

EOS-840 Sensor T AS321x

T A G E O S

Datasheet



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Superior RAIN RFID compatible temperature sensing solution

The EOS-840 Sensor T inlay provides a versatile, temperature sensing solution for a wide range of applications and use-cases in industrial, supply chain, and retail environments.

A wide sensing range, comprehensive compatibility with existing RAIN RFID readers even without firmware updates, and hassle-free on-chip calibration ensure superior usability and trouble-free deployment. Typical application areas for EOS-840 Sensor T comprise cold-chain management, grocery and agriculture warehousing, industrial and pharmaceutical quality control and manufacturing, and predictive maintenance, to name a few.

Available in dry and plastic-face delivery format, EOS-840 Sensor T complies with global frequency standards.

The sensor inlay is based on the AS3213T IC from Asygn, which is a member of the Asygn AS321x Chip Platform. Like all platform members, the IC has a sensitivity in sensing mode which is up to -12dBm with a dipole antenna, enabling read ranges of up to 7 meters for Tageos' sensor inlay. Any required calibration data is stored inside user memory, while equations to get the physical data are provided in application notes. Equipped with an optional operational mode, all AS321x ICs can return their UID for inventory management purposes.

Tageos complies with ISO 9001:2025 Quality Management and ISO 14001:2015 Environmental Management as well as utilizing sustainable manufacturing processes and materials, such as FSC®-certified paper, whenever possible. In addition, all Tageos products meet the RoHS and REACH environmental directives

Overview

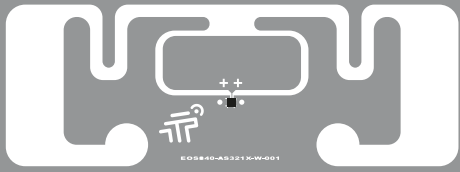
IC:	ASYGN AS3213T
EPC/User Memory:	192 bit / 96 bit
TID Memory:	96 bit incl. 48 bit unique S/N
Frequency Band:	860 - 960 MHz
Protocol:	EPC Class 1 Gen 2 - ISO 18000-63

Application Areas

- Cold Chain Management
- Item Level Tagging
- Supply Chain Management
- Temperature Sensing



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FSC® C166692

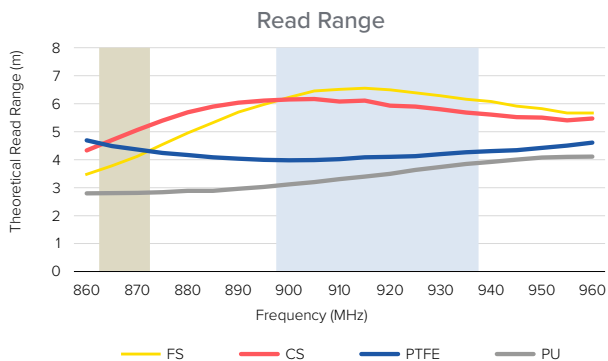


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Technical Overview

	Dry	Wet	Paper-face
Product Code	8400000007	8400000010	8400000011
Antenna Size	70 x 25 mm 2.76 x 0.98 in	70 x 25 mm 2.76 x 0.98 in	70 x 25 mm 2.76 x 0.98 in
Finish Size	-	74 x 28 mm 2.91 x 1.10 in	74 x 28 mm 2.91 x 1.10 in
Web Width	80.00 ± 1 mm 3.150 ± 0.04 in	80.00 ± 1 mm 3.150 ± 0.04 in	80.00 ± 1 mm 3.150 ± 0.04 in
Pitch	32.54 ± 0.2 mm 1.281 ± 0.01 in	32.54 ± 1 mm 1.281 ± 0.04 in	32.54 ± 1 mm 1.281 ± 0.04 in
ARC Approval	-	-	-
FSC® Certification	-	-	-
Antenna Material	Aluminium	Aluminium	Aluminium
Front Face	-	PET clear	Paper TT
Inlay Substrate	PET Clear 50µm	PET Clear 50µm	PET Clear 50µm
Inlay Adhesive	-	permanent	permanent
Liner	-	Paper	Paper
Operating Temperature	-40°C / +85°C -40°F / +185°F @20% to 90% RH	-40°C / +85°C -40°F / +185°F @20% to 90% RH	-40°C / +85°C -40°F / +185°F @20% to 90% RH
Shelf Life Time	2 years @ +25°C/40%RH	2 years @ +25°C/40%RH	2 years @ +25°C/40%RH
Final Inspection	100% tested	100% tested	100% tested



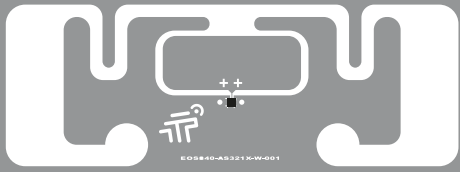
Contact:

Tageos SAS (HQ) . 1340 rue de Pinville . 34000 Montpellier . France . sales@tageos.com



