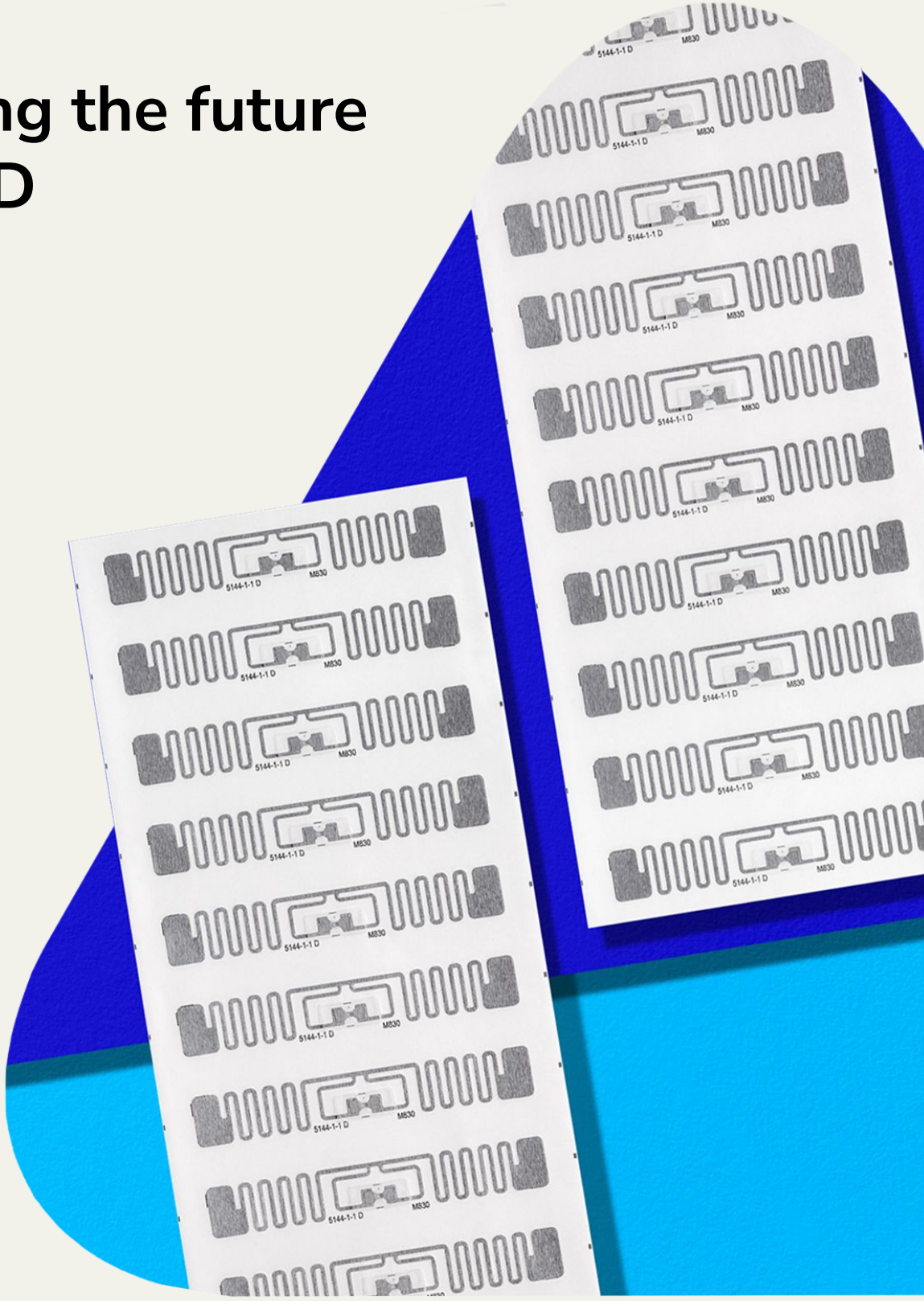
Avery Dennison
Smartrac
Product portfolio

July 2025

Innovating the future with RFID



Why choose Avery Dennison Smartrac?

As the world's largest RFID partner, we provide solutions for multiple industries, from retail and food, to healthcare and aviation.

Our integrated global RFID approach is proven to increase inventory accuracy, improve supply chain agility and enhance visibility across all channels.

When you choose Avery Dennison, you get field-proven inlay products, advanced research and testing capabilities, experienced engineering and technical resources, and, most importantly, a partner with a deep understanding of what it takes to make your application successful.

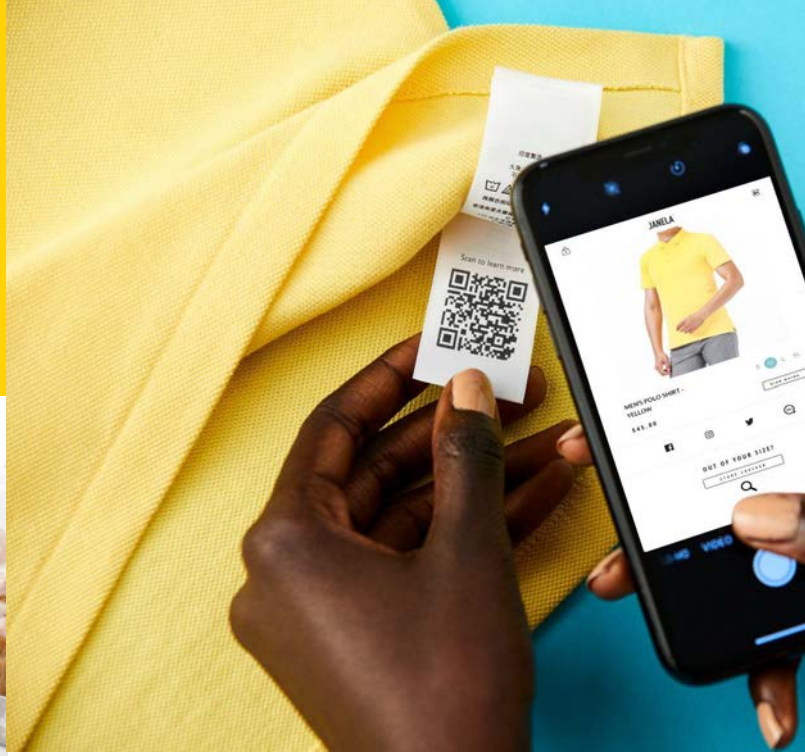
Sustainability is at the core of everything we do, from innovation and product design to development and production. The majority of our inlays now feature our patented SmartFace™ technology, which is one of the most sustainable solutions on the market, reducing your brand's environmental impact.

