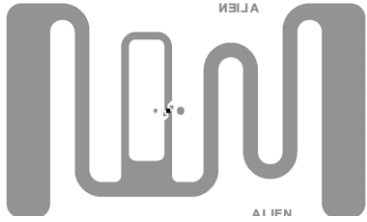


“GT” GARMENT TAG INLAY

The Alien Technology® ALN-9728 “GT” is a 30mm x 50mm RFID inlay specifically designed for high read performance in the retail and apparel markets. This tag has a form-factor especially suitable for hang-tags.



Applications

- Retail
- Apparel
- Hang-tags
- Joker tags
- Labels
- Document tracking

| FEATURE | DESCRIPTION | BENEFIT |
|--|--|---|
| 30mm x 50mm form-factor | Designed to fit the form-factor and everyday retail use cases where items are tightly packed on shelves or hangers | Extremely high read-rates in real-life, every day retail environments |
| Tuned for use in retail environments with packed shelves or hanging garments | | |
| Next generation Higgs™ 4 features and performance | A mass-market optimized tag with class leading read and write performance. Supports pre-encoded MCS serialization and Aliens <i>BlastWrite</i> ™ | Rapid programming of serialized tags and excellent read/write performance |

Features:

- › Designed to meet EPCglobal Gen2 (V 1.2.0) and ISO/IEC 18000-6C
- › Worldwide operation in the RFID UHF bands (840-960 MHz)
- › 448-Bits of NVRAM Memory
 - 128-EPC Bits
 - 128 User Bits
 - 64 Bit Unique TID
 - 32 Bit Access and 32 bit Kill Passwords
- › Pre-Programmed with a unique, unalterable 64-bit serial number
- › User Memory can be Block Perma-Locked as well as read password protected in 32 Bit Blocks
- › Class leading read and write performance
- › Pre-encoded Multivendor Chip Serialization (MCS)
- › *BlastWrite*™ and *QuickWrite*™ mass-encoding
- › Dynamic Authentication™ - anti-cloning/anti-counterfeit technology
- › Exceptional operating range, up to 11m with appropriate antenna.
- › Available in high-yield, high capacity dry/wet inlay rolls

Product Overview:

Powered by Alien®’s break-through **Higgs™ 4 UHF RFID IC** and **innovative “GT” antenna design**, the ALN-9728 delivers industry leading EPC Gen 2 performance and reliability for retail and apparel applications where items are tightly packed on shelves or hangers.

With its Higgs-4 core, the “GT” delivers next generation read and write performance, yet is completely **optimized for the highest volume enterprise, retail, and automotive applications.**

An optimized memory footprint includes a 32-bit TID, a **64-bit Unique TID for authentication** and **next generation serialization** applications, a 128-bit EPC memory bank, 128-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.

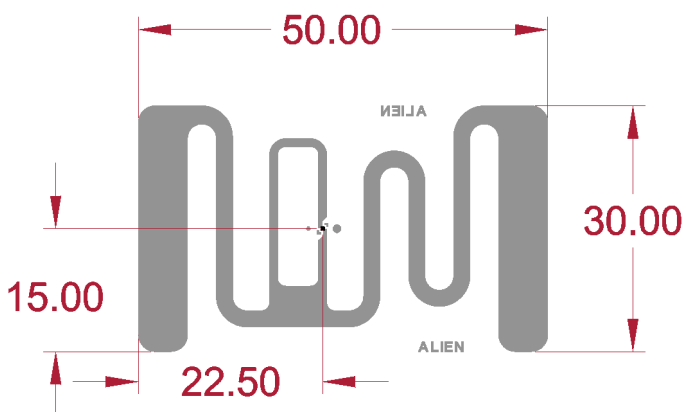
ALN-9728 inlays are World Tag compliant, enabling consistent operation across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa.