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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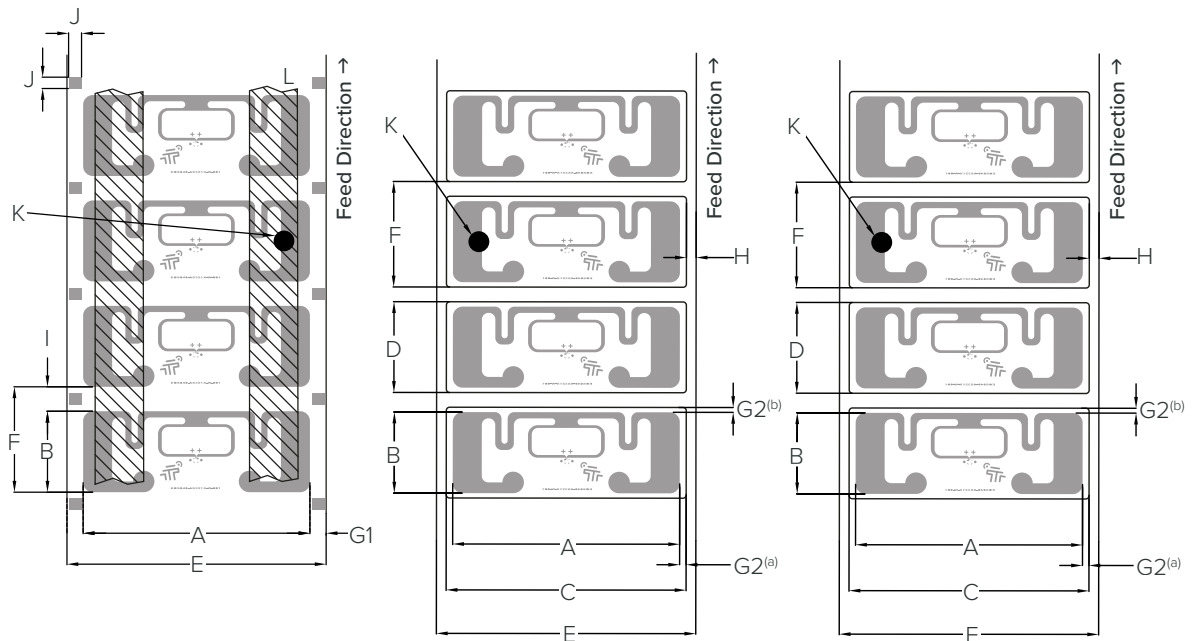


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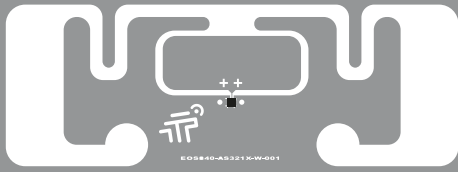
TAGEOS

Product Specifications

Mechanical Dimensions



	Dry	Wet	Paper-face
Product Code	840000007	840000010	840000011
Antenna Size	A x B 70 x 25 mm / 2.76 x 0.98 in	70 x 25 mm / 2.76 x 0.98 in	70 x 25 mm / 2.76 x 0.98 in
Finish Size	C x D - / -	74 x 28 mm / 2.91 x 1.10 in	74 x 28 mm / 2.91 x 1.10 in
Web Width	E 80.00 ± 1 mm / 3.150 ± 0.04 in	80.00 ± 1 mm / 3.150 ± 0.04 in	80.00 ± 1 mm / 3.150 ± 0.04 in
Pitch	F 32.54 ± 0.2 mm / 1.281 ± 0.01 in	32.54 ± 1 mm / 1.281 ± 0.04 in	32.54 ± 1 mm / 1.281 ± 0.04 in
Antenna to Web Edge	G1 5.0 ± 1 mm / 0.197 ± 0.04 in	-	-
Antenna to Die-cut	G2 -	2.0 ± 1 mm / 0.079 ± 0.04 in ^(a) 1.5 ± 1 mm / 0.059 ± 0.04 in ^(b)	2.0 ± 1 mm / 0.079 ± 0.04 in ^(a) 1.5 ± 1 mm / 0.059 ± 0.04 in ^(b)
Die-cut to Web Edge	H -	3.0 ± 1 mm / 0.118 ± 0.04 in	3.0 ± 1 mm / 0.118 ± 0.04 in
Antenna Gap	I 7.54 mm / 0.297 in	-	-
Converting Spot	J 4.00 x 3.50 mm / 0.157 x 0.138 in	-	-
Bad Mark	K Ø 6.0 mm / 0.236 in	Ø 6.0 mm / 0.236 in	Ø 6.0 mm / 0.236 in
Interleaves	L Yes	No	No



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Packing Details

	Dry	Wet	Paper-face
Product Code	8400000007	8400000010	8400000011
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	345 mm / 13.58 in	338 mm / 13.31 in	194 mm / 7.64 in
Unwinding Direction	Inlay on outside of roll	Inlay on outside of roll	Inlay on outside of roll
Standard Roll Size	27 000	15 000	3 000
Min. Guar. Yield/Roll	98.5%	98.5%	98.5%
Box Dimensions	39.5 x 39.0 x 17.0 cm / 15.56 x 15.35 x 6.69 in	39.5 x 39.0 x 17.0 cm / 15.56 x 15.35 x 6.69 in	26.0 x 26.0 x 37.0 cm / 10.24 x 10.24 x 14.57 in
Roll/Box	1	1	4
Inlays/Box	27 000	15 000	12 000
Box Gross Weight	7.46 kg / 16.44 lbs	7.78 kg / 17.16 lbs	8.51 kg / 18.77 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	1 296 000	720 000	432 000
Pallet Gross Weight	383 kg / 845 lbs	398 kg / 878 lbs	331 kg / 730 lbs

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