Applications

- Item-level retail:
  Apparel, accessories, cosmetics, jewelry, food and general retail
- Healthcare: Medical and pharmaceutical
- Transportation: Automotive and aviation
- Industrial logistics and manufacturing
- Animal identification
- Brand protection and product authentication
- Supply chain, asset tracking, inventory and logistics
- Contactless cards and tickets
- Library, media, documents and files

Sustainability

Our Pure portfolio of environmentally friendly inlays include a family of UHF RFID inlay designs that feature antennas made from pure aluminum in the final inlay construction.



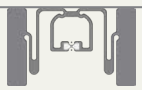
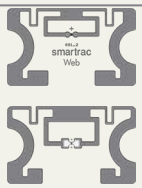
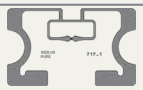
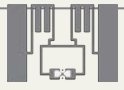
Retail portfolio

Retail portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD-23x (AD Belt)	**AD-239** Impinj M730 Impinj M750		70 x 14.5 mm 2.76 x 0.57 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
	AD-23x NXP UCODE 9		70 x 14.5 mm 2.76 x 0.57 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2, Z
	AD-23x U9 Pure 95™ NXP UCODE 9		70 x 14.5 mm 2.76 x 0.57 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2, Z
	AD Belt Impinj M730 Impinj M750		70 x 14 mm 2.76 x 0.55 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2, Z
	NXP UCODE 9	 	70 x 14 mm 2.76 x 0.55 in		F, I, L, O, Q, R, W5, W6, Y2, Z
	AD Belt Pure NXP UCODE 9		70 x 14 mm 2.76 x 0.55 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
AD Electrify (AD-33x)	**AD-333** NXP UCODE 9		70 x 14.5 mm 2.76 x 0.57 in	Apparel	F, H, O, Q, R, W5, W6, Y2
	AD-333 Pure 95™ NXP UCODE 9		70 x 14.5 mm 2.76 x 0.57 in	Apparel	F, H, O, Q, R, W5, W6, Y2
	AD-334 Impinj M730 Impinj M750		70 x 14.5 mm 2.76 x 0.57 in	Apparel	F, H, I, L, O, Q, R, W5, W6, Y2
	AD Belt H Impinj M730 Impinj M750		70 x 14.6 mm 2.76 x 0.58 in	Apparel	F, H, I, L, O, Q, R, W5, W6, Y2
	AD Electrify Impinj M850		70 x 14.5 mm 2.756 x 0.57 in	Apparel General Retail	F, H, I, L, O, Q, R, W5, W6, Y2
	AD Electrify Pure 95 Impinj M850		70 x 14.5 mm 2.756 x 0.57 in	Apparel General Retail	
AD Burst (AD-23x Slim)	**AD-23x Slim** NXP UCODE 9		70 x 10.5 mm 2.76 x 0.41 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
	AD Burst Impinj M830 Impinj M850		70 x 10.5 mm 2.76 x 0.41 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
	AD Burst (PET & 40# format) Impinj M830 Impinj M850		70 x 10.5 mm 2.76 x 0.41 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2

Pure portfolio product

Retail portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD-35x	**AD-350** NXP UCODE 8		76 x 6 mm 2.99 x 0.24 in	Apparel	I, Q
AD Longbow	**AD Longbow** NXP UCODE 9		70 x 8 mm 2.76 x 0.32 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
AD Force WEL (AD-38x)	**AD-386** Impinj M730 Impinj M750		50 x 30 mm 1.97 x 1.18 in	Apparel	F, I, L, Q, R, W5, W6, Y2
	AD-387 WEL NXP UCODE 9		50 x 30 mm 1.97 x 1.18 in	Apparel	F, I, L, Q, R, W5, W6, Y2
	AD Force Pure 95™ NXP UCODE 9		50 x 30 mm 1.97 x 1.18 in	Apparel	F, I, L, Q, R, W5, W6, Y2
AD Force NEL (AD-38x)	**AD-387 NEL** NXP UCODE 9		30 x 50 mm 1.18 x 1.97 in	Apparel	F, I, L, Q, W5, W6, Y2
AD Web	**AD Web** Impinj M730 Impinj M750		50 x 30 mm 1.97 x 1.18 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
	NXP UCODE 9		50 x 30 mm 1.97 x 1.18 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
	AD Web Pure NXP UCODE 9		50 x 30 mm 1.97 x 1.18 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
AD Stealth	**AD Stealth** Impinj M830 Impinj M850		50 x 14.5 mm 1.97 x 0.57 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
AD Quantum (AD-31x)	**AD-311** Impinj M730 Impinj M750		41.4 x 29 mm 1.63 x 1.14 in	Apparel	F, I, L, Q, W5
	AD-312 NXP UCODE 9		41.4 x 29 mm 1.63 x 1.14 in	Apparel	F, I, Q, W5
	AD-312 Pure 95™ NXP UCODE 9		41.4 x 29 mm 1.63 x 1.14 in	Apparel	F, I, Q, W5
	AD Quantum NXP UCODE 9		41.4 x 29 mm 1.63 x 1.142 in	Apparel	F, I, L, Q, R, W5, W6, Y2

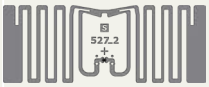
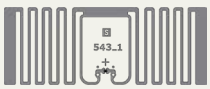
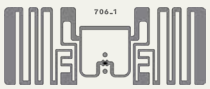
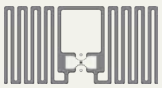
Pure portfolio product

Retail portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Eagle	**AD Eagle®** NXP UCODE 9		44 x 28 mm 1.73 x 1.10 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
	Impinj M730 Impinj M750	 	44 x 28 mm 1.73 x 1.10 in	Apparel	F, I, L, O, Q, R, W5, W6, Y2
AD Sonic	**AD Sonic FCC** NXP UCODE 9		44 x 20 mm 1.73 x 0.79 in	Apparel General Retail	F, O, Q, R, W5, W6, Y2
	AD Sonic Impinj M830		44 x 20 mm 1.73 x 0.79 in	Apparel General Retail	F, I, L, O, Q, R, W5, W6, Y2
	AD Sonic (strap format) Impinj M830		44 x 20 mm 1.73 x 0.79 in	Apparel General Retail	F, I, Q, R, W5, W6, Y2
	AD Sonic (strap format) (PET & PFL format) Impinj M830		44 x 20 mm 1.73 x 0.79 in	Apparel General Retail	
AD Bolt (AD-32x)	**AD-324 FCC** NXP UCODE 8		41 x 16 mm 1.63 x 0.63 in	Apparel	F, Q, W5, W6
	AD-325 FCC Impinj M730 Impinj M750		42.5 x 17 mm 1.67 x 0.67 in	Apparel	F, Q, W5
	AD Bolt FCC Impinj M730		42.5 x 17 mm 1.67 x 0.67 in	Apparel	F, Q, W5
	AD Bolt FCC NXP UCODE 9		42.5 x 17 mm 1.67 x 0.67 in	Apparel	F, Q, W5
	AD-327 FCC NXP UCODE 9		42.5 x 17 mm 1.67 x 0.67 in	Apparel	F, Q, W5
	AD-327 ETSI NXP UCODE 9		41 x 16 mm 1.63 x 0.63 in	Apparel	
	AD-327 ETSI Pure 95™ NXP UCODE 9		41.4 x 16 mm 1.63 x 0.63 in	Apparel	

