



Alien ALN 9740 UHF RFID TAG

Model: ALN-9740

> Applications

- 1 Volume Retail/Apparel
- 2 Enterprise Wide Asset Management
- 3 Warehouse Management
- 4 Tracking Challenging Materials and Objects

> Features

- 1 Designed to meet EPCglobal Gen2 (V 1.2.0) and ISO/IEC 18000-6C
- 2 Worldwide RFID UHF operation (840-960MHz)
- 3 448-Bits of NVRAM Memory
 - 128-EPC Bits
 - 128 User Bits
 - 64 Bit Unique TID
 - 32 Bit Access and 32 bit Kill Passwords
- 4 Pre-Programmed with a unique, unalterable 64-bit serial number
- 5 User Memory can be Block Perma-Locked as well as read password protected in 32 Bit Blocks
- 6 Low power operation for both read and program
- 7 Dynamic Authentication™ - anti-cloning/anti-counterfeit technology
- 8 Exceptional operating range, up to 11m with appropriate antenna.
- 9 Available in high-yield, high capacity dry/wet inlay rolls



> Descriptions

Powered by Alien®'s volume focused Higgs™4 UHF RFID IC and innovative Squiggle antenna design, the ALN-9740 delivers industry leading EPC Gen 2 performance and reliability at a competitive price

ALN-9740 inlays are World Tag compliant, enabling consistent operation across the diverse frequencies of the Americas, Europe, Middle East, Asia, and Africa.

With its Higgs-4 core, the Squiggle delivers next generation performance and a rich feature set, yet is completely optimized for the highest volume enterprise, retail, and apparel 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 memorybank, 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-9740 Specifications

Dry Inlay

Antenna Width	3.66 [93.0 mm]
Antenna Length	0.748 [19.0 mm]
Web Width (-R)	4.173 [106.0 mm]
Web Width (-SR)	3.799 [96.5 mm]
Web Pitch	1.0 [25.4 mm]
Core Width (-R)	3.799 [96.5 mm]
Core Width (-SR)	4.173 [106.0 mm]
Core ID	6 [152.4mm]*
Core Material	Fiberboard
Inlays per Roll	Paper
Maximum Roll OD	1.5 [38.1 mm]
Roll Labeling Data	12,500 Nominal
Maximum Roll OD	< 12 [304.8 mm]
Roll Labeling Data	Roll #, Quantity

Wet Inlay

Inlay Width	3.799 [96.5 mm]
Inlay Length	0.913 [23.2 mm]
Web Width	3.925 [99.7 mm]
Web Pitch	1.0 [25.4 mm]
Core Width	3.874 [98.4 mm]
Core ID	6 [152.4 mm]*
Core Material	Fiberboard
Inlays per Roll	12,500 Nominal
Maximum Roll OD	< 16 [406.4 mm]
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

RFID

Protocols Supported	ISO/IEC 18000-6C EPCglobal Class 1 Gen 2
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

Enviromental

Shelf Life	2 years at +77°F [+25°C] @ 40%RH
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 [50 mm]
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

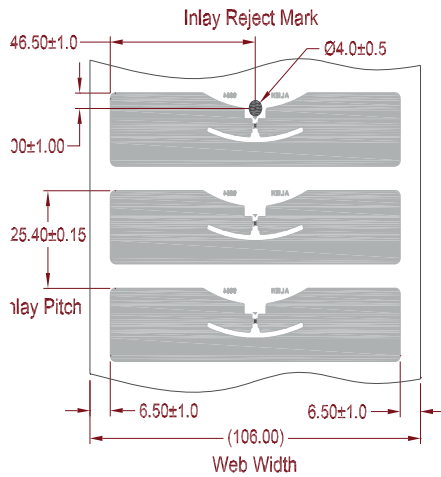
> ALN-9654 Inlay Orientation

ALN-9654-FR
(Dry Unslit Roll)

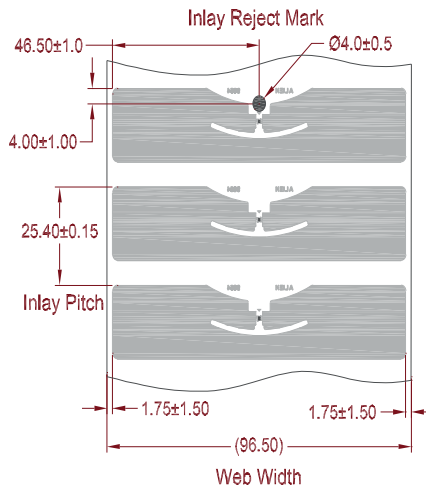
ALN-9654-FSR
(Dry Slit Roll)

