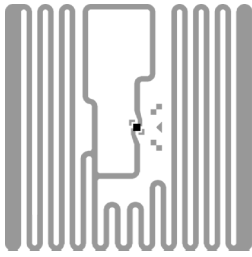




ALN-9629 SQUARE INLAY

The Alien Technology® ALN-9629 “Square” is a small form-factor, general-purpose RFID inlay, well-suited for item level tagging of apparel, pharmaceuticals, or high-value consumables where geometries are constrained.



Applications

- Apparel hang tags
- Pharmaceuticals
- Item level tagging where space is a premium

| FEATURE | DESCRIPTION | BENEFIT |
|--|---|---|
| Alien 2x2 tag performance in a smaller 1x1 form-factor | Approaches the well regarded 2x2 performance tag in a half-size form-factor | Smaller form-factor, still robust, proven, and reliable |
| Multiple frequency optimized sensitivity | Optimized for high performance in all world regions | A worldwide performance tag |

Features:

- › Compact size yet exceptional performance
- › Designed to meet EPCglobal Gen2 (V1.2.0) and ISO/IEC 18000-6C
- › Worldwide RFID UHF operation (840-960MHz)
- › Higgs™-3 IC with 800-bits of Nonvolatile Memory
 - 32-bit TID
 - 64-bit Unique TID
 - 96-bit EPC Memory, extensible to 480-bits
 - 512-bit User Memory
 - 32-bit Access password
 - 32-bit Kill password
- › Pre-programmed with a unique, unalterable 64-bit serial number (ideal for authentication)
- › User Memory can be Block Perma-Locked
- › User Memory can be Read Password protected in 64-bit blocks, prohibiting unintended Reads without an access password
- › Supports all Mandatory and Optional Gen 2 commands including item level commands
- › Custom commands for high speed programming
- › Available in high-yield, high-capacity dry/wet inlay rolls for high volume converting processes

Product Overview:

Powered by Alien®’s break-through **Higgs™3 UHF RFID IC** and **innovative antenna design**, the ALN-9629 delivers industry leading EPC Gen 2 performance and reliability in a compact form factor.

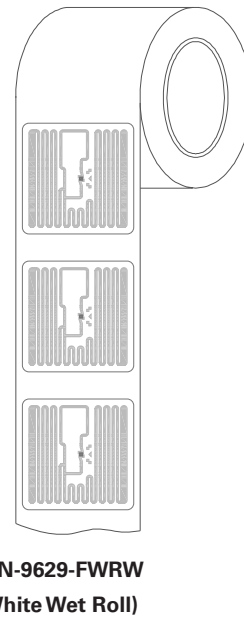
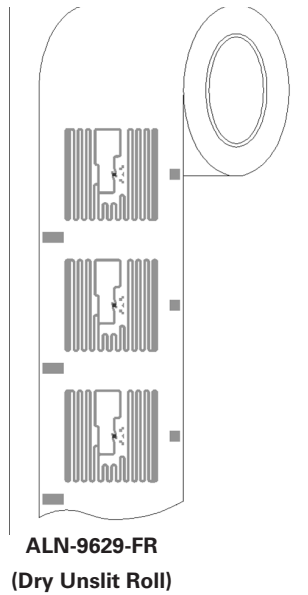
ALN-9629 inlays are World Tag compliant, enabling consistent operation across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa.

With its Higgs-3 core, the “Square” delivers exceptional performance and is especially well suited for item level applications where geometries are constrained.

The “Square” inlay comprises a rich feature set including a 32-bit TID, **a 64-bit Unique TID for authentication and serialization applications**, an **extensible EPC memory bank, 512-bits of user memory** for distributed data applications, and **password protected read and write** support capabilities to prevent unauthorized viewing and modification of the tag’s data.