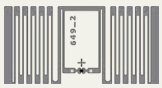
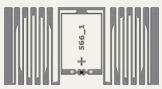
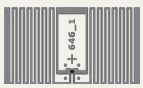
Pure portfolio product

Retail portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Miniweb	**AD Miniweb FCC** Impinj M730 Impinj M750		42 x 16 mm 1.65 x 0.63 in	Apparel	F, O, Q, W5, W6
	NXP UCODE 9		42 x 16 mm 1.65 x 0.63 in	Apparel	F, O, Q, W5, W6
	AD Miniweb ETSI NXP UCODE 9		42 x 16 mm 1.65 x 0.63 in	Apparel	I
	AD Miniweb ETSI Pure Impinj M830		42 x 16 mm 1.65 x 0.63 in	Apparel	I, Q
	AD Miniweb Impinj M730 Impinj M750		42 x 16 mm 1.65 x 0.63 in	Apparel	I, Q
	Impinj M830		42 x 16 mm 1.65 x 0.63 in	Apparel	
	AD Miniweb Pure NXP UCODE 9		42 x 16 mm 1.65 x 0.63 in	Apparel	F, !, Q
AD Astro WEL (AD-37x)	**AD-372** NXP UCODE 8		53 x 19 mm 2.09 x 0.75 in	Apparel	F, Q, W5
	AD Astro (PFL format) NXP UCODE 9		53 x 19 mm 2.09 x 0.75 in	Apparel	
AD Astro NEL (AD-37x)	**AD Astro NEL Pure 95™** NXP UCODE 9		19 x 53 mm 0.75 x 2.09 in	Apparel	F, I, L, Q, W5
	AD Astro NEL (PET & PFL format) NXP UCODE 9		19 x 53 mm 0.75 x 2.09 in	Apparel	
AD Cosmic (AD-173)	**AD Cosmic ETSI** NXP UCODE 9		27 x 14 mm 1.06 x 0.55 in	Apparel	
AD Dazzle (AD-30x)	**AD-302** Impinj M730 Impinj M750		30 x 15 mm 1.20 x 0.60 in	Apparel	Q
	AD Dazzle NXP UCODE 9		30 x 15 mm 1.20 x 0.60 in	Apparel	Q
AD Quest (AD-262)	**AD Quest NEL (PFL format only)** Impinj M830		9.5 x 45 mm 0.37 x 1.77 in	Apparel	

Pure portfolio product

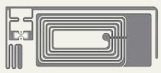
Retail portfolio UHF RFID inlays

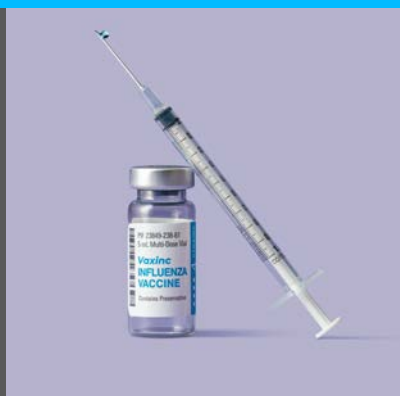
Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Accessory	**AD Accessory** Impinj M730 Impinj M750		30 x 15 mm 1.20 x 0.60 in	Apparel Beauty	Q
	AD Accessory NXP UCODE 9		30 x 15 mm 1.20 x 0.60 in	Apparel Beauty	Q
AD Dynamo **(AD-13x)**	**AD Dynamo** NXP UCODE 9		45 x 7.5 mm 1.7 x 0.26 in	Apparel	Q
AD-141	**AD-141** NXP UCODE 9		4 x 28 mm 0.16 x 1.10 in	Beauty	
AD-18x	**AD-183** NXP UCODE 9		Ø 26 mm Ø 1.02 in	Beauty Food	
AD Presto **(AD-19x)**	**AD-192** Impinj M730 Impinj M750		22 x 12.5 mm 0.86 x 0.49 in	Beauty	
	AD Presto NXP UCODE 9		22 x 12.5 mm 0.86 x 0.49 in	Beauty	
AD Bling	**AD Bling** Impinj M730 Impinj M750		22 x 12.5 mm 0.9 x 0.5 in	Beauty	
AD-83x	**AD-834** NXP UCODE 9 NXP UCODE 9xe		Ø 13 mm Ø 0.51 in	Beauty	
AD-16x	**AD-164** NXP UCODE 9		60 x 4 mm 2.36 x 0.16 in	Beauty Food	
AD-251 r6-P	**AD-251 ETSI** Impinj Monza R6-P		95 x 14.5 mm 3.74 x 0.57 in	Food Microwave Resistant	
	AD-251 FCC Impinj Monza R6-P		95 x 13 mm 3.74 x 0.52 in	Food Microwave Resistant	

Retail portfolio On-Metal tags

Design Family	Product Name	Design (not to scale)	Tag Dimensions	Primary Segment	ARC Spec
AD-45x	**AD-456 ETSI** NXP UCODE 8		64 x 6 mm 2.52 x 0.24 in 64 x 18 mm 2.52 x 0.71 in	Beauty Food	
	AD-456 FCC NXP UCODE 8		64 x 6 mm 2.52 x 0.24 in 64 x 18 mm 2.52 x 0.71 in	Beauty Food	
	AD-457 ETSI NXP UCODE 9		64 x 6 mm 2.52 x 0.24 in 64 x 18 mm 2.52 x 0.71 in	Beauty Food	
	AD-457 FCC NXP UCODE 9		64 x 6 mm 2.52 x 0.24 in 64 x 18 mm 2.52 x 0.71 in	Beauty Food	

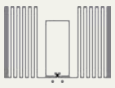
Retail portfolio - Combo tags UHF + EAS

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD-36x	**AD-366** **Dual UHF + EAS** NXP UCODE 9		73.1 x 37.7 mm 2.88 x 1.48 in	Apparel	F, I, L, Q
AD Defender **(AD-369u9)**	**AD Defender** NXP UCODE 9		66 x 27 mm 2.60 x 1.06 in	Apparel	
AD Fusion U9	**AD Fusion** NXP UCODE 9		70 x 40 mm 2.76 x 1.58 in	Apparel	F, H, I, L, Q

