PARAGON ID

EXPLORER Family
EX4420 – U9

RAIN ALLIANCE

Overview

Application Area
Paragon ID EXPLORER Family of inlays are optimally designed for global item level Retail inventory management, Brand Protection and Supply Chain applications
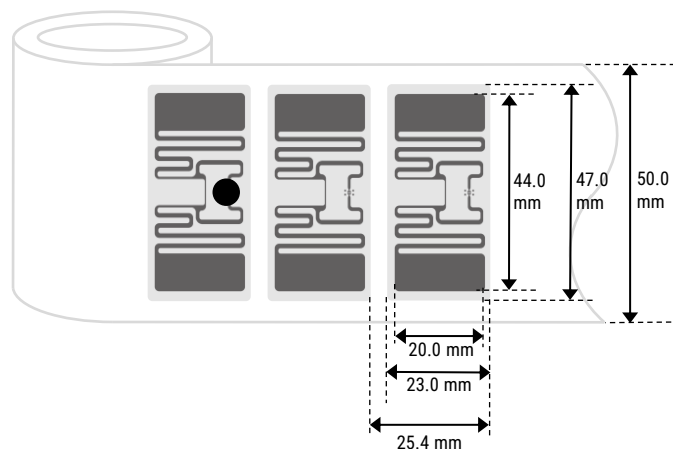
IC
The EX4420-U9 UHF inlays are based on the NXP Ucode 9 RAIN ICs with antenna designs supporting all global frequencies, including FCC and ETSI.

Paragon ID
Paragon ID is the largest EU based RFID inlay and label manufacturer with production facilities in Argent, France and Bucharest, Romania. Inlays are manufactured according to the highest ARC approved quality standards

Dimensions

44.0 mm · 47.0 mm · 50.0 mm · 20.0 mm · 23.0 mm · 25.4 mm

Inlay specifications

Standards	EPC Class1Gen2 V2.1 / ISO 18000-63
Certificates	ARC Compliant, specs: F, O, Q, R, W5, W6, Y2
Antenna size	44 x 20 mm / 1.73 x 0.79 in
Antenna orientation	Wide edge leading (WEL)
Substrate	PET 50 µm
Antenna material	Aluminium, 10 µm
Adhesive	Permanent
Backing	Silicon paper
Minimum Yield	99% for dry inlays 98% for wet transparent & paperface inlays
Quality assurance	100 % performance tested
Marking	Failed units marked*
Shelf life	Two years from date of manufacturing when stored at 20 °C and <40% relative humidity

* Bad inlay can either be non-functional or show lower performances than expected

IC specifications

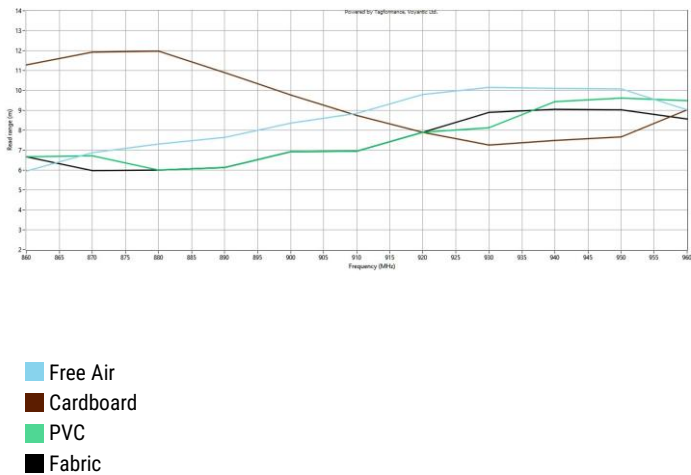|	
Manufacturer	NXP
Model and Memory	Ucode 9: 96 bits EPC
TID memory	96 bits, with 48 bits serial number
Read Sensitivity	-24.0 dBm
Write Sensitivity	-22.0 dBm
Operating Temperature	-40°C up to +85°C -40°F up to +185°F

QUALITY | 2025

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Theoretical read range

- Free Air
- Cardboard
- PVC
- Fabric
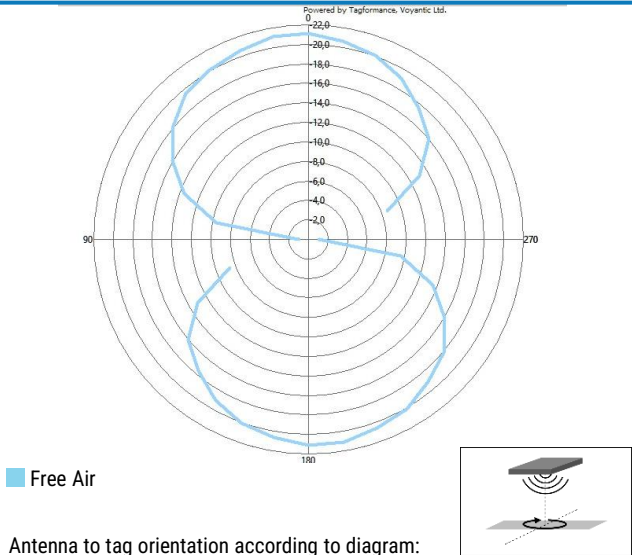
All graphs are generated under laboratory conditions. Real-life performance may vary. Reader power : 29 dBm. Antenna sensitivity : -70 dBm

Orientation sensitivity

- Free Air

Antenna to tag orientation according to diagram:

Delivery information

	Delivery Format		
	Dry Inlay (2)	**Wet Transparent Inlay**	**Paper-face Inlay**
Chip	Ucode 9	Ucode 9	Ucode 9
Sales Code	135587	135196	134884
Antenna size	44 x 20 mm / 1.73 x 0.79 in	44 x 20 mm / 1.73 x 0.79 in	44 x 20 mm / 1.73 x 0.79 in
Die-cut size	N/A	47 x 23 / 1.85 x 0.91 in	47 x 23 / 1.85 x 0.91 in
Standard Pitch	25.40 mm / 1.00 in	25.40 mm / 1.00 in	25.40 mm / 1.00 in
Web width	50 mm / 1.97 in	50 mm / 1.97 in	50 mm / 1.97 in
Core inner diameter	76 mm / 2.99 in	76 mm / 2.99 in	76 mm / 2.99 in
Quantity per roll (1)	35 000	22 000	4 000

(1)   Quantity per Roll values are nominal with up to +/- 2% variation
(2)   Delivered with disposable compensation layer (interleaves)

RoHS compliant

REACH COMPLIANCE

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