Avery Dennison
Smartrac
Quick Guide

January 2023

RFID labels
for apparel

Why RFID?

Inventory accuracy
- Up to 92% faster* stock counts vs barcode
- Up to 80% reduction* in 'out of stock'

Loss prevention
- Improved stock visibility
- Increased internal control

Logistics
- Increased delivery accuracy
- Faster processing speed

Customer experience
- 4-10%* sales increase
- Improved returns process
- Interactive communications
- Fast automated self checkout

Why Avery Dennison?

Broadest product range for any RFID challenge
- Global manufacturing footprint with one of the largest product ranges.
- Customized inlay and label products.
- Sustainable paper-based SmartFace®.

Most reliable and durable products ensuring consistent quality and performance
- Proprietary chip strap attach for most durable RFID tags (chip protection through life cycle).
- 100% quality control ensures 99%+ functioning tags on roll to achieve maximum ROI.
- Minimal number of malfunctioning tags even after conversion.
- Less machine down time and wastage (label converting
- and application).

Valued services that help grow your business
- Low MOQs (from 1 roll).
- Free sampling service.
- Shipping of stock items within 24 hours.
- Fast response from local RFID technology and sales team.
- Quick product qualification and POC support.

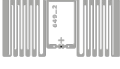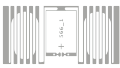**Global network to expand your knowledge and capability**
- New business opportunities from dedicated Business Development Managers and SMEs.
- RFID training academies and workshops at our I.Lab centers.
- Connect with local and/or global commercial partners.

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.

Our RFID product recommendations

| Product name	Design (not to scale)	Antenna dimensions	Chip	EPC and user memory	TID memory	Delivery format	Applications
AD Accessory		30 x 15 mm 1.20 x 0.60 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Fashion Jewelry and Sunglasses Children Accessories Pharmaceutical and Healthcare
AD Accessory		30 x 15 mm 1.20 x 0.60 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Fashion Jewelry and Sunglasses Children Accessories Pharmaceutical and Healthcare
AD-130		45 x 7.5 mm 1.77 x 0.30 in	NXP UCODE 8	128-bit EPC	96-bit/ 48-bit unique serial number	Dry inlay Wet inlay Label	Apparel Home Essentials Pharmaceutical and Healthcare
AD-173		27 x 14 mm 1.06 x 0.55 in	NXP UCODE 8	128-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Home Essentials Fashion Jewelry and Sunglasses Pharmaceutical and Healthcare
AD-23x		70 x 14.5 mm 2.76 x 0.57 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Brand Protection Supply Chain Management Home Essentials
AD-23x Pure		70 x 14.5 mm 2.76 x 0.57 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Brand Protection Supply Chain Management Home Essentials
AD-23x Slim		70 x 10.5 mm 2.75 x 0.413 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Apparel Industrial Applications
AD-239		70 x 14.5 mm 2.76 x 0.57 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Brand Protection Supply Chain Management Home Essentials
AD-302		30 x 15 mm 1.20 x 0.60 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Children Accessories Fashion Jewelry and Sunglasses Pharmaceutical and Healthcare
AD-311		41.4 mm x 29 mm 1.63 x 1.142 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Brand Protection Home Essentials
AD-312		41.4 x 29 mm 1.60 x 1.10 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Brand Protection Home Essentials
AD-324 FCC		41.4 x 16mm 1.63 x 0.63 in	NXP UCODE 8	128-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials Inventory and Logistics
AD-325		42.5 x 17mm 1.67 x 0.67 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials Inventory and Logistics
AD-327 ETSI		41.4 x 16 mm 1.63 x 0.63 in	NXP UCODE 9	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials Inventory and Logistics
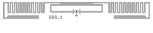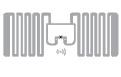
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Product name	Design (not to scale)	Antenna dimensions	Chip	EPC and user memory	TID memory	Delivery format	Applications
AD-327 ETSI Pure		41.4 x 16 mm 1.63 x 0.63 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials Inventory and Logistics
AD-327 FCC		42.5 x 17 mm 1.67 x 0.67 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials Inventory and Logistics
AD-333		70 x 14.5 mm 2.76 x 0.57 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Inventory and Logistics Supply Chain Management
AD-333 Pure		70 x 14.5 mm 2.76 x 0.57 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Inventory and Logistics Supply Chain Management
AD-334		70 x 14 mm 2.76 x 0.55 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Apparel Supply Chain Management Inventory and Logistics
AD-350 WEL		76 x 6 mm 2.99 x 0.24 in	NXP UCODE 8	128-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials
AD-350 NEL		6 X 76 mm 0.24 x 2.99 in	NXP UCODE 8	128-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials
AD-366		73.1 x 37.7 mm 2.877 x 1.484 in	NXP UCODE 9	96-bit and 0	96-bit / 48-bit unique serial number	Label	Retail Supply Chain Management Theft Prevention
AD-372 WEL		53 x 19 mm 2.09 x 0.75 in	NXP UCODE 8	128-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials
AD-374 NEL		19 x 53 mm 0.75 x 1.09 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Home Essentials Supply Chain Management Inventory and Logistics
AD-386		50 x 30 mm 1.97 x 1.18 in	Impinj M730 Impinj M750	128-bit EPC 96-bit EPC & 32-bit UM	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Supply Chain Management Home Essentials Brand Protection
AD-387 WEL		50 x 30 mm 1.97 x 1.18 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Item Level Tracking Parcel Level Tracking Case Level Tracking
AD-387 NEL		30 x 50 mm 1.18 x 1.97 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Item Level Tracking Parcel Level Tracking Case level Tracking
AD-400		23 x 23 mm 0.906 x 0.906 in	NXP UCODE 9	96-bit EPC	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label	Apparel Footwear Cosmetics and personal Care

