

## Micro-iN



### Functional Specifications

|                                       |  |
|---------------------------------------|--|
| RF air protocol                       | EPC Class 1 Gen 2; ISO18000-6C               |
| Operating frequency                   | UHF 902-928 MHz (US); 866-868 MHz (EU)       |
| IC type                               | Alien Higgs-3                                |
| Memory configuration                  | 96-bit EPC ; 512-bit user memory; 64-bit TID |
| Functionality                         | Read / write (user programmed)               |
| Memory – expected read / write cycles | 100,000 cycles at 77°F (25°C)                |
| Data retention                        | Up to 50 years <sup>1</sup>                  |
| Read rate                             | 400 tags per second for 96-EPC bit number    |
| Warranty (limited)                    | 1 year                                       |

### Performance Characteristics

|   |                   |
|---|-------------------|
| Read range in metal (2W ERP) <sup>2</sup> | Up to 20 ft (6 m) |
| Polarization                              | Linear            |

### Physical Specifications

|          |         |
|----------|---------|
| Material | Ceramic |
| Color    | White   |

### Environmental and Industry Compliance

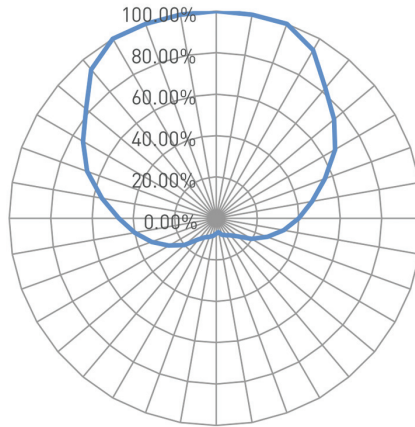
|      |                         |
|------|-------------------------|
| RoHS | EU Directive 2002/95/EC |
| ATEX | ATEX Compliant          |



<sup>1</sup> The chip data retention is based on chip operating under general environment conditions.

<sup>2</sup> Actual read range may vary based upon use case and antenna power.

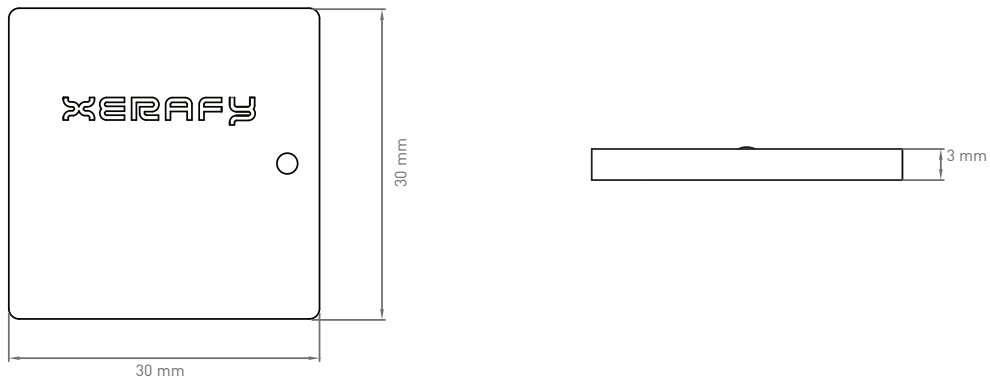
## Radiation Pattern



## Operational and Environmental Specifications

|  |   |
|--|---|
| Operational temperature                |   |
| Cold                                   | -22°F (-30°C)                                   |
| Dry heat (Long term, days/weeks/years) | +185°F (+85°C)                                  |
| Thermal shock                          | -22°F to 185°F (-30°C to +85°C); cycled         |
| Peak temperature                       |   |
| Cold                                   | -40°F (-40°C)                                   |
| Dry heat (Short term, minutes/hours)   | +302°F (+150°C)                                 |
| Humidity                               |   |
| Operational humidity                   | 5%-95% non-condensing                           |
| Storage humidity                       | 5%-95% non-condensing                           |
| Shock (drop)                           | 3 ft (1 m) to concrete/granite up to 200 cycles |
| Vibration                              | MIL-STD-810F                                    |
| Compression strength                   | Packaging dependent                             |
| IP classification                      | IP 68   |

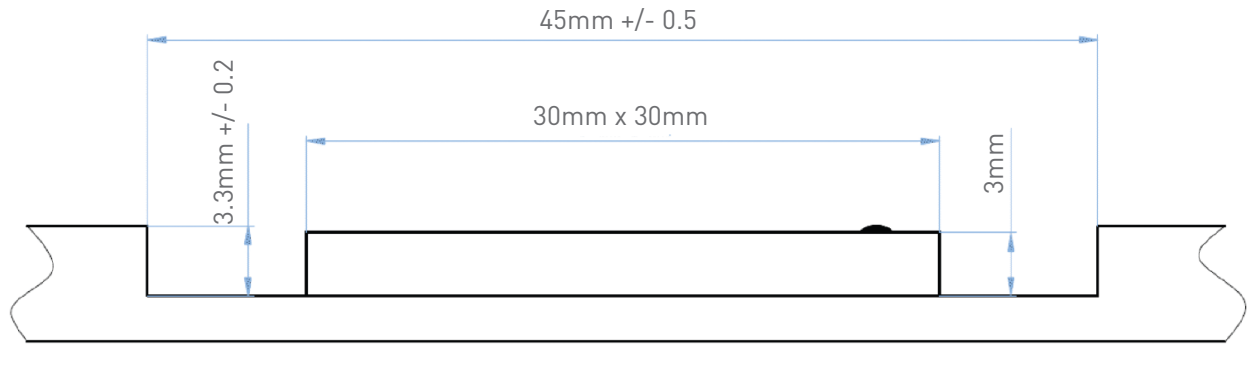
## Product Dimensions and Weight



|                 |                    |
|-----------------|--------------------|
| Dimensions (mm) | 30 x 30 x 3        |
| tolerance       | +/- 0.3            |
| Dimensions (in) | 1.18 x 1.18 x 0.12 |
| tolerance       | +/- 0.014          |
| Weight          | 0.49 oz (14 g)     |

## Cylindrical Socket Dimensions for Flush-mounting

|  |                                  |
|--|----------------------------------|
| Cylindrical socket dimensions / tolerance (mm) | 45(+/- 0.5) x 3.3(+/- 0.2)       |
| Cylindrical socket dimensions / tolerance (in) | 1.77(+/- 0.02) x 0.13(+/- 0.008) |



## Order information

|                |             |
|----------------|-------------|
| X0230-US000-H3 | Micro iN US |
| X0230-EU000-H3 | Micro iN EU |