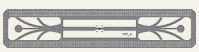


Industrial portfolio

Industrial Portfolio UHF RFID inlays

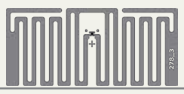
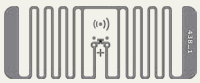
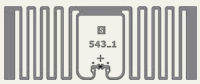
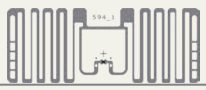
Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD-15x	**AD-151** NXP G2iM		22 x 15 mm 0.90 x 0.60 in	Automotive	
AD-22x	**AD-226** NXP G2iM		95 x 8.15 mm 3.74 x 0.32 in	Automotive Supply Chain and Logistics	
AD-37x	**AD-373** NXP UCODE 7xm		53 x 19 mm 2.09 x 0.75 in	Aviation Automotive	
AD-38x	**AD-380** NXP G2iM		50 x 30 mm 1.97 x 1.18 in	Automotive Supply Chain and Logistics	
AD-55x	**AD-553** NXP UCODE 8		38 x 76 mm 1.50 x 2.99 in	Aviation	U
	AD-556 Impinj M730 Impinj M750		38 x 46 mm 1.50 x 1.80 in	Aviation Supply Chain and Logistics	
AD-600	**AD-600** NXP UCODE 8		90 x 57.5 mm 3.54 x 2.26 in	Automotive	
AD-66x	**AD-662** NXP UCODE DNA		90 x 19 mm 3.54 x 0.75 in	Automotive	
	AD-663 NXP UCODE 7xm		90 x 19 mm 3.54 x 0.75 in	Automotive	
	AD-665 NXP UCODE 8		90 x 19 mm 3.54 x 0.75 in	Automotive	
AD-68x	**AD-680** Impinj Monza R6-P		50 x 50 mm 1.97 x 1.97 in	Logistics	
	AD-681 Impinj Monza 4QT		50 x 50 mm 1.97 x 1.97 in	Logistics	
AD Belt	**AD Belt** NXP UCODE 7xm		70 x 10 mm 2.76 x 0.40 in	Aviation Automotive Supply Chain and Logistics	
	NXP UCODE 9xm		70 x 14 mm 2.76 x 0.55 in	Automotive Supply Chain and Logistics	
	AD Belt HighTemp NXP UCODE 7xm		70 x 10 mm 2.76 x 0.40 in	Automotive Supply Chain and Logistics	

Industrial Portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Dogbone	**AD Dogbone®** Impinj Monza R6-P		94 x 24 mm 3.70 x 0.95 in	Automotive	
	Impinj M730 Impinj M750		94 x 24 mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	Impinj M780 Impinj M781		94 x 24 mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	Impinj M830		94 x 24 mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	NXP UCODE 7xm		94 x 24 mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	NXP UCODE 9		94 x 24mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	AD Dogbone® **Dura 2.0** Impinj M730		94 x 24mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	AD Dogbone® Pure NXP UCODE 9		94 x 24 mm 3.70 x 0.95 in	Automotive Supply Chain and Logistics	
	AD Dogbone® **High Temp** NXP UCODE 7xm		94 x 24 mm 3.70 x 0.95 in	Automotive	
AD Dot	**AD Dot** Impinj Monza R6-P		3 x 3 mm 0.118 x 0.118 in	General Industry	
AD Frog 3D®	**AD Frog 3D®** Impinj Monza 4QT		68 x 68 mm 2.68 x 2.68 in	Automotive Supply Chain and Logistics	
	Impinj M830		68 x 68 mm 2.68 x 2.68 in	Logistics	
AD G7	**AD G7** NXP UCODE 7xm		100 x 20 mm 3.94 x 0.79 in	Automotive	

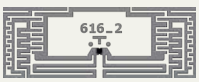
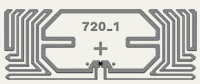
Pure portfolio product

Industrial Portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Grille	**AD Grille** NXP UCODE 7xm		22 x 22 mm 0.87 x 0.87 in	Automotive Healthcare	
	NXP UCODE 9		22 x 22 mm 0.87 x 0.87 in	Automotive Healthcare	
AD Grip	**AD Grip** Impinj M730		80 x 40 mm 3.15 x 1.58 in	Automotive	T
AD Minidose	**AD Minidose** Impinj M780		22 x 12 mm 0.87 x 0.47 in	Healthcare	
	NXP UCODE 8 NXP UCODE 9		22 x 12 mm 0.87 x 0.47 in	Healthcare	S
	NXP UCODE 9xm		22 x 12 mm 0.87 x 0.47 in	Healthcare	S
AD Miniweb	**AD Miniweb** NXP UCODE G2iM		40 x 18 mm 1.58 x 0.71 in	Automotive Supply Chain and Logistics	
	NXP UCODE 7xm		40 x 15 mm 1.58 x 0.60 in	Automotive Supply Chain and Logistics	
	NXP UCODE 9xm		42 x 16 mm 1.65 x 0.63 in	Automotive Supply Chain and Logistics	
	AD Miniweb FCC Impinj M780		42 x 16 mm 1.65 x 0.63 in	Automotive Supply Chain and Logistics	
AD Shortdipole	**AD Shortdipole** NXP UCODE 7xm		93 x 11 mm 3.66 x 0.43 in	Automotive Supply Chain and Logistics	
	NXP UCODE 8		93 x 11 mm 3.66 x 0.43 in	Automotive Supply Chain and Logistics	P
AD Solar	**AD Solar** NXP UCODE 9		70 x 14.5 mm 2.76 x 0.57 in	General Industry	

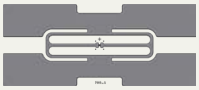
Pure portfolio product

Industrial Portfolio UHF RFID inlays

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Squarewave	**AD Squarewave** Impinj M730 Impinj M750		93 x 11 mm 3.66 x 0.43 in	Automotive Supply Chain and Logistics	P
	Impinj M780 Impinj M781		93 x 11 mm 3.66 x 0.43 in	Automotive Supply Chain and Logistics	
	Impinj M830		93 x 11 mm 3.66 x 0.43 in	Automotive Supply Chain and Logistics	Z
	NXP UCODE 9		93 x 11 mm 3.66 x 0.43 in	Supply Chain and Logistics	
	AD Squarewave Pure 95™ NXP UCODE 9		93 x 11 mm 3.66 x 0.43 in	Supply Chain and Logistics	
AD TracX	**AD TracX** Impinj M730 Impinj M750		50 x 50 mm 1.97 x 1.97 in	Automotive Supply Chain and Logistics	
	Impinj M780 Impinj M781		50 x 50 mm 1.97 x 1.97 in	Automotive Supply Chain and Logistics	
AD Trap	**AD Trap** Impinj M730 Impinj M750		8 x 22 mm 0.32 x 0.87 in	Healthcare	
	NXP UCODE 9		8 x 22 mm 0.32 x 0.87 in	Healthcare	
AD Twist	**AD Twist** NXP UCODE 7xm		27 x 27 mm 1.06 x 1.06 in	Automotive Supply Chain and Logistics	
	NXP UCODE 8		23 x 23 mm 0.91 x 0.91 in	Automotive Supply Chain and Logistics	
	NXP UCODE 9xm		23 x 23 mm 0.91 x 0.91 in	Automotive Supply Chain and Logistics	

