








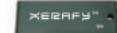








# Product Guide

| Series                       | Rugged Line   |  |   |   |   | Versatile On and Off Metal Line  |  |  |   |   |   |
|------------------------------|---|--|---|---|---|--|--|--|---|---|---|
|                              | X II / Pico Plus Series   |  |   | XS Series   |   | Trak Series  |  |  |   |   |   |
| Product                      |              |                     |    |  |  |                         |                         |                                 |  |  |  |
| Operating frequency          | 902-928 MHz [US]<br>866-868 MHz [EU]  | 902-928 MHz [US]<br>866-868 MHz [EU]   | 902-928 MHz [US]<br>866-868 MHz [EU]  | 902-928 MHz [US]<br>866-868 MHz [EU]  | 902-928 MHz [US]<br>866-868 MHz [EU]  | 902-928 MHz [US]<br>866-868 MHz [EU]   | 902-928 MHz [US]<br>866-868 MHz [EU]   | 902-928 MHz [US]<br>866-868 MHz [EU]   | 902-928 MHz [US]<br>866-868 MHz [EU]  | 860-960 MHz [Global]  | 860-960 MHz [Global]  |
| IC type                      | Alien Higgs-3   | Alien Higgs-3  | Alien Higgs-3   | Alien Higgs-3   | Alien Higgs-3   | Impinj Monza R6-P  | Alien Higgs-3  | Alien Higgs-3  | Impinj Monza 4E   | Impinj Monza 4QT  | Alien Higgs-3   |
| Memory configuration         | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                           | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                                  | 96 EPC bits, extensible to 480 bits (512 bits user memory), 64-bit TID              | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID               | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID               | 128 EPC bits, 32-bit user memory, 48-bit TID; Max user memory 64-bit, 48 TID, 96 EPC bits                  | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID  | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID  | 48-bit serialized TID, 496 EPC bits, 128-bit user memory                            | 128-EPC bits; 512-bit user memory   | 96-bit EPC, 512-bit user memory, 64-bit TID   |
| Read range on metal (2W ERP) | Up to 33 ft (10 m)  | Up to 20 ft (6 m)  | Up to 10 ft (3 m)   | Up to 6.6 ft (2 m)  | Up to 5 ft (1.5 m)  | Up to 65 ft (20 m)   | Up to 39 ft (12 m)   | Up to 26 ft (8 m)  | Up to 14.8 ft (4.5 m)   | Up to 8 ft (2.5 m)  | Up to 6.5 ft (2 m)  |
| Read range off metal         | Limited   | Limited  | Limited   | Limited   | Limited   | Up to 39 ft (15 m)   | Up to 20 ft (6 m)  | Up to 13 ft (4 m)  | Up to 8 ft (2.5 m)  | Up to 6 ft (1.8 m)  | Up to 4.9 ft (1.5 m)  |
| Case material                | Engineering grade nylon polymer   | Engineering grade nylon polymer  | Engineering grade nylon polymer/ Ceramic  | Ceramic   | Ceramic   | Anti-UV Industry Grade Polymer   | Anti-UV Industry Grade Polymer   | Anti-UV Industry Grade Polymer   | Polycarbonate   | Polycarbonate   | FR4   |
| Mounting system              | Rivet hole, ø 0.12 in (3.2 mm); adhesive (optional)   | High performance adhesive  | High performance adhesive   | Epoxy   | Epoxy   | Rivet hole, ø 1/4" M6, adhesive (optional) Cable tie, Metal Insert (optional)                              | Rivet hole, ø 0.14 in (3.5 mm); adhesive (optional)  | High performance adhesive/Rivet hole, ø 0.14 in (3.5 mm); adhesive (optional)                                      | Adhesive; built-in ø 0.1 in (2.6 mm) tethering hole                                 | Adhesive; built-in ø 0.1 in (2.6 mm) tethering hole                                 | Adhesive (TESA 51972), epoxy (optional)   |