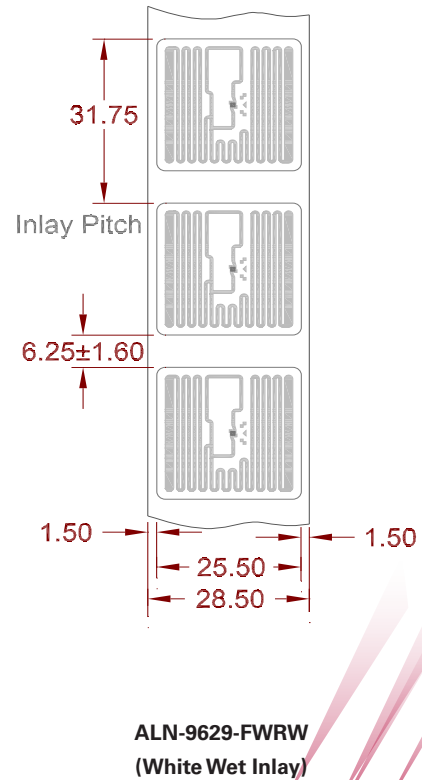
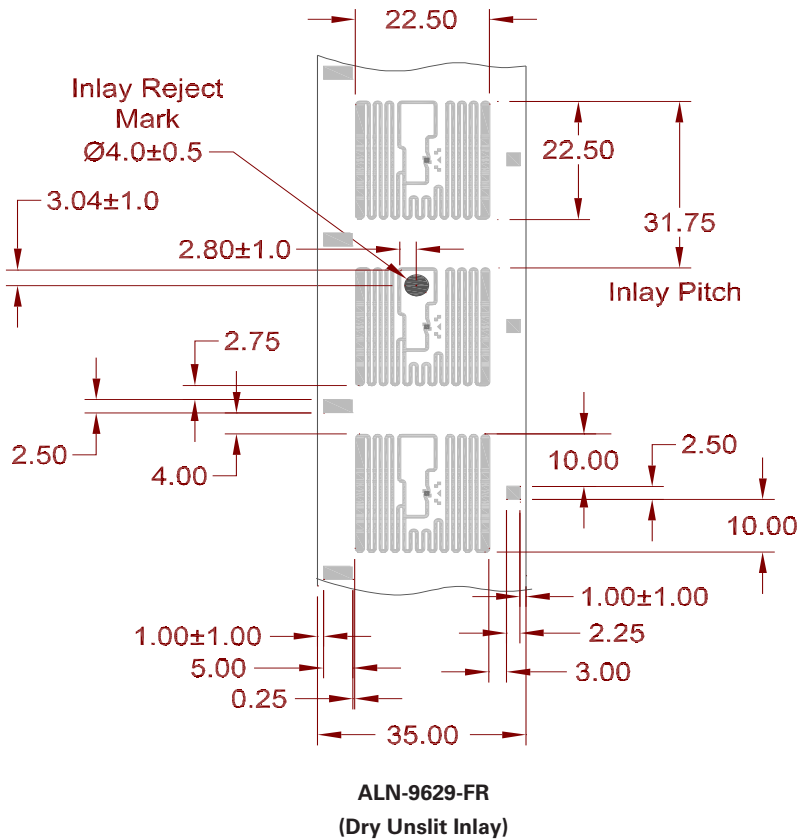


ALN-9629 Inlay Orientation



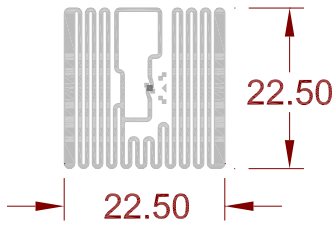
Standard Alien Inlay rolls unwind with metal antenna side facing outward, with respect to the core.