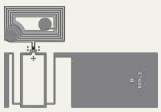
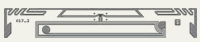
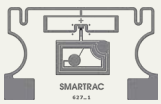
Pure portfolio product

Industrial Portfolio On-metal tags

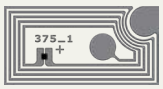
Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD 2Metal Rock	**AD 2Metal Rock** Impinj M781		95 x 40 mm 3.74 x 158 in	Automotive Supply Chain and Logistics	
AD Midas Flagtag	**AD Midas Flagtag®** Impinj M730 Impinj M750		34.4 x 18 mm 1.36 x 0.71 in	Aviation Automotive Supply Chain and Logistics	
	Impinj M780		34.4 x 18 mm 1.36 x 0.71 in	Aviation Automotive Supply Chain and Logistics	
	NXP UCODE 9xm		34 x 18 mm 1.34 x 0.71 in	Aviation Automotive Supply Chain and Logistics	
	AD Midas Flagtag® ETSI NXP UCODE 7xm		47 x 18 mm 1.85 x 0.71 in	Aviation Automotive Supply Chain and Logistics	
	AD Midas Flagtag® Pure NXP UCODE 9		34 x 18 mm 1.34 x 0.71 in	Industrial Automotive Logistics	
AD Skyline	**AD Skyline ETSI** NXP UCODE 7xm		112 x 23 mm 4.41 x 0.91 in	Automotive Supply Chain and Logistics	

Pure portfolio product

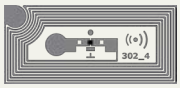
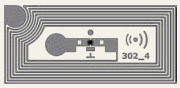
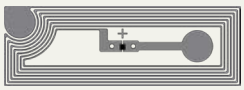
Industrial Portfolio - Dual frequency tags

Design Family	Product Name	Design (not to scale)	Antenna Dimensions	Primary Segment	ARC Spec
AD Belt DF	**AD Belt DF** EM4425		70 x 20 mm 2.76 x 0.79 in	Supply Chain and Logistics	
AD Medio Web DF	**AD Medio Web DF** EM4425		45 x 28.5 mm 1.77 x 1.12 in	Supply Chain and Logistics	
AD Midas Flagtag	**AD Midas Flagtag® DF Global** EM4425		31.4 x 48 mm 1.24 x 1.89 in	Automotive Supply Chain and Logistics	
AD Slim DF	**AD Slim DF** EM4425		74.2 x 10.7 mm 2.92 x 0.42 in	Supply Chain and Logistics	
AD Web DF	**AD Web DF** EM4425		50 x 30 mm 1.97 x 1.18 in	Supply Chain and Logistics	

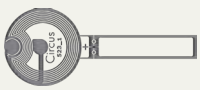
Industrial Portfolio HF inlays

Product Name	Design (not to scale)	Antenna Dimensions	Chip	Industry Segments
AD Band		23 x 70 mm 0.91 x 2.76 in	NXP ICODE ILT-M	Media and Document Management
AD Block		45 x 45 mm 1.77 x 1.77 in	NXP ICODE ILT-M	Inventory
AD Block Lite		47 x 47 mm 1.85 x 1.85 in	NXP ICODE SLIX / SLIX 2	Library Product Authentication
AD Bullseye™		Ø 33 mm 1.30 in	NXP ICODE SLIX / SLIX 2	Apparel, Aviation, Food, Healthcare, Inventory
AD Circus™		Ø 22 mm 0.87 in	NXP ICODE ILT-M	Healthcare Inventory
AD Circus™		Ø 18 mm 0.71 in	NXP ICODE SLIX / SLIX 2	Apparel, Beauty and Personal Care, Healthcare, Inventory
AD Circus™		Ø 18 mm 0.71 in	STM ST25TV02K	Apparel, Beauty and Personal Care, Healthcare, Inventory
AD Microblock		8 x 8 mm 0.32 x 0.32 in	NXP ICODE SLIX	Healthcare
AD Microtrack		20 x 10 mm 0.79 x 0.39 in	NXP ICODE SLIX	Healthcare
AD Miniblock		14.5 x 14.5 mm 0.57 x 0.57 in	NXP ICODE SLIX / SLIX 2	Beauty and Personal Care
AD Miniblock		14.5 x 14.5 mm 0.57 x 0.57 in	STM ST25TV02K	Beauty and Personal Care

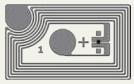
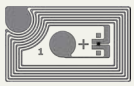
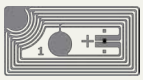
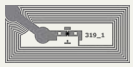
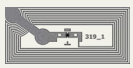
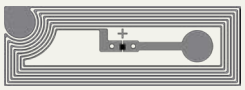
Industrial Portfolio HF inlays

Product Name	Design (not to scale)	Antenna Dimensions	Chip	Industry Segments
AD Minitrack		14 x 31 mm 0.55 x 1.22 in	NXP ICODE SLIX / SLIX 2	Apparel Healthcare Inventory
AD Minitrack		14 x 31 mm 0.55 x 1.22 in	STM ST25TV02K	Apparel Healthcare Inventory
AD Racetrack		45 x 76 mm 1.77 x 2.99 in	NXP ICODE SLIX / SLIX 2	Media and Document Management
AD Stingray		Ø 105 mm 4.13 in	NXP ICODE SLIX / SLIX 2	
AD Velodrome		30 x 10 mm 1.18 x 0.39 in	NXP ICODE SLIX 2	General Industry

