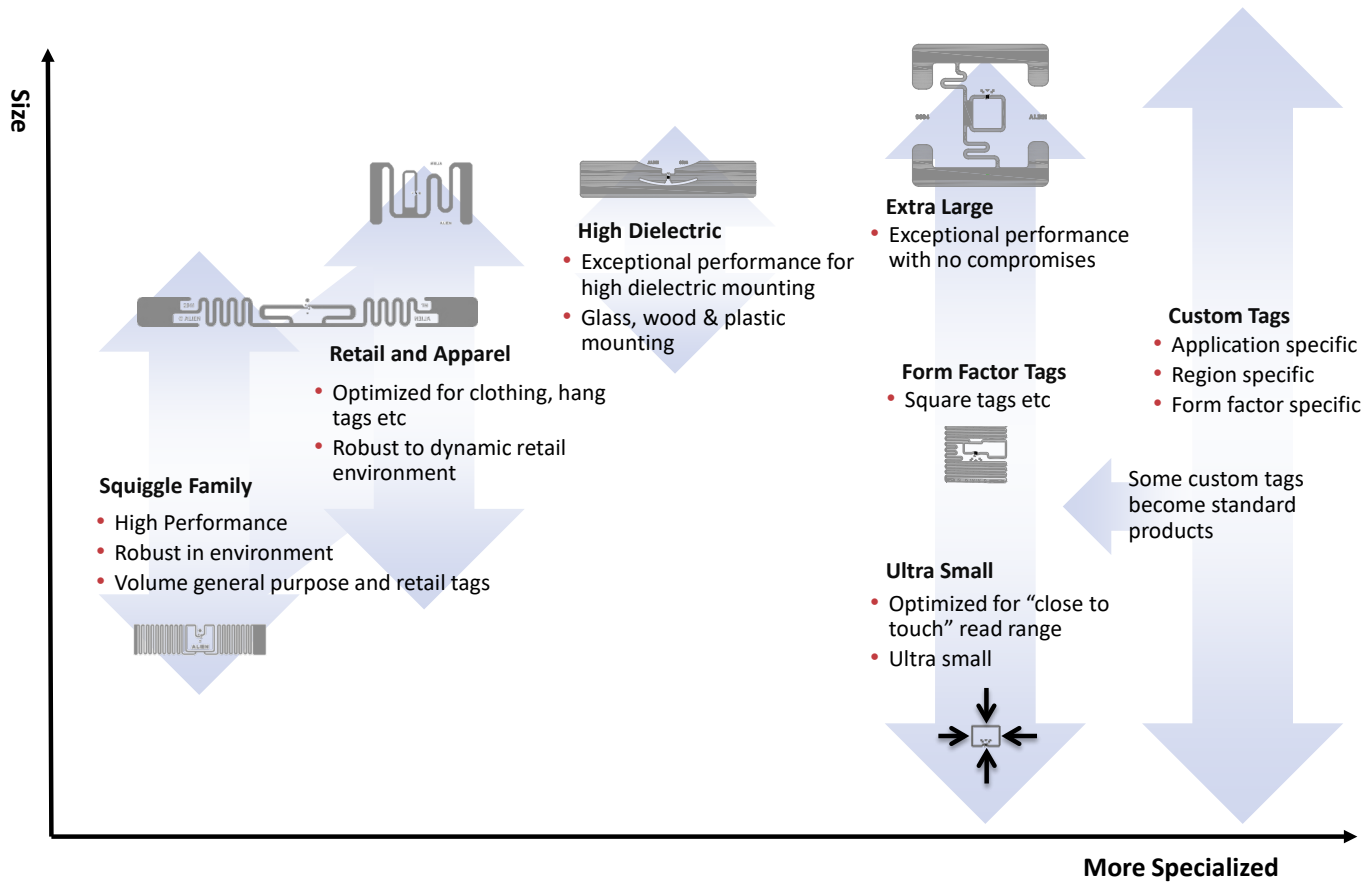




# ALIEN FAMILY OF EPC GEN 2 RFID INLAYS

Alien Technology® manufactures a range of EPC Gen 2 inlays designed to deliver optimal performance in a variety of applications.

Powered either by the larger memory **Higgs™-3 UHF RFID IC**, the volume focused **Higgs™-4** or the new **Higgs™-EC** with increased range, reliability and robustness, Alien® offers a range of RFID inlays that fit a wide variety of sizes, applications, characteristics and needs.

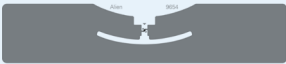





**All Alien inlays are World Tag compliant**, enabling operation across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa. Some tags are world tags with specially tuned performance for optimal behavior in certain regions. See the tag matrix on the following pages. Please refer to Alien’s Higgs-3, Higgs-4 and Higgs-EC product overviews for details on the RFID IC capabilities.

Alien has the capability to design custom tags for appropriate volume applications (under appropriate business terms) and can offer reference designs under license.