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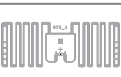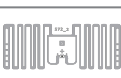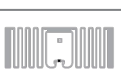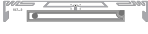| Product name	Design (not to scale)	Antenna dimensions	Chip	EPC and user memory	TID memory	Delivery format	Applications
AD Belt		70 x 14 mm 2.75 x 0.55 in	NXP UCODE 8	128-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Brand Protection Supply Chain Management Home Essentials
AD Belt		70 x 10 mm 2.76 x 0.39 in	Impinj Monza R6	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Brand Protection Supply Chain Management Home Essentials
AD Belt		70 x 10 mm 2.76 x 0.39 in	Impinj Monza R6-P	128-bit / 96-bit and 32-bit / 64-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Brand Protection Supply Chain Management Home Essentials
AD Belt		70 x 14 mm 2.75 x 0.55 in	NXP UCODE 9	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Apparel Industrial Applications
AD Belt		70 x 10 mm 2.76 x 0.39 in	Impinj M730 Impinj M750	128-bit and n/a 96bit EPC and 32bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Brand Protection Supply Chain Management Home Essentials
AD Bullseye™		Ø 33 mm 1.30 in	NXP ICODE SLIX2	2500-bit	N/A	Label / sticker	Authentication, Warranty, Care Integration into Label Packaging
AD Bullseye™ NFC		Ø 35 mm 1.378 in	NXP NTAG213	144 bytes	N/A	Dry inlay Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Bullseye On Metal		Ø 35 mm 1.38 in	NXP NTAG213	144 bytes	N/A	Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Circus™		Ø 18 mm 0.71 in	NXP ICODE SLIX 2	2500-bit	N/A	Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Circus™ Flex		Ø 20 mm 0.79 in	NXP NTAG213	144 bytes	N/A	Dry inlay Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Circus™ Mini		Ø 16 mm 0.63 in	NXP NTAG213	144 bytes	N/A	Dry inlay Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Circus™ NFC		Ø 20 mm 0.79 in	NXP NTAG210 Micro	48 bytes	N/A	Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Circus™ On Metal		Ø 20 mm 0.79 in	NXP NTAG213	144 bytes	N/A	Wet inlay	Authentication, Warranty, Care Integration into Label Packaging