Industrial Portfolio NFC inlays

Product Name	Design (not to scale)	Antenna Dimensions	Chip	Industry Segments
AD Bullseye™ NFC		Ø 35 mm 1.38 in	NXP NTAG213 NXP NTAG216	Apparel, Aviation, Food, Healthcare, Inventory, Supply Chain
AD Bullseye™ On-Metal		Ø 35 mm 1.38 in	NXP NTAG213	Apparel, Food, Healthcare, Inventory
AD Bullseye™ Pro		Ø 35 mm 1.38 in	NXP NTAG424 DNA	Apparel, Aviation, Food, Healthcare, Inventory Supply Chain
AD Circus™ Flex		Ø 20 mm 0.79 in	NXP NTAG213	Apparel, Aviation, Food, Inventory, Supply Chain
AD Circus™ Mini		Ø 16 mm 0.63 in	NXP NTAG213	Apparel, Beauty and Personal Care, Food, Inventory
AD Circus™ NFC		Ø 20 mm 0.79 in	NXP NTAG210 Micro	Apparel, Aviation, Food, Healthcare, Inventory, Supply Chain
AD Circus™ NFC		Ø 20 mm 0.79 in	NXP NTAG213 NXP NTAG216	Apparel, Beauty and Personal Care, Food, Healthcare, Inventory, Supply Chain
AD Circus™ NFC		Ø 20 mm 0.79 in	ST25TN512 ST25TN01K	Apparel, Beauty and Personal Care, Food, Healthcare, Inventory, Supply Chain
AD Circus™ Dura 2.0		Ø 20 mm 0.79 in	NXP NTAG213	Apparel, Beauty and Personal Care, Healthcare
AD Circus™ On-Metal		Ø 20 mm 0.79 in	NXP NTAG213	Apparel, Food, Healthcare, Inventory
AD Circus™ Pro		Ø 20 mm 0.79 in	EM 4332 NXP NTAG424 DNA	Apparel, Aviation, Food, Healthcare, Inventory Supply Chain
AD Circus™ Tamper Loop		20 x 50 mm 0.79 x 2.0 in	NXP NTAG213 TT	Healthcare Food

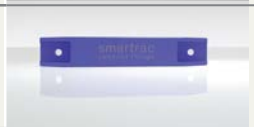
Industrial Portfolio NFC inlays

Product Name	Design (not to scale)	Antenna Dimensions	Chip	Industry Segments
AD Midas NFC		10 x 17 mm 0.39 x 0.67 in	NXP NTAG210 Micro NXP NTAG213	Apparel
AD Midas+ NFC		11.5 x 19 mm 0.45 x 0.75 in	NXP NTAG210 Micro NXP NTAG213	Apparel
AD Midas+ NFC		11.5 x 19 mm 0.45 x 0.75 in	ST25TN512 ST25TN01K	Apparel
AD Midas Slim		17 x 8.5 mm 0.67 x 0.34 in	NXP NTAG210 Micro NXP NTAG213	Food
AD Minitrack NFC		14 x 31 mm 0.55 x 1.22 in	NXP NTAG210 Micro NXP NTAG213	Apparel
AD Minitrack NFC		31 x 14 mm 1.22 x 0.55 in	ST25TN512 ST25TN01K	Apparel
AD Velodrome		30 x 10 mm 1.18 x 0.39 in	ST25TV512C NFC	General Industry

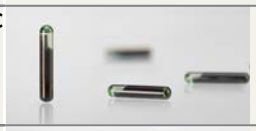
Industrial Portfolio TT Sensor Plus 2 tags

Product Name	Design (not to scale)	Tag Dimensions	Chip	Industry Segments
AD-TT Sensor Plus 2		68 x 26 x 3.5 mm 2.68 x 1.02 x 0.14 in	NXP NHS3100	Logistics Healthcare Food

UHF RFID hard tags

Product Name	Design (not to scale)	Hard Tag Dimensions	Chip	Industry Segments
AD Maxdura® Tire Tag		43 x 2.0 x 2.00 mm 1.69 x 0.07 x 0.07	Impinj M730	Automotive Industrial Applications
AD Eartrace® Male Flag		60 x 76 mm 2.36 x 2.99 in	Impinj Monza R6-P	Animal Identification
AD Maxdura® Brick		39 x 13 mm 1.54 x 0.51 in	Alien Higgs 9	Automotive Industrial Applications Logistics
AD Maxdura® Ceramic		5 x 5 mm 0.20 x 0.20 in (±0.5 mm) many sizes available	Alien Higgs 3	Automotive Industrial Applications Logistics
AD Maxdura® Flex		124 x 30 mm 4.88 x 1.18 in	Alien Higgs 9	Automotive Industrial Applications Logistics
AD Maxdura® Keg Dual		53 x 43 mm 2.09 x 1.69 in	Impinj Monza R6-P NXP ICODE SLIX2	Food Industrial Applications Logistics
AD Maxdura® Keg Embedded		10 x 60 mm 0.39 x 2.36 in	Impinj Monza R6-P	Food Industrial Applications Logistics
AD Maxdura® Long Range		150 x 25 mm 5.91 x 0.98 in	Alien Higgs 9 Impinj Monza 4E	Automotive Industrial Applications Logistics
AD Maxdura® Outdoor		150 x 25 mm 5.91 x 0.98 in	Alien Higgs 9	Automotive Industrial Applications Logistics
AD Tagmicro-Tx3D		5 x 5 mm 0.20 x 0.20 in	ASIC 16k	Automotive
AD Tagmicro-TxFN		5 x 5 mm 0.20 x 0.20 in	ASIC 4k ASIC 8k	Automotive

NFC / HF hard tags

Product Name	Design (not to scale)	Hard Tag Dimensions	Chip	Industry Segments
AD Glass Tag NFC		Ø 2.12 x 12 mm 0.08 x 0.47 in	NXP ICODE SLIX 2 NXP ICODE SLIX-L NXP NTAG216	Industrial Applications Healthcare Sports and Events
AD HAT NFC Dongle		Ø 30 mm 1.18 in	NXP NTAG213	Animal Identification Industrial Applications
AD Maxdura® Case		51 x 51 mm 2.01 x 2.01 in	NXP ICODE SLIX	Automotive Industrial Applications Logistics
AD Maxdura® Disc		Ø 15 mm - 0.59 in Ø 20 mm - 0.78 in Ø 30 mm - 1.18 in Ø 50 mm - 1.97 in	ATMEL ATA5577 EM 4237 SLIC Fujitsu FRAM 2k rev.C NXP ICODE SLIX NXP ICODE SLIX 2	Automotive Healthcare Industrial Applications Logistics
AD Maxdura® Keg Dual		53 x 43 mm 2.09 x 1.69 in	Impinj Monza R6-P NXP ICODE SLIX2	Food Industrial Applications Logistics
AD Maxdura® Laundry		Ø 16 mm 0.63 in	EM 4033 DFN	Apparel Industrial Applications Logistics
AD Maxdura® Mini		Ø 6 mm 0.24 in	NXP ICODE SLIX	Automotive Industrial Applications Logistics