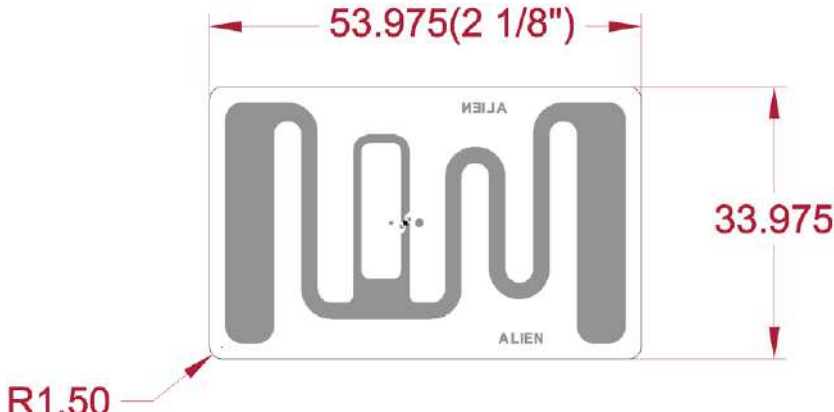
ALN-9728 "GT" Garment Tag Inlay

All dimensions in millimeters unless specified otherwise

ALN-9728 Basic Dimensions

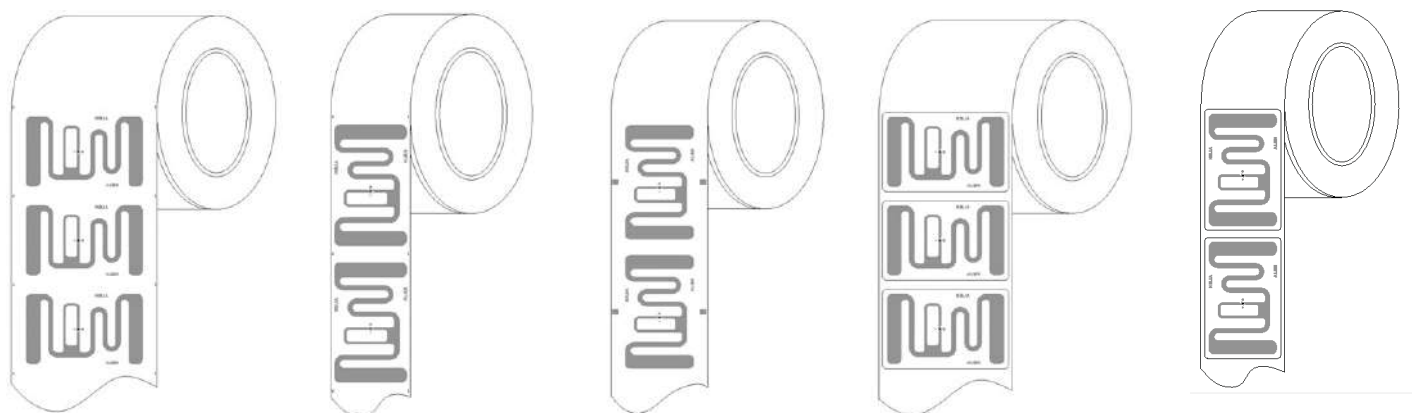


ALN-9728 Dry



ALN-9728 Wet

ALN-9728 Inlay Orientation



ALN-9728-R (Non-Rotated Dry Unslit Roll) and ALN-9728-SR (Non-Rotated Dry Slit Roll)

ALN-9728-90SR (Rotated 90° Dry Slit Roll)

ALN-9728-90R (Rotated 90° Dry Unslit Roll)

ALN-9728-WRW (White Wet Roll)