ALN-9654-FWRW
(White Wet Roll)

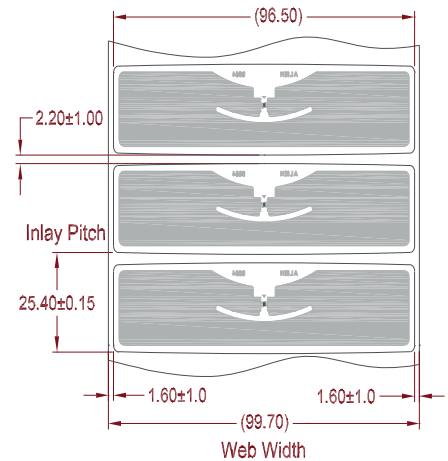
> ALN-9654 Inlay Specification



ALN-9654-FSR
(Dry Unslit Roll)

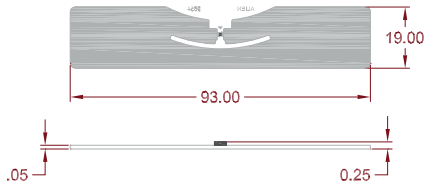


ALN-9654-FSR
(Dry Slit Roll)

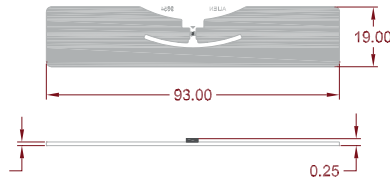


ALN-9654-FWRW
(White Wet Roll)

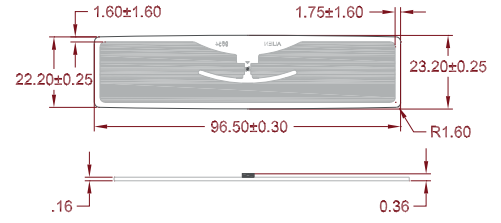
> ALN-9654 Inlay General Dimensions



ALN-9654-FR
(Dry Unslit Inlay)



ALN-9654-FSR
(Dry Slit Inlay)



ALN-9654-FWRW
(White Wet Inlay)

> ALN-9654 Inlay Stackup

DRY INLAY THICKNESS. +10%	
OVER ANTENNA	0.05 mm
OVER CHIP	0.25 mm

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

INLAY



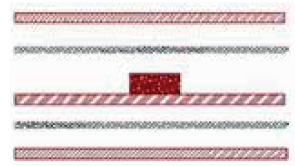
ALN-9654-FR
(Dry Unslit Inlay)

INLAY
ADHESIVE
RELEASE LINER



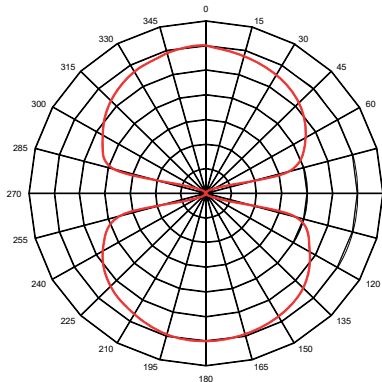
ALN-9654-FSR
(Dry Slit Inlay)

OVERLAY
ADHESIVE
INLAY
ADHESIVE
RELEASE LINER

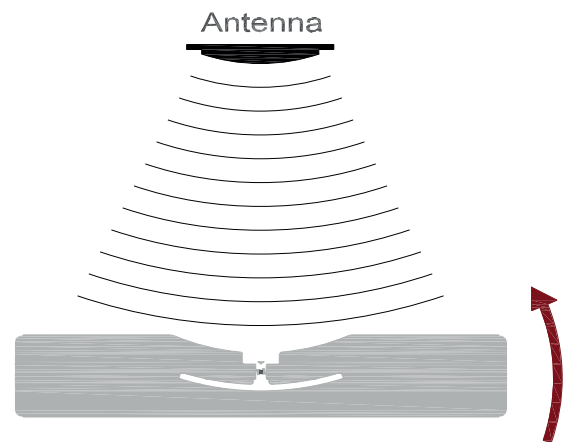


ALN-9654-FWRW
(White Wet Inlay)

> ALN-9654 Inlay Angular Sensitivity



Angular Sensitivity
(Relative Read Range vs. Orientation)



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



Reusable plastic pallets



High speed motocross
and triathlon tagging



Totes and containers



Asset Management