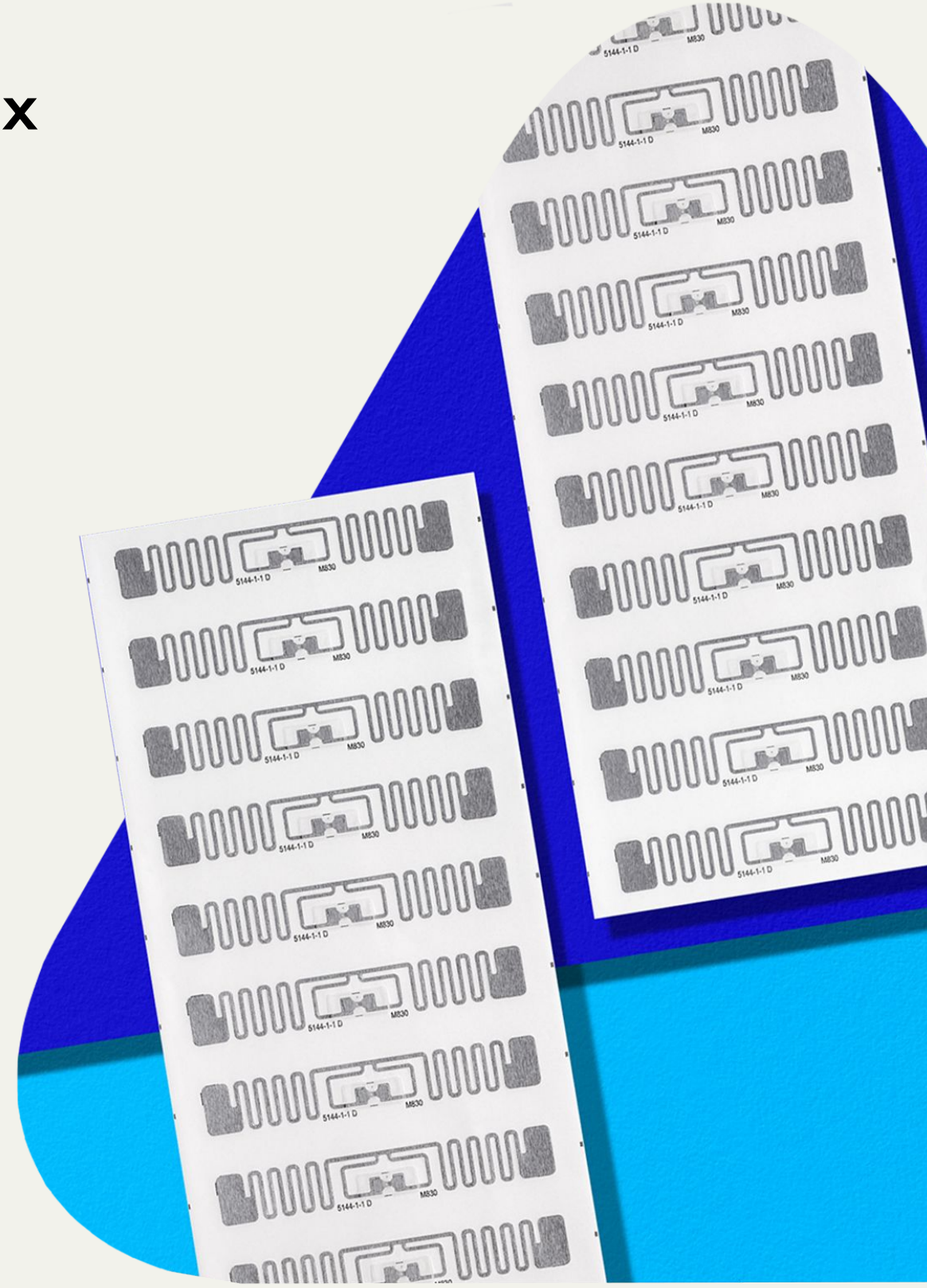
LF hard tags

Product Name	Design (not to scale)	Hard Tag Dimensions		Chip	Industry Segments
AD Glass Tag AES		Ø 3.15 x 13.30 mm 0.12 x 0.52 in		ASIC	Automotive Immobilizer Systems Industrial Applications
AD Eartrace® Air Coil		Max. Inner Diameter Ø 24.1 mm / 0.95 in Ø 20 mm / 0.79 in Ø 23 mm / 0.91 in Ø 26 mm / 1.02 in Ø 27 mm / 1.09 in Ø 20.8 mm / 0.81 in Ø 25.4 mm / 1 in Ø 27.8 mm / 1.09 in	Min. Outer Diameter Ø 20 mm / 0.79 in Ø 15 mm / 0.59 in Ø 19.5 mm / 0.77 in Ø 17.1 mm / 0.67 in Ø 23.8 mm 0.94 in Ø 15 mm / 0.59 in Ø 19.9 mm / 0.78 in Ø 23.8 mm / 0.94 in	EM 4305 SIC279	Animal Identification
AD Glass Tag Animal ID		Ø 1.25 x 8.30 mm / 0.05 x 0.33 in Ø 1.41 x 8.30 mm / 0.06 x 0.33 in Ø 2.12 x 12 mm / 0.08 x 0.47 in Ø 3.85 x 23 mm / 0.15 x 0,91 in Ø 3.85 x 32 mm / 0.15 x 1.26 in		EM 4305 SIC279 Other IC's on request	Animal Identification
AD Glass Tag Industry		Ø 2.12 x 12 mm / 0.08 x 0.47 in Ø 3.15 x 13.30 mm / 0.12 x 0.52 in Ø 3.85 x 32 mm / 0.15 x 1.26 in		NXP HITAGS 256 NXP HITAGS 2048 Unique	Industrial Applications Logistics
AD Intrace® Cannula		Ø 1.41 x 8.30 mm / 0.06 x 0.33 in Ø 1.41 x 10 mm / 0.06 x 0.39 in Ø 2.12 x 12 mm / 0.08 x 0.47 in		EM 4305	Animal Identification
AD Intrace® Syringe		Ø 1.25 x 8.30 mm / 0.05 x 0.33 in Ø 1.41 x 8.30 mm / 0.06 x 0.33 in Ø 1.41 x 10 mm / 0.06 x 0.39 in Ø 2.12 x 12 mm / 0.08 x 0.47 in		EM 4305	Animal Identification
AD Glass Tag Tagcoder Lite II		Ø 3.15 x 13.30 mm 0.12 x 0.52 in		ASIC	Automotive Industrial Applications
AD Tagmicro-Tx3D		5 x 5 mm 0.20 x 0.20 in		ASIC 16k	Automotive
AD Tagmicro-TxFN		5 x 5 mm 0.20 x 0.20 in		ASIC 4k ASIC 8k	Automotive
AD Tagreader IC		9.93 x 5.99 mm 0.39 x 0.23 in		ASIC	Automotive
AD Glass Tag Unique Automotive		Ø 3.15 x 13.30 mm 0.12 x 0.52 in		EM 4102	Automotive Industrial Applications