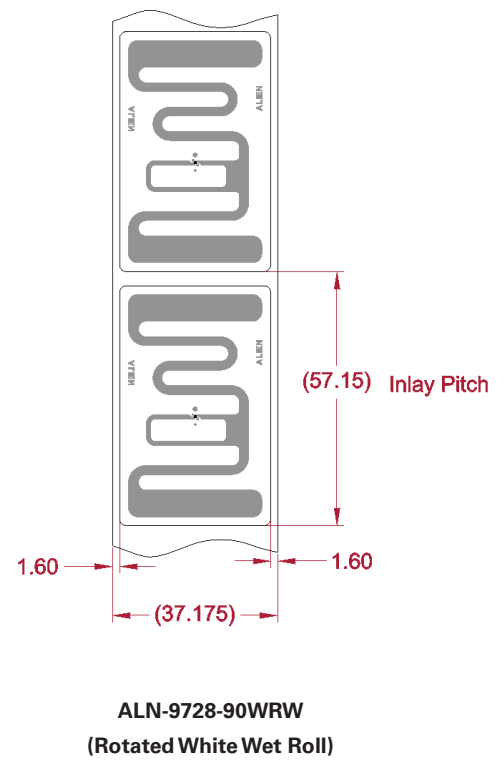
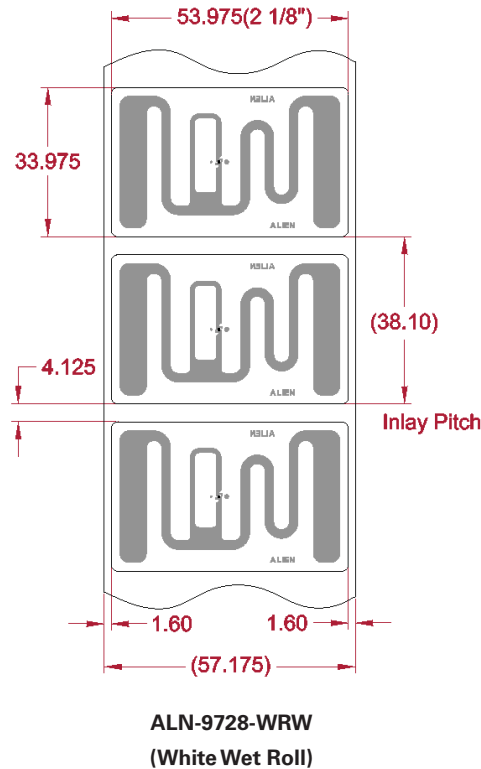
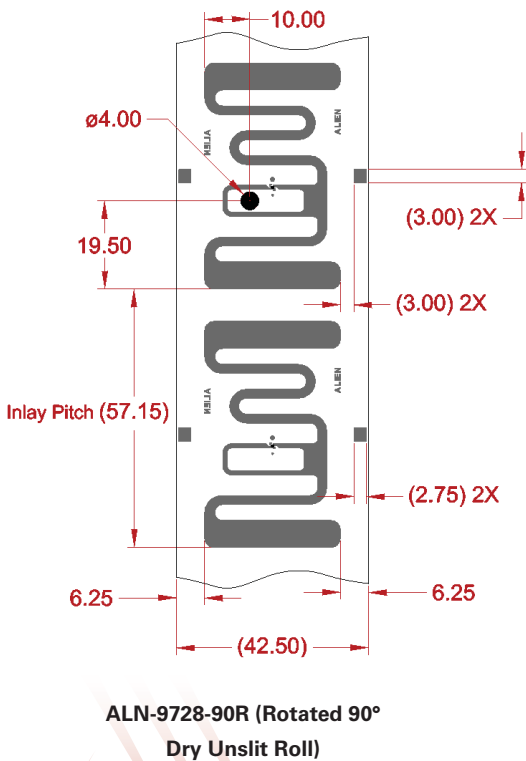
