

PRODUCT DATASHEET

Confidex Ironside Micro™



On-metal tag with square inch foot print for various metal asset tracking applications.

ELECTRICAL SPECIFICATION

Device type

Class 1 Generation 2 passive UHF RFID transponder

Air interface protocol

EPCGlobal Class1 Gen2 ISO 18000-6C

Operational frequency

Global 865-928MHz

EU 865-869 MHz

US 902-928 MHz

IC type

Global:

Impinj Monza 4QT™

Impinj Monza 4E™ (upon special request)

EU & US:

Alien Higgs 3™ (upon special request)

Memory configuration

With Monza 4QT: EPC 128 bit; User 512 bit; TID 96 bit

With Monza 4E: EPC 496 bit; User 128 bit; TID 96 bit

With Higgs 3: EPC 96-496 bit; User 64-512 bit; TID 96 bit

EPC memory content

Unique number encoded as a default

Read range (2W ERP)*

Global version:

EU up to 5 m / 16 ft

US up to 4 m / 13 ft

EU version up to 7 m / 23 ft

US version up to 6,5 m / 21 ft

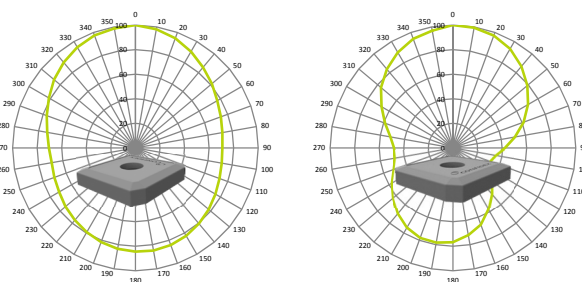
Applicable surface materials*

Works on any material

* Read ranges are theoretical values that are calculated for non-reflective environment, in where antennas with optimum directivity are used with maximum allowed operating power according to ETSI EN 302 208 (2W ERP). EU = 865 - 868 MHz, US = 902 - 928 MHz. Informed values are measured on metal.

RADIATION PATTERNS

On metal



MECHANICAL SPECIFICATION

Tag materials

High quality engineering plastics

Weight

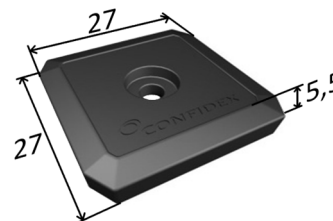
4,3 g

Delivery format

Single, 500pcs in box

Dimensions

27 x 27 x 5,5 mm / 1.06 x 1.06 x 0.22 in



ENVIRONMENTAL RESISTANCE

Operating temperature

-35°C to +85°C / -31°F to +185°F

Ambient temperature

-35°C to +85°C / -31°F to +185°F

IP classification

IP68

Chemical resistance

No physical or performance changes in:

Global version:

- 168h Motor oil exposure

- 168h Salt water (salinity 10%) exposure

- 5h Sulfuric acid (10%, pH 2) exposure

- 1h NaOH (10%, pH 13) exposure

- Acetone, contact should be avoided

EU & US versions:

- 168h Motor oil exposure

- 1h Salt water (salinity 10%) exposure

- 1h Sulfuric acid (10%, pH 2) exposure

- 1h NaOH (10%, pH 13) exposure

- Acetone, contact should be avoided

Expected lifetime

Years in normal operating conditions

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.

PERSONALIZATION OPTIONS

Pre-encoding

- Customer specific encoding of EPC or user memory. Locking permanently or with password.

Customized data label

- Customer specific layout including logo, text, numbers, barcodes etc.

Customized laser engraving

- Customer specific layout including logo, text, numbers, barcodes etc.

Note that polarization of Confidex Ironside Micro™ is in 45° angle to the Confidex logo like shown in following picture.



To achieve the optimal performance please locate the tag on metal like shown below. Ideally the tag is placed on large even metal surface with direct metal contact underneath the whole tag.



INSTALLATION INSTRUCTIONS

Confidex Ironside Micro™ can be attached with several fixing methods:

1. 3M 300LSE high performance acrylic adhesive (not included by default)

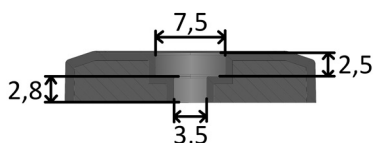
When background adhesive is ordered the tag is delivered with adhesive attached. When mounting the tag with its adhesive background, clean and dry the surface for obtaining the maximum bond strength. Ideal application temperature is from +21°C to +38°C (+70°F to +100°F), bond strength can be improved 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.

2. Other adhesive fixings
 - Polyurethane adhesives
 - Epoxies
 - Silicone sealants

Silicone sealants like Dow Corning AS 7096 provide very high bond strength and resistance against mechanical stress. When tag is attached with sealant adhesive, insert a layer of sealant under the tag and press the tag on the surface. Increase the bond by adding extra sealant from the tag holes. Insert maximum 2mm layer of adhesive under the tag. Please refer to silicone sealant supplier for exact fixing instructions.

3. Mechanical fixing
 - Screws (size M3)
 - Pop rivets
 - Plastic rivets (size 3mm)

Mechanical fixing is recommended to be used in every application that includes risk for high mechanical stress or low temperature during tag fixing. During fixing make sure there is no air gap left in between the metal surface and tag.



ORDER INFORMATION

- Product number:** 3000448
Product name: Confidex Ironside Micro™ Global M4QT
- Product number:** 3000594
Product name: Confidex Ironside Micro™ Global M4QT ATEX

Following products are available upon special request:

- Product number:** 3000449
Product name: Confidex Ironside Micro™ Global M4E
- Product number:** 3000261
Product name: Confidex Ironside Micro™ ETSI Higgs3
- Product number:** 3000262
Product name: Confidex Ironside Micro™ FCC Higgs3

For other versions, additional information and technical support contact Confidex Ltd.

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