LF readers

Product Name	Design (not to scale)	Hard Tag Dimensions	Industry Segments
AD Intrace® Handheld Reader RH5		155 x 82 mm 6.10 x 3.23 in	Animal Identification
AD Eartrace® Handheld Reader RH7		660 x 65 mm 25.98 x 2.56 in	Animal Identification

Appendix



AVERY DENNISON

rfid.averydennison.com

Inlay Naming Cross Reference Guide

Avery Dennison Smartrac is updating its product names to harmonize the portfolio, therefore the current numbering system (Ex. AD-32x U9) will begin changing into names (Ex. AD Bolt U9). Existing inlay designs will keep their current names. Please find the inlay naming cross reference guide below.

Current Design Family	New Design Family	Inlay Image	Antenna Dimensions
AD-13x	AD Dynamo		45 x 7.5 mm / 1.772 x 0.295 in
Bling **AD-19x**	AD Presto		22 x 12.5 mm / 0.9 x 0.5 in
AD-173	AD Cosmic		27 x 14 mm / 1.06 x 0.55 in
AD-182	AD Spectrum		32 x 32 mm / 1.26 x 1.26 in
AD 23x Slim	AD Burst		70 x 10.5 mm / 2.75 x 0.41 in
Accessory **AD-30x**	AD Dazzle		30 x 15mm / 0.87 x 0.49 in
AD-31x	AD Quantum		41.4 x 29 mm / 1.63 x 1.14 in
AD-32x	AD Bolt		41 x 16 mm / 1.61 x .629 in
AD-37x	AD Astro		53 x 19 mm / 2.09 x 0.75 in 19 x 53 mm / 0.75 x 2.09 in
AD-38x	AD Force		50 x 30 mm / 1.97 x 1.18 in

UHF IC memory

	Name	EPC Memory	User Memory	TID Prefix	TID Memory
Magnus S2	Axzon S2	128-bit	144-bit	E282 402	64 bits of serialized TID with 48-bit serial number
Magnus S3	Axzon S3	128-bit	176-bit	E282 403	64 bits of serialized TID with 48-bit serial number
H3	Alien Higgs 3	96-bit	512-bit	E200 3412	64-bit unique TID
Echo-V	EM4425	96 bit / up to 480 bit	2K-bit	E280 B11	96-bit (UHF) / 64-bit (HF) overlapping
R6-P	Impinj Monza R6-P	96/128-bit	64/32-bit	E280 1170	96 bits of serialized TID with 48-bit serial number
M4QT	Impinj Monza 4QT	128-bit	512-bit	E280 1105	96 bits of serialized TID with 48-bit serial number
M730	Impinj M730	128-bit	-	E280 1191	96 bits of serialized TID with 48-bit serial number
M750	Impinj M750	96-bit	32-bit	E280 1190	96 bits of serialized TID with 48-bit serial number
M775	Impinj M775	128-bit	32-bit	E2C0 11A2	96 bits of serialized TID with 48-bit serial number
M780	Impinj M780	496-bit	128-bit	E280 11C0	96 bits of serialized TID with 48-bit serial number
M781	Impinj M781	128-bit	512-bit	E280 11C1	96 bits of serialized TID with 48-bit serial number
M830	Impinj M830	128-bit	-	E280 11B0	96 bits of serialized TID with 48-bit serial number
M850	Impinj M850	96-bit	32-bit	E280 11B0	96 bits of serialized TID with 48-bit serial number
G2iM	NXP G2iM	256-bit	512-bit	E200 680A	96 bits of serialized TID with 48-bit serial number
U7xm-2k	NXP UCODE 7xm	448-bit	2K-bit	E280 6F12	96 bits of serialized TID with 48-bit serial number
U8	NXP UCODE 8	128-bit	-	E280 6894	96 bits of serialized TID with 48-bit serial number
U9	NXP UCODE 9	96-bit	-	E280 6895	96 bits of serialized TID with 48-bit serial number
U9xe	NXP UCODE 9xe	128-bit	-	E280 6A16	96 bits of serialized TID with 48-bit serial number
U9xm	NXP UCODE 9xm	256-bit	624-bit	E280 6897	96 bits of serialized TID with 48-bit serial number
UDNA	NXP UCODE DNA	224-bit	3K-bit	E2C0 6892	96 bits of serialized TID with 48-bit serial number

HF, NFC IC memory

	Name	User Memory
SLIX	NXP ICODE SLIX	896-bit
SLIX2	NXP ICODE SLIX2	2528-bit
NTAG210µ	NXP NTAG210µ	48-bytes
NTAG213	NXP NTAG213	144-bytes
NTAG216	NXP NTAG216	888-bytes
NTAG213 TT	NXP NTAG213 TT	144-bytes
ILT-M	NXP ICODE ILT-M	512-bit
NTAG424 DNA	NXP NTAG424 DNA	416-bytes
EM 4332	Em|linq (EM 4332)	208-bytes
ST25TN512	STMicroelectronics ST25TN512	64-bytes
ST25TN01K	STMicroelectronics ST25TN01K	160-bytes
ST25TV512C	STMicroelectronics ST25TV512C	512-bit
ST25TV02K	STMicroelectronics ST25TV02K	2048-bit

UMD Value Add:

Design & Manufacture

- IoT devices and interfaces
- Cables
- Modify products
- Mechanical design and assembly

Source

- Data capture and ICT products and from our agencies
- Systems Integration

Professional Services

- Engineering
- Software
- Deployment
- Support

Full Stack Solution Provider

- Data Carriers (barcode, RFID, sensors)
- Edge devices and gateways
- Own and manage PCI-DSS compliant Data Center
- Middleware and Cloud Application Broker
- Software: cloud, mobile and embedded applications
- Design, deploy and managed services

UMD RFID Services:

RFID Site Surveys

RFID Tag Selection, Printing, Programming and Testing

Design and Construction of RFID Systems and Portals

Cloud and Edge Software

Proof of Value Trials

RFID Mobile Devices. Mobile Device Management

UMD RFID Benefits For Real-Time Tracking And Productivity:

- Seamless end to end data acquisition
- Streamline inventory management
- Centralised cloud services. Distributed stock inventory and audit functionality
- Ability to track, trace and locate product
- Continuous visibility via frequent RFID stocktakes
- Stocktake accuracy and reduced human error

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