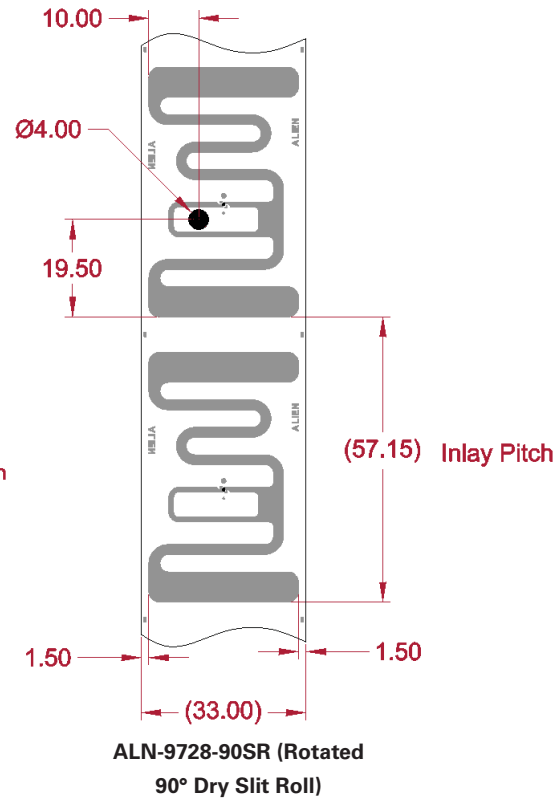
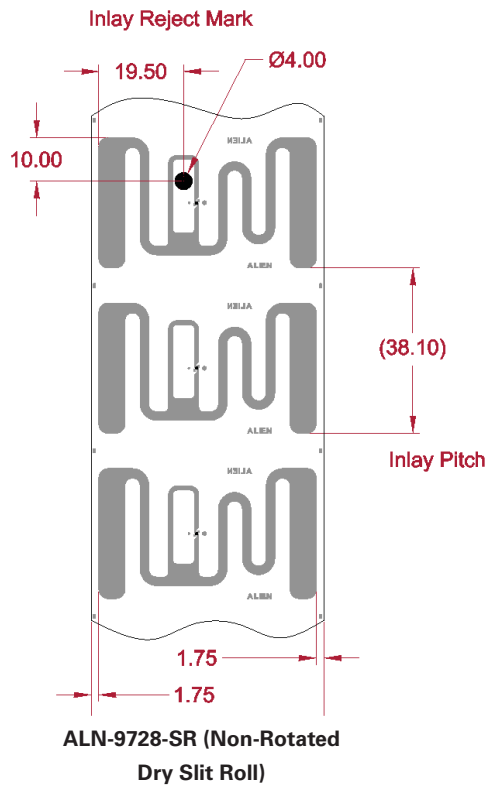
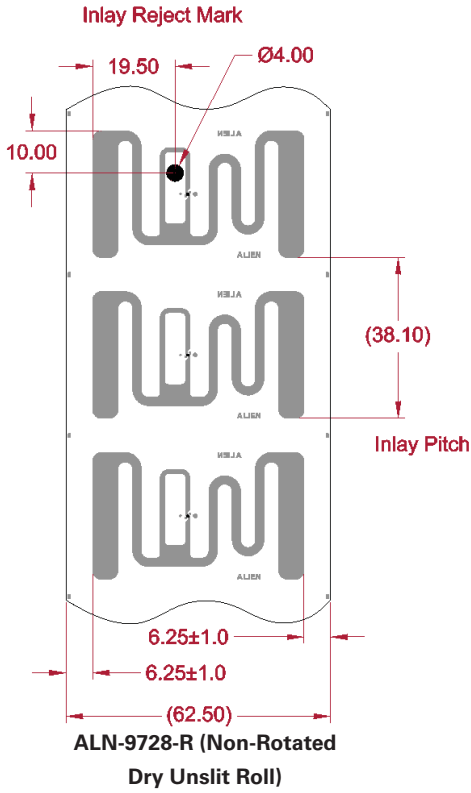
ALN-9728-90WRW (Rotated White Wet Roll)