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Product name	Design (not to scale)	Antenna dimensions	Chip	EPC and user memory	TID memory	Delivery format	Applications
AD Circus™ Pro		Ø 20 mm 0.79 in	NXP NTAG424 DNA	416 bytes	N/A	Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Circus™ Pro		Ø 20 mm 0.79 in	EM4332	208 bytes	N/A	Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Eagle		44 x 28 mm 1.70 x 1.10 in	NXP UCODE 8	128-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Label / sticker	Supply Chain Management Brand Protection Home Essentials
AD Eagle		44 x 28 mm 1.70 x 1.10 in	NXP UCODE 9	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Brand Protection Home Essentials
AD Eagle		44 x 28 mm 1.70 x 1.10 in	Impinj M730 Impinj M750	128-bit and n/a 96bit EPC and 32bit	96-bit / 48-bit unique serial number	Dry inlay Label / sticker	Supply Chain Management Brand Protection Home Essentials
AD Force		50 x 30 mm 1.97 x 1.18 in	Impinj M775	128-bit EPC, 32-bit User memory	96-bit / 48-bit unique serial number	Label	Retail Apparel, General Retail, Accessories, Pharmaceutical
AD Longbow		70 x 8 mm 2.75 x 0.31 in	NXP UCODE 9	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Label / sticker	Supply Chain Management Brand Protection Home Essentials
AD MedioWeb DF		45 x 28.5 mm 1.772 x 1.122 in	EM4425	96-bit / up to 480-bit	96-bit (UHF) / 64-bit (HF) overlapping	Dry+, Label	RTIs, Cardboard box, Medical device
AD Midas Flagtag		31.41 x 18 mm 1.24 x 0.71 in	Impinj M750	96-bit and 32-bit	96-bit / 48-bit unique serial number	Wet inlay	On-Metal Asset Tracking Metal / Liquids Supply Chain Management
AD Minitrack		14 x 31 mm 0.55 x 1.22 in	NXP ICODE SLIX 2	2500-bit	N/A	Dry inlay Wet inlay	Authentication, Warranty, Care Integration into Label Packaging
AD Miniweb		42 x 16 mm 1.65 x 0.63 in	Impinj Monza R6	96-bits and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Miniweb		42 x 16 mm 1.65 x 0.63 in	Impinj Monza R6-P	128-bit / 96-bit and 32-bit / 64-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Miniweb Global		42 x 16 mm 1.65 x 0.63 in	Impinj M730 Impinj M750	128-bit and n/a 96bit EPC and 32bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Miniweb		42 x 16 mm 1.65 x 0.63 in	Impinj M730 (FCC)	128-bit and 0-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Miniweb		42 x 16 mm 1.65 x 0.63 in	NXP UCODE 8 (ETSI)	128-bit / 96-bit and 32-bit / 64-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics

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AD Miniweb		42 x 16 mm 1.65 x 0.63 in	NXP UCODE 8 (FCC)	128-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Miniweb		42 x 16 mm 1.65 x 0.63 in	NXP UCODE 9	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Miniweb		42 x 16 mm 1.7 x 0.6 in	NXP UCODE 9 (ETSI)	96-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Inventory and Logistics
AD Slim DF		74.2 x 10.7 mm 2.921 x 0.421 in	EM4425	96-bit / up to 480-bit	96-bit (UHF) / 64-bit (HF) overlapping	Dry inlay Wet inlay	RTIs, medical device
AD Web		50 x 30 mm 1.97 x 1.18 in	NXP UCODE 8	128-bit and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Brand Protection
AD Web		50 x 30 mm 1.97 x 1.18 in	Impinj Monza R6	96-bits and n/a	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Brand Protection
AD Web		50 x 30 mm 1.97 x 1.18 in	Impinj Monza R6-P	128-bit / 96-bit and 32-bit / 64-bit	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Brand Protection
AD Web		50 x 30 mm 1.97 x 1.18 in	NXP UCODE 9	96-bit and 0	96-bit / 48-bit unique serial number	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Brand Protection
AD Web		50 x 30 mm 1.97 x 1.18 in	Impinj M730 Impinj M750	128-bit and n/a 96 bit EPC and 32bit	N/A	Dry inlay Wet inlay Label / sticker	Supply Chain Management Home Essentials Brand Protection

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