

# EXPLORER Family

## EX4216 –U9



### 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 EX4216-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

### Inlay specifications

**Standards** EPC Class1Gen2 V2.1 / ISO 18000-63

**Certificates** ARC Spec: F, O, Q, W2, W5, W6

**Antenna size** 42 x 16 mm / 1.65 x 0.63 in

**Antenna orientation** Wide edge leading (WEL)

**Substrate** PET 50 µm

**Antenna material** Aluminum, 10 µm

**Adhesive** Permanent

**Backing** Silicon paper

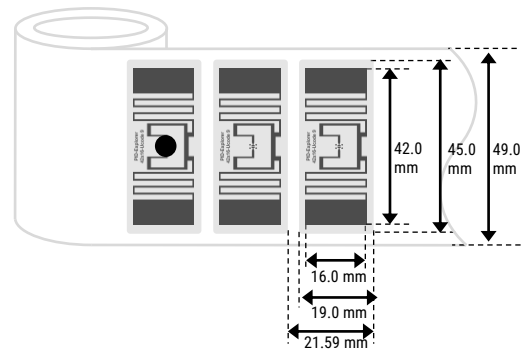
**Minimum Yield** 98% or higher,  
2 splices or less per roll

**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

### Dimensions



### 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

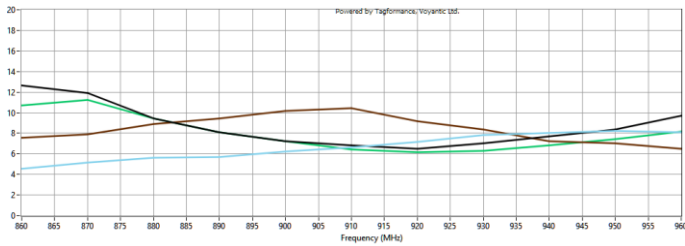
\* Bad inlay can either be non-functional or show lower performances than expected

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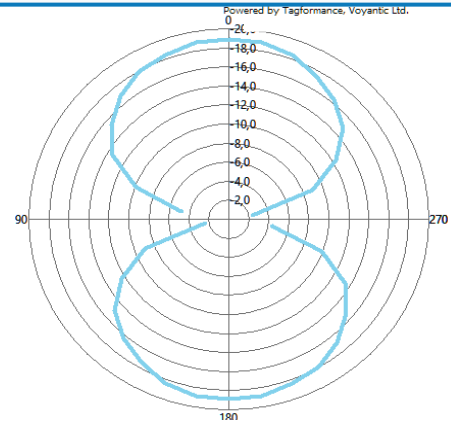
### Theoretical read range



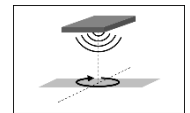
- Free Air
- Cardboard
- PVC
- Fabric

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
<b>Chip</b>	Ucode 9	Ucode 9	Ucode 9
<b>Sales Code</b>	135553	135551	135552
<b>Antenna size</b>	42 x 16 mm / 1.65 x 0.63 in	42 x 16 mm / 1.65 x 0.63 in	42 x 16 mm / 1.65 x 0.63 in
<b>Die-cut size</b>	N/A	45 x 19 mm / 1.77 x 0.75 in	45 x 19 mm / 1.77 x 0.75 in
<b>Standard Pitch</b>	21.59 mm / 0.85 in	21.59 mm / 0.85 in	21.59 mm / 0.85 in
<b>Web width</b>	53 mm / 2.09 in	49 mm / 1.93 in	49 mm / 1.93 in
<b>Core inner diameter</b>	76 mm / 2.99 in	76 mm / 2.99 in	76 mm / 2.99 in
<b>Quantity per roll (1)</b>	25 000	20 000	5 000

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



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