Inlays: High Dielectric Family / Automotive (Tires, Windshields)

| Product  | Higgs-3  | Higgs-4  | Higgs-EC | Antenna Size <sup>1</sup>      | Application  |
|--|----------|----------|----------|--------------------------------|--|
| G Tag (G)<br>        | ALN-9654 | N/A      | N/A      | 3.66" x 0.748"<br>93mm x 19mm  | High density plastic totes, windshields, batteries etc.  |
| BAT (BAT)<br>        | N/A      | ALN-9770 | N/A      | 3.25" x 1.25"<br>82.5mm x 32mm | Automotive batteries, fluid filled objects, plastic containers and metal filled objects.         |
| Wonder Dog™ (WD)<br> | N/A      | ALN-9768 | N/A      | 3.30" x 0.91"<br>86mm x 23mm   | General purpose, automotive metalized windshields/ head lamp and consumer electronic devices.    |
| Bio Tag (BIO)<br>  | N/A      | ALN-9714 | N/A      | 0.67" x 0.59"<br>17mm x 15mm   | Pharmaceuti-cals, Healthcare, vials/ampules, small glass objects and small liquid filled objects |

| Product          | Features  | Benefits   |
|------------------|---|--|
| G Tag (G)        | Exceptional performance for high dielectric mounting.   | Designed for use on glass, plastics, wood or other materials normally challenging for RF.  |
| BAT (BAT)        | Highly tuned for read rates and distances when amongst metal/water based objects contained in plastics, glass etc           | Designed for high read and write performance when applied to thin high-dielectric materials especially when these dielectrics contain challenging materials like metal and water based fluids.   |
| Wonder Dog™ (WD) | Both a good general purpose tag but also excellent near metal or fluids. Excellent with lower power readers (e.g. handheld) | Excellent general purpose high performance tag that can be also be used on metalized windshields, water filled bottles even with a low power handheld reader.  |
| Bio Tag (BIO)    | Small form factor, non-near field read tag and tuned for placement on glass containing water or oil based fluids.           | Offers read/write distances compatible with usage in pharmaceutical production facilities and handheld reader usage for logistics and supply chain. Designed to provide 30 cm / 12" or greater read distance even when applied to vials containing water based fluids. |

<sup>1</sup> Sizes are approximate. **These are inlay antenna sizes.** Tags and labels will be larger. Please refer to specific product details available on Alien's website for exact measurements - [www.alientechnology.com](http://www.alientechnology.com)



## Inlay Application Guide:

This table is a guide to assist narrowing the inlay types that may be relevant in your application. Tags should always be tested in their application but this table should help narrow that initial selection.

|                        | Squiggle Family |            |                        |            |              | Specialized Retail |            |             |             |                 | High-Dielectric / Automotive |                 |           |               | Form-factor   |           |              |          |
|------------------------|-----------------|------------|------------------------|------------|--------------|--------------------|------------|-------------|-------------|-----------------|------------------------------|-----------------|-----------|---------------|---------------|-----------|--------------|----------|
|                        | Squiggle® (SQ)  | Short (SH) | Squiglette (ST)        | Squig (SG) | Doc Tag (DT) | Glint (GL)         | Pearl (PE) | HiScan (HS) | GT-Tag (GT) | Spider-360 (SP) | BAT-Tag (BAT)                | Wonder-Dog (WD) | G-Tag (G) | Bio-Tag (BIO) | SlimLine (SL) | 2x2 (2x2) | Square (1x1) | ST (ST)  |
| Higgs™-EC Model #      | ALN-9840        | N/A        | ALN-9830               | N/A        | N/A          | N/A                | N/A        | ALN-9820    | ALN-9828    | N/A             | N/A                          | N/A             | N/A       | N/A           | N/A           | N/A       | N/A          | N/A      |
| Higgs™-4 Model #       | ALN-9740        | ALN-9762   | ALN-9730<br>ALN-9730-E | ALN-9710   | ALN-9741     | ALN-9715           | ALN-9716   | ALN-9720    | ALN-9728    | ALN-9726        | ALN-9770                     | ALN-9768        | N/A       | ALN-9714      | ALN-9745      | N/A       | N/A          | ALN-9713 |
| Higgs™-3 Model #       | ALN-9640        | ALN-9662   | ALN-9630               | ALN-9610   | N/A          | N/A                | N/A        | N/A         | N/A         | N/A             | N/A                          | N/A             | ALN-9654  | N/A           | N/A           | ALN-9634  | ALN-9629     | ALN-9613 |
| Retail                 |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Mobile Asset Tracking* |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Automotive             |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Pharma / Healthcare    |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Ultra compact          |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Wood/ Plastic/ Glass   |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Files/ Paper           |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| General Purpose        |                 |            |                        |            |              |                    |            |             |             |                 |                              |                 |           |               |               |           |              |          |
| Ref Design Available?  | Yes             | Yes        | Yes                    | Yes        | No           | Yes                | No         | No          | No          | No              | Yes                          | No              | Yes       | No            | Yes           | Yes       | Yes          | Yes      |



\* Includes Consumer Electronic Devices (TV's, STB's etc)

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HANDLING PRECAUTIONS Observe standard handling practices to minimize ESD.

DISCLAIMER Application recommendations are guidelines only - actual results may vary and should be confirmed. This is a general purpose product not designed or intended for any specific application.

This product is covered by one or more of the following U.S. patents: 7967204, 7931063, 7868766, 7737825, 7716208, 7716160, 7688206, 7659822, 7619531, 7615479, 7598867, 7580378, 7576656, 7562083, 7561221, 7559486, 7559131, 7554451, 7551141, 7542301, 7542008, 7531218, 7522055, 7500610, 7489248, 7453705, 7425467, 7417306, 7411503, 7385284, 7377445, 7364084, 7353598, 7342400, 7324061, 7321159, 7301458, 7295114, 7288432, 7266675, 7262686, 7260882, 7253735, 7244326, 7218527, 7214569, 7199527, 7193504, 7173528, 7172910, 7172789, 7141176, 7113250, 7101502, 7080444, 7070851, 7068224, 7046328, 6998644, 6988667, 6985361, 6980184, 6970219, 6952157, 6942155, 6933848, 6927085, 6816380, 6780696, 6731353, 6693384, 6683663, 6665044, 6657289, 6623579, 6606247, 6606079, 6590346, 6586338, 6566744, 6555408, 6527964, 6479395, 6468638, 6420266, 6316278, 6291896, 6281038. Other patents pending.

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