A

Compliance

FCC-ID: 2AMK9-CFXBLE-1

Operational frequency

ISM: 2.45 GHz

NFC: 13,56 MHz

SOC

Nordic Semiconductor NRF52832

Memory configuration

512 kB FLASH, 64 kB RAM

Configuration interface

NFC interface for fast deployments and configuration

Sensor

Built-in temperature sensor; other sensors by request

Sensitivity

-96 dBm sensitivity (Bluetooth Low Energy)

Read range*

Up to 200 m / 650 ft

Battery type

2 x CR2477 coin battery for maximal lifetime

Applicable surface materials

Can be attached to any surface

* Read ranges are measured in laboratory environment and there can be some variation in real application.

MECHANICAL SPECIFICATION

Encapsulation materials

Polyurethane coating

Weight

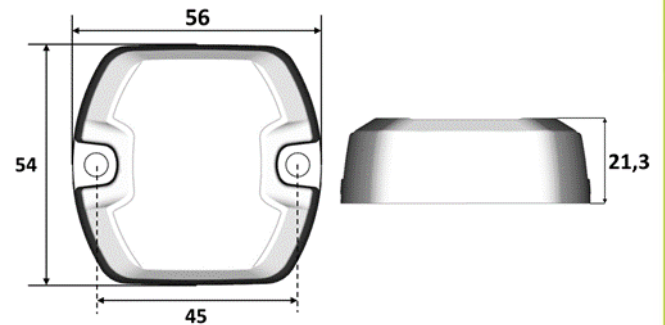
70 g

Delivery format

Single

Tag dimensions

56 x 54 x 21,3 mm / 2.20 x 2.13 x 0.84 in



ENVIRONMENTAL RESISTANCE

Operating temperature

-20°C to +60°C / -4°F to +140°F

Water resistance

Good, tested 5 hours in 1m deep water (IP68)

Vibration resistance

JESD22-B103B, service condition 1; 3-axis vibration with 20G acceleration

ESD immunity

±8 kV according to EN 61000-4-2 (air discharge)

±4 kV according to EN 61000-4-2 (contact discharge)

Chemical resistance

No physical or performance changes in:

- 168h Motor oil exposure
- 48h Salt water (salinity 10%) exposure
- 48h Sulfuric acid (10%, pH 2) exposure
- 48h NaOH (10%, pH 13) exposure

Generally good resistance with moderate concentrations of acids, alcohols, alkalis, detergents and cleaners.

Acetone should be avoided

Expected lifetime

Up to 60 months (depending on operating mode)**

** Beacon lifetime in nominal mode is optimized for long term use, and is highly affected by operating mode parameters and ambient temperature. Configured TX power level and advertisement interval have influence on lifetime.

Values in the table are the best recommendations; resistance against environmental conditions depends on the combination of all influencing factors, exposure duration and chemical concentrations. Thus, product's final suitability for certain environmental conditions is recommended to be tested. Contact Confidex for more specific information.



Confidex Viking Tough™ supports following Eddystone™ frame types:

Eddystone™-UID frame broadcasts 16-byte Beacon ID composed of a 10-byte namespace and a 6-byte instance.

Eddystone™-URL frame broadcasts a URL using a compressed encoding format.

Eddystone™-TLM frame broadcasts telemetry information as temperature.

Eddystone™-EID frame broadcasts and encrypted ephemeral identifier that changes periodically. Eddystone™-EID frame operating mode requires service for resolving the ephemeral ID. Please contact Confidex for more information.

INSTALLATION INSTRUCTIONS

Confidex Viking Tough™ can be attached with several fixing methods:

1. Mechanical fixing – Screw

Mechanical fixing is recommended to be used in every application that includes risk for high mechanical stress or low temperature during tag fixing. Screw size M5 is to be used for fixing.

2. Mechanical fixing – Cable tie

Plastic or metallic cable ties can also be used for fixing Confidex Viking Tough™. Maximum width of cable tie is 4 mm.



3. High performance acrylic adhesive (optional)

When background adhesive is ordered the tag is delivered with adhesive attached. When mounting the tag with its adhesive background, clean and dry the surface for obtaining the maximum bond strength. Ideal application temperature is from +21°C to +38°C (+70°F to +100°F), bond strength can be improved with firm application pressure and moderate heating from +38°C to +54°C (+100°F to +130°F). Installation at temperatures below +10°C (+50°F) is not recommended.

ORDER INFORMATION

Product number: 3002061

Product name: Confidex Viking™ Tough

Availability: Please contact Confidex Smart Industries Sales at www.confidex.com/contact-us

For additional information and technical support, please contact Confidex Ltd.

DISCLAIMER

THE MATERIALS, PRODUCTS AND SERVICES ARE SOLD SUBJECT TO ITS STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, CONFIDEX MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN CONFIDEX STANDARD CONDITIONS OF SALE, CONFIDEX AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN.

Each user bears full responsibility for making its own determination as to the suitability of Confidex products, materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished systems incorporating Confidex products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Confidex.

