

PRODUCT DATASHEET

Confidex Ironside Micro™

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1. PRODUCT DESCRIPTION

Confidex Ironside Micro is a tag solution for returnable transit items and industrial assets that face varying weather conditions and rough handling. Due to its compact size, Ironside Micro fits into smaller slots than the most tags which are designed to be used in the same applications.

Like the industry benchmark Confidex Ironside, the new and smaller Ironside Micro is tuned for metal use and brings excessive level of robustness against the demanding requirements of industrial and retail tracking applications. Ironside Micro encapsulation is IP68 level and it requires only approx. square inch area. Read range comes up to 4 meters with maximum allowed reader power.

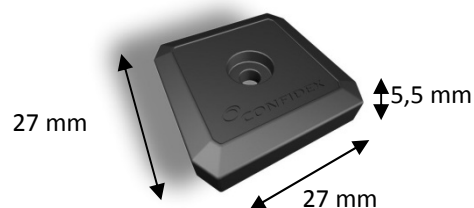
1.1 SPECIFICATION DATA

Device type	Class 1 Generation 2 passive UHF RFID transponder
Air interface protocol	EPCGlobal Class1 Gen2 ISO 18000-6C
Operational frequency	865-869 MHz (EU), 902-928MHz (US), 952-955 MHz (JPN)
IC options	Alien Higgs3
EPC memory	96 bit
EPC memory content	Unique number encoded as a default
Extended memory	512 bit
Read range	up to 4 m / 20-23 ft, reader power 2W ERP (dependent on application)
Applicable surface materials	Metal surfaces
Encapsulation material	Impact resistant plastics
Delivery format	Single
Amount in box	To be defined
Product is RoHS compliant	

1.2 DIMENSIONS

**General dimensions
(Width x Height x
Thickness)**

27 x 27 x 5,5 mm / 1,06 x 1,06 x 0,22 inch



1.3 ELECTRICAL PERFORMANCE

Read range on metal (2W ERP)	3-4 m / 9,8-13 ft
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*Read ranges may vary depending on the used frequency and reader power.

1.4 RESISTANCE AGAINST ENVIRONMENTAL CONDITIONS*

Typically values are valid for all tag versions. If not, applicable IC versions are marked

Operating temperature	-20°C to +80°C / -4°F to +176°F
Ambient temperature	-20°C to +80°C / -4°F to +176°F
IP classification	IP68: - Complete protection against dust - Protection against continuous immersion in water (tested for 5 hours in 1 m [3.3 in] depth)
Weather ability	Good
Impact resistance	Good
Chemical resistance	Good
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.

1.5 SUPPORTING COMPONENTS

3M background adhesive

Purpose	High performance adhesive for attaching Ironside Micro on metal surfaces. Suitable for applications without shear forces pointing towards the tag and when tag application is done indoors.
Advantages	Quick and simple attachment method without additional tools
Size	Die-cut according to the tag shape
Type	3M 300LSE High performance acrylic adhesive
Delivery format	Attached to the tag

1.6 SUPPORTED SERVICES

There are several personalization options available for Confidex Ironside Micro in order to “fine tune” the tag to match with the application requirements:

- Pre-encoding
- Data label

1.7 POSSIBLE APPLICATIONS

Metal surfaces	Metal returnable transit items, metal containers, metal pallets, high value items, aerospace applications, etc.
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2. INSTALLATION INSTRUCTIONS

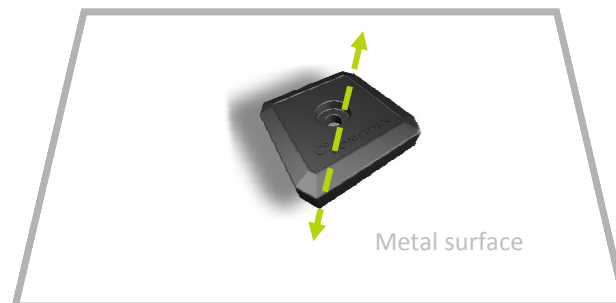
2.1 TAG PLACEMENT

Ironside Micro tag polarization is in 45 degrees angle to the Confidex text (see the picture below).

In order to achieve the optimum performance Ironside Micro must be placed on metal surface without covering its front side.

When selecting the location on metal surface, ensure the following:

- Select an even surface so that there is direct metal contact underneath the whole tag.
- For optimum performance, there should be metal area equal to tag area all around the tag (see the picture below).



2.2 TAG FIXING METHODS

Mechanical fixing

Mechanical fixing ensures the best and most reliable grip in various use conditions. It's recommended to be used in every application that includes risk for high mechanical stress or low temperature during tag fixing. Ironside Micro can be attached mechanically with:

- Screws (size M3)
- Plastic (size 3 mm)

During fixing, make sure that there's no air gap left in between the tag and metal surface.

Adhesive fixing

- Silicone sealants
- 3M 300LSE acrylic adhesive

Silicone sealant adhesives like Dow Corning AS 7096 provide very high bond strength and resistance against mechanical stress. Usually, fixing must be done indoors in room temperature and in 50% humidity. Total curing time can be several days.

Procedure: When fixing the tag 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 max. 2mm layer of sealant under the tag and to the tag holes.**

Please refer silicone sealant supplier for exact product specifications.

3M adhesive: When mounting the tag with its adhesive background, clean and dry the surface for obtaining the maximum bond strength. Remove the liner and place the tag on the correct location. 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). Application at temperatures below 10°C (50°F) is not recommended. Due to adhesive properties, the tag should be placed on even surface.

3. ORDER INFORMATION

Product number	Product name
3000261	Ironside Micro ETSI Higgs3
3000262	Ironside Micro FCC Higgs3
3000263	Ironside Micro JPN Higgs3

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