ALN-9629 Inlay Specification

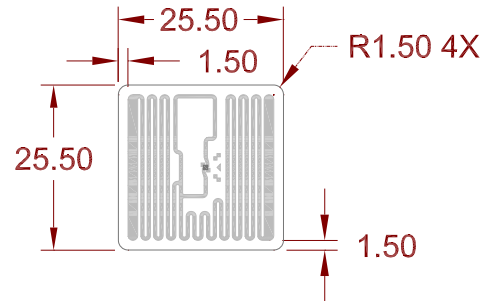




ALN-9629 Inlay General Dimensions



ALN-9629-FR
(Dry Unslit Inlay)



ALN-9629-FWRW
(White Wet Inlay)

ALN-9629 Inlay Stackup

| DRY INLAY THICKNESS, ±10% | |
|---------------------------|---------|
| OVER ANTENNA | 0.05 mm |
| OVER CHIP | 0.25 mm |

INLAY



ALN-9629-FR
(Dry Unslit Inlay)

| WHITE WET INLAY THICKNESS, ±10% | |
|---------------------------------|---------|
| OVER ANTENNA | 0.16 mm |
| OVER CHIP | 0.36 mm |



ALN-9629-FWRW
(White Wet Inlay)



ALN 9629 Square Inlay

ALN-9629 Specifications

Dry Inlay

| | |
|--------------------|------------------------------------|
| Antenna Width | 0.89" [22.5mm] |
| Antenna Length | 0.89" [22.5mm] |
| Web Width | 1.38" [35.0mm] |
| Web Pitch | 1.25" [31.75mm] |
| Core Width | 1.5" [38mm] |
| Core ID | 6.0" [152.4mm]* |
| Core Material | Fiberboard |
| Inlays per Roll | 10,000 Nominal (Two Rolls per Box) |
| Maximum Roll OD | < 12.0" [304.8mm] |
| Roll Labeling Data | Roll #, Quantity |

Wet Inlay

| | |
|----------------------------------|------------------------------------|
| Inlay Width | 1.00" [25.5mm] |
| Inlay Length | 1.00" [25.5mm] |
| Web Width | 1.12" [28.5mm] |
| Web Pitch | 1.25" [31.75mm] |
| Core Width | 1.12" [28.5mm] |
| Core ID | 6" [152.4mm]* |
| Core Material | Fiberboard |
| Inlays per Roll | 10,000 Nominal (Two Rolls per Box) |
| Maximum Roll OD | < 16.0" [406.4mm] |
| Roll Labeling Data | Roll #, Quantity |
| Overlay | TT Printable White Film Overlay |
| Overlay Adhesive | General Purpose Permanent |
| Inlay Adhesive | General Purpose Permanent |
| Adhesive Application Temperature | > +25°F [-4°C] |
| Adhesive Service Temperature | -40°F to +200°F [-40°C to +93.3°C] |
| Release Liner | 40# SCK |

Environmental

| | |
|--|---|
| Shelf Life | Dry Inlays: 5 years at +77°F [+25°C] @ 40% RH |
| | Wet Inlays: 2 years at +77°F [+25°C] @ 40% RH |
| Recommended Storage | +77°F [+25°C] @ 40% RH |
| Dry Inlay Operating and Storage Limits | -40°F to +158°F [-40°C to +70°C] 20% to 90% RH Non-condensing |
| Wet Inlay Operating and Storage Limits | -13°F to 122°F [-25°C to +50°C] 20% to 90% RH Non-condensing |
| Bend Diameter | > 1.97" [50mm] |
| Pressure | < 5N/mm ² |
| Drop Resistance | Per ASTM D5276 |
| Write Cycles | 100,000 @ 25°C |
| RoHs | 2002/95/EC, 2005/618/EC, 2011/65/EU Compliant |
| REACH | 1907/2006/EC Compliant (SVHC and ECHA) |
| ESD Limit- 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 Size | 96 - 480 Bits |
| User Memory | 512 Bits |
| TID | 32 Bits |
| Unique TID | 64 Bits |
| Access Password | 32 Bits |
| Kill Password | 32 Bits |

* Shipped with 6" to 3" plastic core adapter

March 22, 2017

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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, 7378255, 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, 7342490, 7324061, 7321159, 7301458, 7295114, 7288432, 7265675, 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, 6623599, 6606247, 6606079, 6590346, 6586338, 6566744, 6555408, 6527964, 6479395, 6468638, 6420266, 6316278, 6291896, 6281038. Other patents pending.

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