

# EOS-202 U9

# T A G E O S

## Datasheet

### Minimum Size and Maximum Performance on Medical Items



EOS-202 U9 RAIN RFID inlay from Tageos is the market's first and (as of July 2021) only RFID inlay to combine a footprint of just 20x10 mm (wet inlay finished size 22x12 mm) with strong performance across all types of item specified in ARC category S for healthcare and pharmaceutical applications.

Due to its outstanding read sensitivity and reliability characteristics, even in dense RFID tag populations, the EOS-202 U9 inlay is viable for use across a broad portfolio of items used for unit-dose medication, including glass syringes, clear and amber liquid glass vials, clear glass powder vials, plastic/COC syringes, and blow-fill-seal vials. That performance edge pays off in a wide range of hospital, pharmacy and inventory management workflows.

EOS-202 U9 RAIN RFID inlay features a sophisticated extra-small antenna design that leverages

the capabilities of NXP's latest UCODE 9 IC. The IC complies with the EPC Class 1 Gen 2 protocol and the ISO 18000-6c standard for global use, and features auto-adjust technology, unique brand identifiers, and pre-serialized 96-bit EPC memory.

EOS-202 U9 inlay is available in dry, wet, and paper-face formats.

Like all Tageos' RFID products, the EOS-202 U9 inlay complies with ISO 9001:2015 Quality Management System and ISO 14001:2015 Environmental Management System, as well as Environmental Directives RoHS and REACH, utilizing sustainable materials such as FSC® certified paper whenever possible.

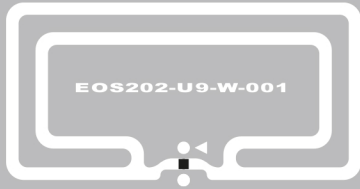
### Overview

IC:	NXP UCODE 9
EPC/User Memory:	96 bit / - bit
TID Memory:	96 bit incl. 48 bit unique S/N
Frequency Band:	860 - 960 MHz
Protocol:	EPC Class 1 Gen 2 ISO 18000-63

### Application Areas

- Pharma & Healthcare
- Beauty & Cosmetics
- Consumer Electronics



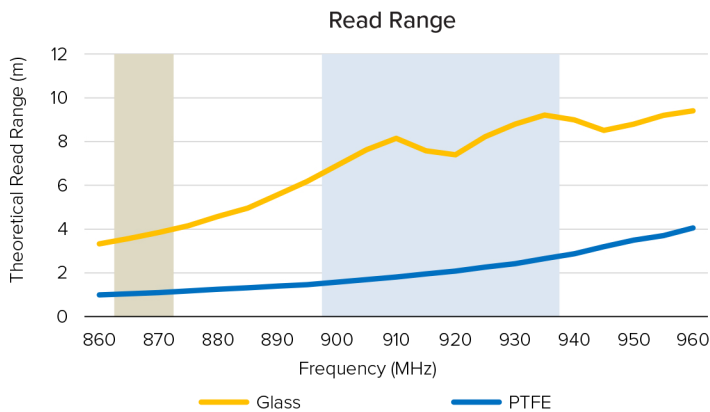


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## Technical Overview

	Dry Inlay	Wet Inlay	Paper-face Inlay
Product Code	2000000064	2000000065	2000000066
Antenna Size	20 x 10 mm 0.79 x 0.39 in	20 x 10 mm 0.79 x 0.39 in	20 x 10 mm 0.79 x 0.39 in
Die-cut Size	-	22 x 12 mm 0.87 x 0.47 in	22 x 12 mm 0.87 x 0.47 in
Web Width	32 ± 0.5 mm 1.26 ± 0.02 in	32 ± 0.5 mm 1.26 ± 0.02 in	32 ± 0.5 mm 1.26 ± 0.02 in
Pitch	19.05 ± 0.2 mm 0.75 ± 0.01 in	19.05 ± 0.2 mm 0.75 ± 0.01 in	19.05 ± 0.2 mm 0.75 ± 0.01 in
Antenna Material	Aluminium	Aluminium	Aluminium
Front Face	-	Clear PET	TT Paper
Inlay Substrate	Clear PET	Clear PET	Clear PET
Inlay Adhesive	-	Permanent	Permanent
Liner	-	Paper	Paper
Operating Temperature	-40°C / +85°C -40°F / +185°F	-40°C / +85°C -40°F / +185°F	-40°C / +85°C -40°F / +185°F
Final Inspection	100% tested	100% tested	100% tested
ARC Approvals	S	S	S

