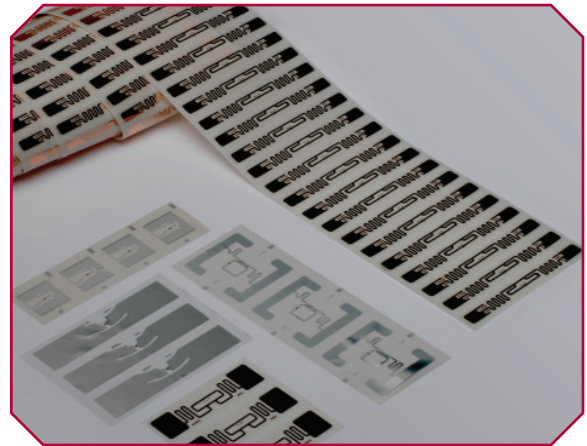




Alien® Family of EPC Gen 2 RFID Inlays

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

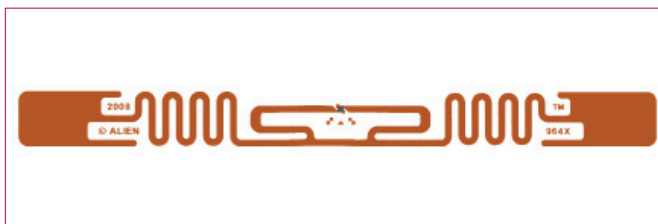
The Squiggle® (ALN-9640) is the most versatile member of Alien's inlay family, delivering industry leading range, reliability and price for a broad range of traditional and innovative new RFID applications. Complementing the Squiggle is its sibling, the "Short" (ALN-9662) which delivers similar performance in a 3" label size. The "2x2" (ALN-9634) inlay is a compact inlay that offers exceptional performance and is well suited for tagging apparel and airline baggage applications. The "G" (ALN-9654) inlay provides a high-performance solution for tagging challenging, high dielectric materials such as plastic tote bins or pallets and windshield glass. And the diminutive "Square" (ALN-9629), delivers outstanding performance in the item-tagging arena despite being the size of postage stamp.



Inlay Product Portfolio

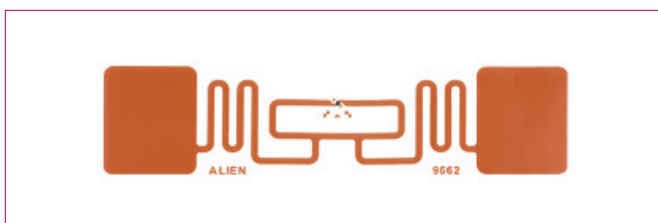
All inlays are powered by Alien's break-through 800-bit Higgs™-3 UHF RFID IC and innovative antenna designs, delivering industry leading sensitivity, performance and a rich set of features. Higgs-3 features include a 32-bit manufacturers Tag Identifier (TID), a 64-bit Unique TID for authentication and serialization applications, an extensible EPC memory bank (scalable between 16-480 bits), a scalable user memory bank (64-512-bits) useful for distributed data applications, and password protected read and write support capabilities to prevent unauthorized viewing and modification of the tag's data by unintended users. Additionally, Higgs-3 ICs include Alien's Dynamic Authentication - a challenge/response validation algorithm to authenticate Higgs-3 ICs for additional user protection.

Alien inlays are designed as World Tags, delivering global operation from 840 to 960 MHz. This enables the same inlay to be used successfully at the diverse frequencies of the Americas, Europe, Asia, and Africa. Alien World Tags allow companies to manufacture products on one continent and ship worldwide utilizing a single RFID inlay.



"Squiggle" Inlay

- › The EPC Class 1 Gen 2 price/performance benchmark.
- › Top ranking general purpose inlay achieves exceptional performance in multiple applications, including case tagging, pallet placards, apparel and baggage tags.
- › 94.8mm x 8.1mm

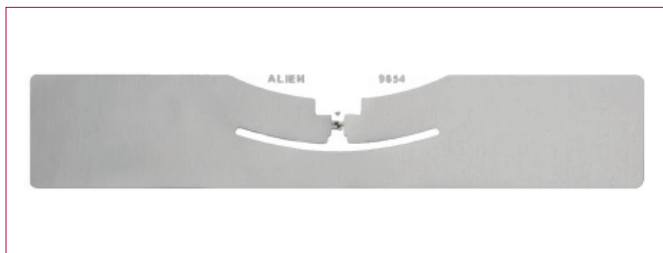


"Short" Inlay

- › Compact design delivers Squiggle level performance.
- › Superb general performance inlay for applications with geometric constraints. Great choice for apparel hang tags, cases, pallet placards, 3" labels and ISO cards.
- › 70mm x 17mm

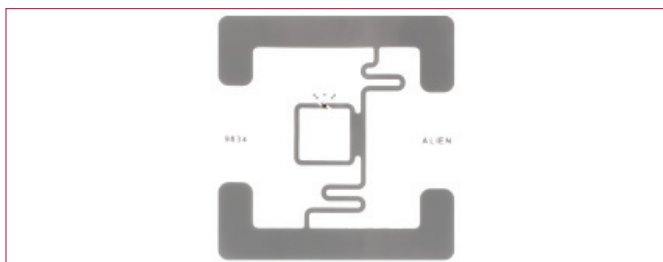


Alien Family of EPC Gen 2 RFID Inlays



"G" Inlay

- › High gain, high-performance inlay.
- › Designed for ultra-high performance in demanding applications. Excellent choice for high dielectric materials such as high density plastic totes, pallets or windshield glass.
- › 93mm x 19mm



"2x2" Inlay

- › Square design enables cost effective conversion for vertical labels.
- › A high performance inlay designed for smaller form factor applications such as apparel tags, airline baggage and plastic pharmaceutical pill bottles.
- › 44mm x 46mm



"Square" Inlay

- › Compact form factor designed for item level applications.
- › Excellent choice for small pharmaceutical or apparel hang tags.
- › 22.5mm x 22.5mm

Environmental

Shelf Life	2 Years at +77°F [+25°C]
Recommended Storage	+77°F [+25°C] / 40% RH
Storage Limits	-13°F to +122°F [-25°C to +50°C] 20% to 90% RH Non-condensing
Operating Limits	-40°F to 158°F [-40°C to +70°C] 20% to 90% RH Non-condensing
Bend Diameter	> 1.97" [50mm]
Pressure	< 5N/mm ²
Drop Resistance	Per ASTM D5276
Write Cycles	10,000
RoHs	2002/95/EC Compliant
ESD – HBM / CDM	> 5.0kV / > 1.5kV

RFID

Protocols Supported	EPCglobal Class 1 Gen 2 ISO/IEC 18000-6C
Integrated Circuit	Alien Higgs-3
EPCglobal Certificate	950110126000001084
Operating Frequency	840–960 MHz
EPC Memory	96-480 bits
User Memory	64-512 bits
TID	32-bits
Unique TID	64-bits
Access Password	32-bits
Kill Password	32-bits



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