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





ALN-9728 Inlay Specification





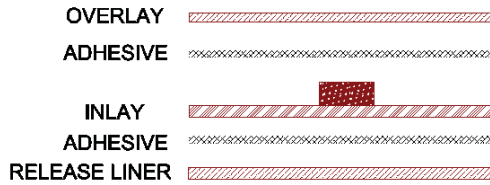
ALN-9728 Inlay Stackup

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

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

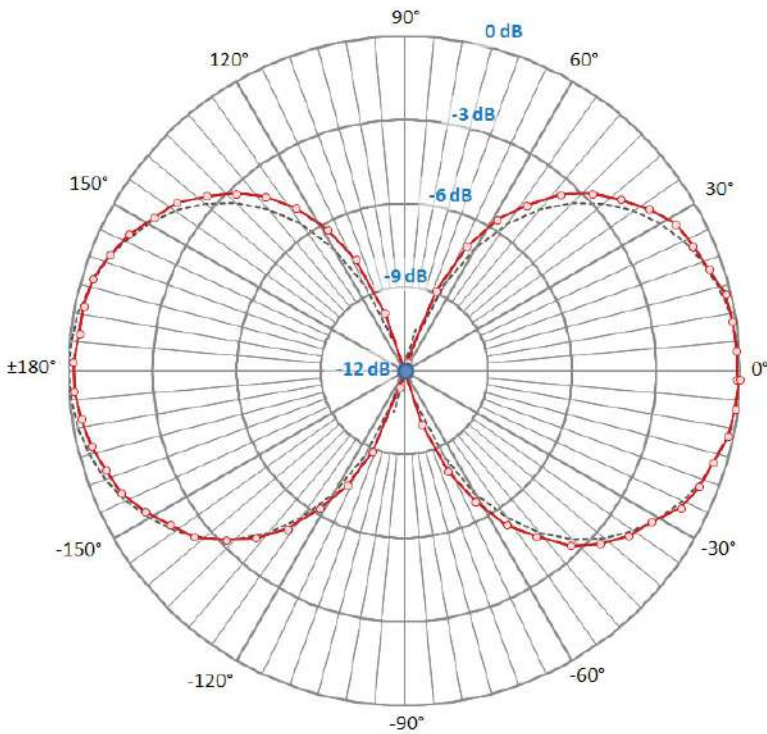


ALN-9728-R/90SR/90R

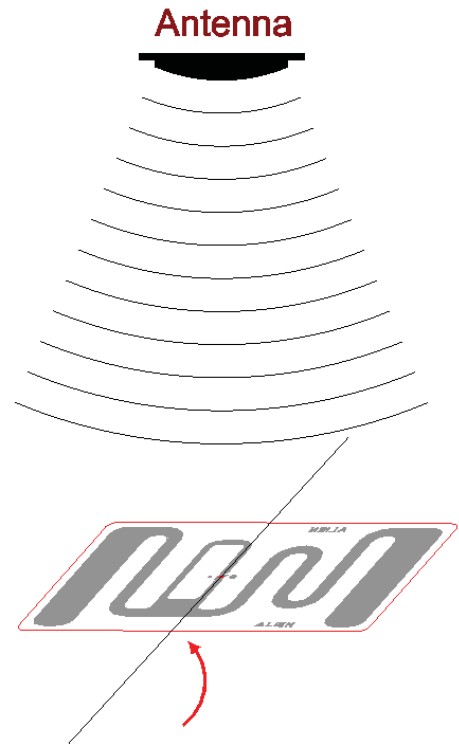


ALN-9728-WRW/90WRW

ALN-9728 Inlay Angular Sensitivity



Angular Sensitivity
(Relative Read Range vs. Orientation)