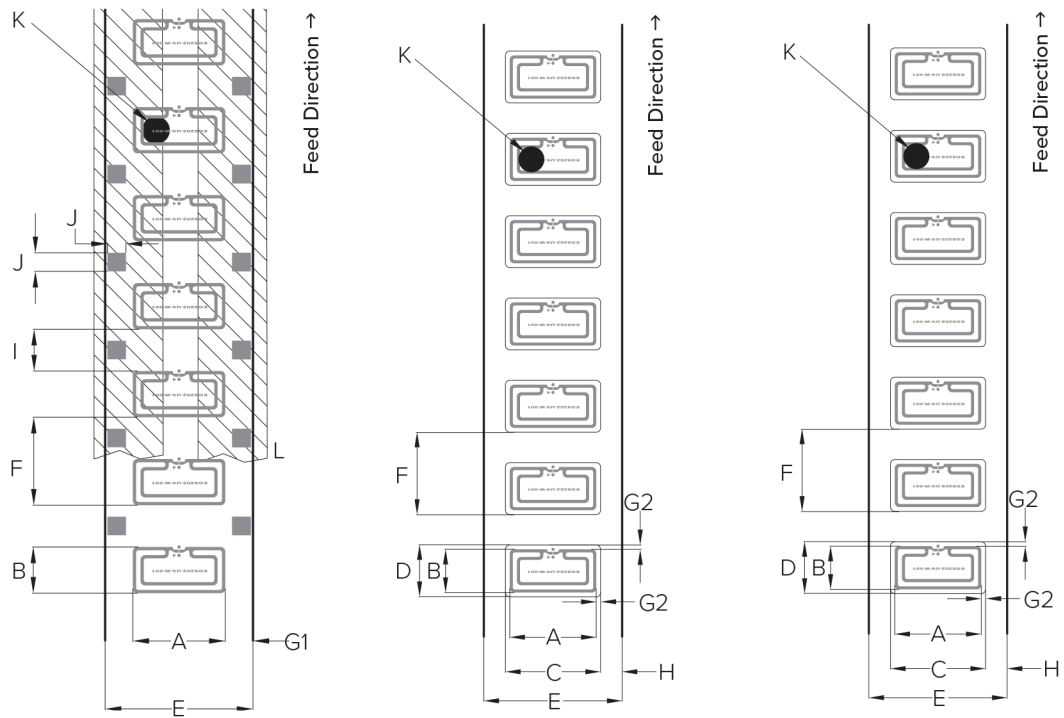


**Graphs:** All the graphs are indicative; performance in real life applications may vary. The data has been determined based on calculations for transmitters with a normal output power level and respective IC silicon. **Storage & handling precautions:** Observe standard storage and handling practices to minimize Electro Static Discharge. Tageos reserves the right to change its products and services at any time without notice. As our products are used in circumstances beyond our control, we cannot be held liable for any damages caused through their use. This is a general purpose product not designed or intended for any specific application.

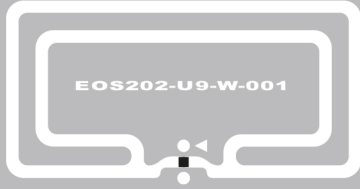
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# Product Specifications

## Mechanical Dimensions



	Dry Inlay	Wet Inlay	Paper-face Inlay
Product Code	2000000064	2000000065	2000000066
Antenna Size	A x B 20 x 10 mm / 0.79 x 0.39 in	20 x 10 mm / 0.79 x 0.39 in	20 x 10 mm / 0.79 x 0.39 in
Die-cut Size	C x D -	22 x 12 mm / 0.87 x 0.47 in	22 x 12 mm / 0.87 x 0.47 in
Web Width	E 32 ± 0.5 mm / 1.26 ± 0.02 in	32 ± 0.5 mm / 1.26 ± 0.02 in	32 ± 0.5 mm / 1.26 ± 0.02 in
Pitch	F 19.05 ± 0.2 mm/0.75 ± 0.01 in	19.05 ± 0.2 mm/0.75 ± 0.01 in	19.05 ± 0.2 mm/0.75 ± 0.01 in
Antenna to Web Edge	G1 5 ± 1 mm / 0.20 ± 0.04 in	-	-
Antenna to Die-cut	G2 -	1 ± 1 mm / 0.04 ± 0.04 in	1 ± 1 mm / 0.04 ± 0.04 in
Die-cut to Web Edge	H -	5 ± 1 mm / 0.02 ± 0.04 in	5 ± 1 mm / 0.02 ± 0.04 in
Antenna Gap	I 9.05 mm / 0.36 in	-	-
Converting Spot	J 4 x 4 mm/ 0.16 x 0.16 in	-	-
Bad Mark	K Ø 6 mm / 0.24 in	Ø 6 mm / 0.24 in	Ø 6 mm / 0.24 in
Interleaves	L yes	no	no



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### Packing Details

	Dry Inlay	Wet Inlay	Paper-face Inlay
Product Code	2000000064	2000000065	2000000066
Delivery Format	Roll (single row)	Roll (single row)	Roll (single row)
Core Inner Diameter	76 mm / 2.99 in	76 mm / 2.99 in	76 mm / 2.99 in
Roll Outer Diameter	283 mm / 11.14 in	315 mm / 12.40 in	207 mm / 8.15 in
Unwinding Direction	Inlay on outside of roll	Inlay on outside of roll	Inlay on outside of roll
Standard Roll Size	30 000	22 000	6 000
Min. Guar. Yield/Roll	98.5%	98.5%	98.5%
Box Dimensions	39.5 x 39 x 17 cm / 15.5 x 15.3 x 6.7 in	39.5 x 39 x 17 cm / 15.5 x 15.3 x 6.7 in	26 x 26 x 37 cm / 10.2 x 10.2 x 14.5 in
Roll/Box	3	3	9
Inlays/Box	90 000	66 000	54 000
Box Gross Weight	7.20 kg / 15.87 lbs	5.98 kg / 13.18 lbs	6.23 kg / 13.73 lbs
Pallet Dimensions	120 x 80 x 151 cm / 47.2 x 31.5 x 59.4 in	120 x 80 x 151 cm / 47.2 x 31.5 x 59.4 in	120 x 80 x 126 cm / 47.2 x 31.5 x 49.6 in
Boxes/Pallet	48	48	36
Inlays/Pallet	4 320 000	3 168 000	1 944 000
Pallet Gross Weight	370 kg / 816 lbs	312 kg / 688 lbs	249 kg / 549 lbs



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