| Operating temperature        | -40°F to +185°F (-40°C to +85°C)  | -22°F to +185°F (-30°C to +85°C)   | -22°F to +185°F (-30°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  |
| Application temperature      | -40°F to +482°F (-40°C to +250°C)   | -40°F to +302°F (-40°C to +150°C)  | -40°F to +302°F (-40°C to +150°C)   | -40°F to +302°F (-40°C to +150°C)   | -40°F to +302°F (-40°C to +150°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  | -40°F to +302°F (-40°C to +150°C)   |
| Compression strength         | 181 psi (1250 kPa)  | 166.8 psi (1150 kPa)   | 174 psi (1200 kPa) / 170 psi (1176 kPa)   | 790 psi (5447kPa)   | 790 psi (5447kPa)   | 29 psi (200 kPa)   | 29 psi (200 kPa)   | 26.1 psi (180 kPa)   | 14.5 psi (100 kPa)  | 14.5 psi (100 kPa)  | 106 psi (731 kPa)   |
| IP classification            | IP68  | IP68   | IP68  | IP68  | IP68  | IP68   | IP68   | IP68/IP54  | IP54  | IP54  | IP68  |
| Dimensions                   | 2.01 x 1.43 x 0.30 in (51 x 36.3 x 7.5 mm)  | 1.25 x 0.51 x 0.20 in (31.7 x 12.8 x 4.8 mm)   | 0.70 x 0.43 x 0.2 in (17.7 x 10.9 x 5 mm) / 0.47 x 0.28 x 0.13 in (12 x 7 x 3.2 mm) | 0.48 x 0.12 x 0.09 in (12.3 x 3 x 2.2 mm)   | ø 0.24 x 0.1 in (ø 6 x 2.5 mm)  | 5.46x 4.99 x 0.47 in (138.8 x 42 x 12 mm)  | 3.94 x 1.02 x 0.35 in (100 x 26 x 8.9 mm)  | 2.88 x 0.9 x 0.33 in (73.3 x 22.8 x 8.3 mm) / 1.98 x 0.67 x 0.21 in (50.3 x 17 x 5.3 mm)                           | 1.50 x 0.51 x 0.16 in (38 x 13 x 4 mm)  | 1.50 x 0.51 x 0.16 in (38 x 13 x 4 mm)  | 2.22 x 0.234 x 0.051 in (56.5 x 5.95 x 1.3 mm)                                      |
| Weight                       | 0.92 oz (26 g)  | 0.18 oz (5 g)  | 0.07 oz (2 g) / 0.05 oz (1.4 g)   | 0.016 oz (0.44 g)   | 0.012 oz (0.34 g)   | 1.45 oz (41 g)   | 0.62 oz (17.8 g) / 0.61 oz (17.2 g)  | 0.39 oz (11 g) / 0.11 oz (3 g)   | 0.08 oz (2.3 g)   | 0.09 oz (2.6 g)   | 0.035 oz (1 g)  |
| Suggested applications       | Bulk container tracking, vehicle tracking, post-paint oven baking, medical equipment tracking | Tool tracking, WIP conveying equipment, IT/telecom management, instrument tracking, weapons tracking | Tool tracking, weapon tracking, medical device management, instrument tracking      | Instrument tracking, tool tracking, medical device management, source tagging     | Instrument tracking, tool tracking, medical device management, source tagging     | Outdoor using, Vehicle chassis and trailer tracking, Unit Load Device identification, logistics management | Outdoor using, Vehicle chassis and trailer tracking, Unit Load Device identification, logistics management | Unit Load Device identification, logistics management pallet tracking, RTI management, storage rack identification | IT asset management, Datacenter servers, Healthcare equipment                       | Global supply chain logistics, IT asset management, datacenter servers              | IT server rack, military asset & weapon tracking, tool tracking                     |