Angular Sensitivity
Inlay is rotated in the x, y, plane about the z axis



ALLEN® ALN-9728 "GT" Garment Tag Inlay

ALN-9728 Specifications

| Dry Inlay | Non-Rotated ALN-9728-R | Non-Rotated Slit ALN-9728-SR | Rotated ALN-9728-90SR | Rotated Unslit ALN-9728-90R | Environmental |
|--------------------|------------------------|------------------------------|-----------------------|-----------------------------|---------------------|
| Antenna Width | 1.97" [50mm] | 1.97" [50mm] | 1.18" [30mm] | 1.18" [30mm] | Shelf Life |
| Antenna Length | 1.18" [30mm] | 1.18" [30mm] | 1.97" [50mm] | 1.97" [50mm] | Recommended Storage |
| Web Width | 2.46" [62.5mm] | 2.11" [53.5mm] | 1.3" [33mm] | 1.67" [42.5mm] | Storage Limits |
| Web Pitch | 1.5" [38.1mm] | 1.5" [38.1mm] | 2.25" [57.15mm] | 2.25" [57.15mm] | Operating Limits |
| Core Width | 2.46" [62.5mm] | 2.46" [62.5mm] | 1.3" [33mm] | 1.67" [42.5mm] | Bend Diameter |
| Core ID | 6" [152.4mm]* | | | | Pressure |
| Core Material | Fiberboard | | | | Drop Resistance |
| Inlays per Roll | 12,500 Nominal | 12,500 Nominal | 7,500 Nominal | 7,500 Nominal | Write Cycles |
| Maximum Roll OD | < 12" [304.8mm] | | | | RoHs |
| Roll Labeling Data | Roll #, Quantity | | | | REACH |

| Wet Inlay | Non-Rotated ALN-9728-WRW | Rotated ALN-9728-90WRW |
|----------------------------------|------------------------------------|------------------------|
| Inlay Width | 2.125" [53.975mm] | 1.34" [33.975mm] |
| Inlay Length | 1.34" [33.975mm] | 2.125" [53.975mm] |
| Web Width | 2.25" [57.175mm] | 1.46" [37.175mm] |
| Web Pitch | 1.5" [38.1mm] | 2.25" [57.15mm] |
| Core Width | 2.25" [57.175mm] | 1.46" [37.175mm] |
| Core ID | 6" [152.4mm]* | |
| Core Material | Fiberboard | |
| Inlays per Roll | 11,500 Nominal | 7,500 Nominal |
| Maximum Roll OD | < 16" [406.4mm] | < 16" [406.4mm] |
| Roll Labeling Data | Roll #, Quantity | |
| White | TT Printable White Film Only | |
| 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 | |

* Shipped with 6" to 3" plastic core adapter

Copyright © 2014 Alien Technology Corporation. All rights reserved.

Alien, Alien Technology, the Alien Technology logo, FSA, Higgs, Dynamic Authentication, QuickWrite, BlockWrite, Squiggle, and the Squiggle logo are trademarks or registered trademarks of Alien Technology Corporation in the U.S. and other countries.

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, 7570656, 7562083, 7561221, 7559486, 7559131, 7554451, 7551141, 7542301, 7542008, 7531218, 7522055, 7500610, 7480248, 7453705, 7425467, 7417306, 7411503, 7385284, 7377445, 7364084, 7353598, 7342490, 7324061, 7321159, 7301458, 7295114, 7288432, 7265675, 7262386, 7260882, 7253735, 7244326, 7218527, 7214569, 7199527, 7193504, 7173528, 7172910, 7172789, 7141176, 7112250, 7101502, 7080444, 7070851, 7068224, 7046328, 6998644, 6988667, 6985361, 6980184, 6970219, 6952157, 6942155, 6933848, 6927085, 6816380, 6780606, 6731353, 6693384, 6683663, 6665044, 6657289, 6623579, 6606247, 6606079, 6590346, 6586338, 6566744, 6555408, 6527964, 6479395, 6468638, 6420266, 6316278, 6291896, 6281038. Other patents pending.

This product is licensed under patents of Round Rock Research, LLC, for use solely with UHF RFID Readers (such as Alien reader products) that are licensed under an agreement with Round Rock Research, LLC.

June 4, 2014



Alien Technology
18220 Butterfield Blvd.
Morgan Hill, CA 95037
866-RFID NOW
www.alientechnology.com