

## Nano<sup>X</sup> II



### 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                        | 50 years <sup>1</sup>                        |
| Read rate                             | 400 tags per second for 96-EPC bit number    |
| Warranty (limited)                    | 1 year                                       |

### Performance Characteristics

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

### Physical Specifications

|                 |                                 |
|-----------------|---------------------------------|
| Material        | Engineering-grade nylon polymer |
| Mounting system | High performance adhesive       |
| Color           | Charcoal                        |

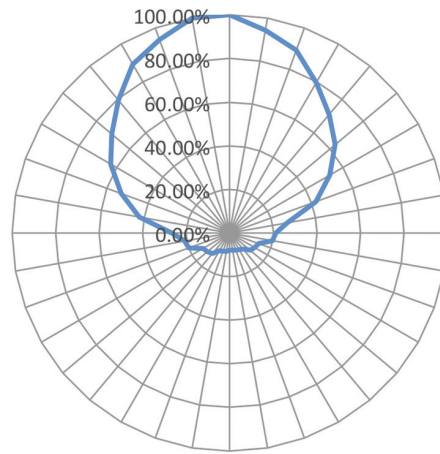
### Environmental and Industry Compliance

|      |                         |
|------|-------------------------|
| 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.

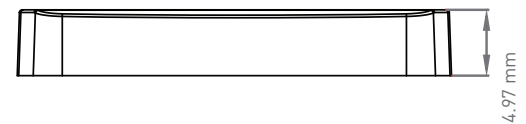
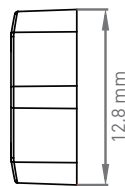
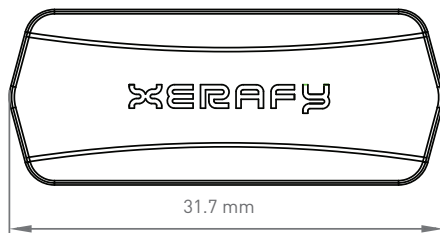
<sup>2</sup> Actual read range may vary based upon use case and antenna power.



**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         |
| Application 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                   | 166.8 psi (1150 kPa)                            |
| IP classification                      | IP68  |

**Product Dimensions and Weight**



|                 |                    |
|-----------------|--------------------|
| Dimensions (mm) | 31.7 x 12.8 x 4.97 |
| tolerance       | +/- 0.35           |
| Dimensions (in) | 1.25 x 0.51 x 0.20 |
| tolerance       | +/- 0.014          |
| Weight          | 0.18 oz (5 g)      |

**Order information**

|                |             |
|----------------|-------------|
| X1120-US101-H3 | Nano XII US |
| X1120-EU101-H3 | Nano XII EU |