Products marked with an asterisk(\*) are available in autoclavable version.

# Product Guide

| Series                        | Embeddable Line for Source Tagging and Extreme Conditions   |   |  |  |   | Flexible Metal Label Line   |  |  | Specialty Tag Line  |  |  |
|-------------------------------|---|---|--|--|---|---|--|--|---|--|--|
|                               | iN Series   | XS Series   | XS Series  | XXS Series   | XXS Series  | Metal Skin™ Series  |  |  | Specialized Series  |  |  |
| Product                       | <br>Pico-iN Plus | <br>Dash-iN XS | <br>Dot-iN XS | <br>Dash XXS* | <br>Dot XXS* | <br>Mercury Metal Skin | <br>Platinum Metal Skin | <br>Titanium Metal Skin | <br>Bric | <br>Autoclavable Roswell*/<br>Roswell | <br>Xplorer |
| Operating frequency           | 902-928 MHz (US)<br>866-868 MHz (EU)  | 902-928 MHz (US)<br>866-868 MHz (EU)  | 902-928 MHz (US)<br>866-868 MHz (EU)   | 902-928 MHz (US)<br>866-868 MHz (EU)   | 902-928 MHz (US)<br>866-868 MHz (EU)  | 860-960 MHz (Global)  | 902-928 MHz (US)<br>865-868 MHz (EU)   | 902-928 MHz (US)<br>865-868 MHz (EU)   | 902-928 MHz (US)<br>866-868 MHz (EU)  | 902-928 MHz (US)<br>866-868 MHz (EU)   | 902-928 MHz (US)<br>865-868 MHz (EU)   |
| IC type                       | Alien Higgs-3   | Alien Higgs-3   | Alien Higgs-3  | Alien Higgs-3  | Alien Higgs-3   | Impinj Monza 4E   | Alien higgs4   | Impinj Monza M5  | Alien Higgs-3   | Alien Higgs-3  | Alien Higgs-3  |
| Memory configuration          | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                               | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                             | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                            | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                            | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                           | 48-bit serialized TID, 496 EPC bits, 128-bit user memory  | 128 bits user memory, 128 bits EPC, 96 bits TID  | 48-bit serialized TID, 128 EPC bits  | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                         | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID  | 96 EPC bits, extensible to 480-bit, 512-bit user memory, 64-bit TID                            |
| Read range on metal (2W ERP)  | Up to 6.6 ft (2 m) when embedded  | Up to 5 ft (1.5 m) when embedded  | Up to 3 ft (1 m) when embedded   | Up to 2 ft (0.6 m)   | Up to 1.6 ft (0.5 m)  | Up to 13 ft (4 m)   | Up to 6.6 ft (2 m)   | Up to 4 ft (1.2 m)   | Up to 19 ft (6 m)   | Up to 16.4 ft (5 m)  | 5 ft (1.5m) when embedded  |
| Read range off metal (2W ERP) | Limited   | Limited   | Limited  | Limited  | Limited   | Up to 16 ft (5 m)   | Up to 3.9 ft (1.2 m)   | Up to 4 ft (1.2 m)   | Up to 13 ft (4 m); 6.5 ft (2 m) when embedded 2 in (50 mm) in concrete                      | Limited  | Limited  |
| Case material                 | Ceramic   | Ceramic   | Ceramic  | Ceramic  | Ceramic   | Not applicable  | Not applicable   | Not applicable   | Engineering grade nylon polymer   | Stainless steel/ Aluminum 6061-T6  | Stainless steel  |
| Mounting system               | Epoxy, embedded   | Epoxy, embedded   | Epoxy, embedded  | Epoxy, embedded  | Epoxy, embedded   | High performance adhesive   | High performance adhesive  | High performance adhesive  | Mounted or embedded in concrete   | Welding, cable tie, rivet hole ø 0.19 in (ø 5 mm)  | Snap in  |
| Operating temperature         | -22°F to +185°F (-30°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   |
| Application temperature       | -40°F to +302°F (-40°C to +150°C)   | -40°F to +302°F (-40°C to +150°C)   | -40°F to +302°F (-40°C to +150°C)  | -40°F to +302°F (-40°C to +150°C)  | -40°F to +302°F (-40°C to +150°C)   | -40°F to +185°F (-40°C to +85°C)  | -40°F to +185°F (-40°C to +85°C)   | -40°F to +185°F (-40°C to +85°C)   | -40°F to +194°F (-40°C to +90°C)  | -40°F to +482°F (-40°C to +250°C)  | -58°F to +482°F (-50°C to +250°C)  |
| Compression strength          | Packaging dependent   | Packaging dependent   | Packaging dependent  | Packaging dependent  | Packaging dependent   | 92 psi (634 kPa)  | 14 psi (97 kPa)  | 58 psi (400 kPa)   | 93 psi (641 kPa)  | 1145 psi (7900 kPa)/ 115 psi (793 kPa)   | 30,000 psi (206 MPa)   |
| IP classification             | IP68  | IP68  | IP68   | IP68   | IP68  | Not applicable  | Not applicable   | Not applicable   | IP68  | IP69K  | IP69K  |
| Dimensions                    | 0.47 x 0.28 x 0.12 in (12 x 7 x 3 mm)   | 0.48 x 0.12 x 0.09 in (12.3 x 3 x 2.2 mm)   | ø 0.24 x 0.1 in (ø 6 x 2.5 mm)   | 0.26 x 0.08 x 0.08 in (6.75 x 2.08 x 2.08 mm)  | ø 0.16 x 0.10 in (ø 4.08 x 2.58 mm)   | Label: 4 x 1.5 x 0.03 in (101.6 x 38 x 0.76 mm)   | Label: 2.28 x 0.75 x 0.03 in (58 x 19 x 0.8 mm)  | Label: 1.77 x 0.22 x 0.03 in (45 x 5.6 x 0.86 mm)  | 2.75 x 1.25 x 0.43 in (70 x 32 x 11 mm)   | 1.89 x 1.10 x 0.53 in (48 x 28 x 13.5 mm)  | ø 1.11 x 0.33 in / (ø 28.3 x 8.5 mm)   |
| Weight                        | 0.05 oz (1.4 g)   | 0.016 oz (0.44 g)   | 0.012 oz (0.34 g)  | 0.004 oz (0.12 g)  | 0.012 oz (0.34 g)   | Reel: 4.85 lbs (2.2 kg)   | Reel: 3.53 lbs (1.6 kg)  | Reel: 2.54 lbs (1.15 kg)   | 0.85 oz (24 g)  | 1.55 oz / 44 g<br>0.74 oz / 21 g   | 0.89 oz (25.4 g)   |
| Suggested applications        | IT and laptop tracking, tool tracking, embedded bolt identification, weapons tracking             | Instrument tracking, tool tracking, medical device management, source tagging                   | Instrument tracking, tool tracking, medical device management, source tagging                  | Surgical instrument management, Small asset tracking, Source tagging                           | Surgical instrument management, Small asset tracking, Source tagging                          | Product authentication, IT asset tracking, global supply chain, cylinder tracking, foil-based packaging   | Housewares, electronic equipment, computer and laptops, cosmetics, foil-based packaging                    | Product authentication, IT asset and laptop tracking, radio and mobile equipment, foil-based packaging     | Facility management, logistics management, work in progress                                 | Surgical Trays, Oil & Gas Valve / Wellhead Management, Food Processing Plants, Automotive Manufacturing                  | Downhole and Surface Drill Pipes, Sub-sea Oil Pipes, BOPs and Wellheads                        |

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