

Inlay Features

- EPC Class1 Gen2 compliant
- Compact dipole configuration
- Long read range
- Innovative design for excellent performance and orientation insensitivity
- Designed to work in environment with high density of tags
- Fits in ISO cards or medium sized paper labels
- Supports Impinj and NXP dies

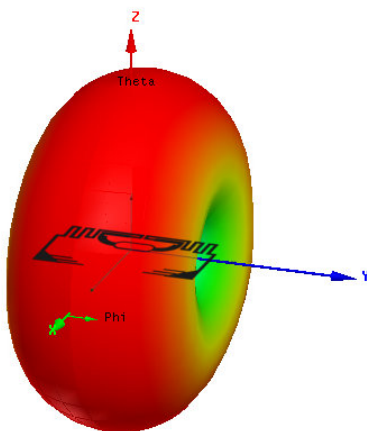
Applications

- Apparel applications
- Access control

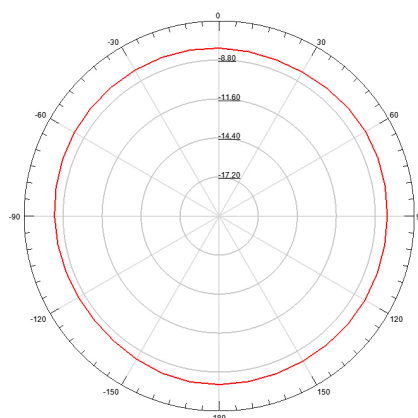
Inlay Layout and Dimensions

	UH414
Antenna width	48 mm \pm 0.5 mm (1,89 \pm 0.02 in)
Antenna length	28 mm \pm 0.5 mm (1.10 \pm 0.02 in)
Lengthwise pitch	tbd
Web width	tbd

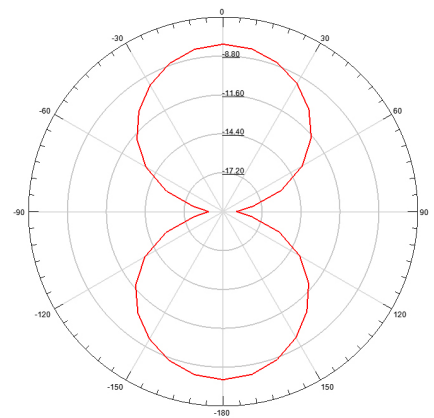
3D Radiation pattern



[Z,X] Radiation pattern



[Y,Z] Radiation pattern





Inlay Composition

Composition	Material	Thickness* [µm]
Top	Aluminium	9 ± 5%
Support	Polyester PET	38 ± 5%

* Overall thickness depends on the IC. For IC thickness please refer to the "Available ICs" table

Available ICs

	Impinj Monza 3	Impinj Monza ID
Product code	UH414-MZ3	UH414-MZID
Operating frequency	860 ÷ 960 MHz	
Standard compliance	EPC Class 1 Gen2 – ISO 18000-6C	
Thickness	150µm ± 15µm	150µm ± 15µm
Operating temperature	-40 °C to +65 °C	-40 °C to +65 °C
Storage temperature	-40 °C to +85 °C	-40 °C to +85 °C
Unique serial number	n/a	8 bytes in User Memory bank
EPC code	96 bits	96 bits
User memory	n/a	8 bytes factory locked (UID)
TID	32 bits (locked)	32 bits (locked)
Reserved memory	64 bits (for Kill and Access passwords)	112 bits (locked for factory use)
Write endurance	50 years	50 years
Data retention	100 000 cycles	100 000 cycles

	NXP UCode G2XL	NXP UCode G2XM
Product code	UH414-G2XL	UH414-G2XM
Operating frequency	840 ÷ 960 MHz	
Standard compliance	EPC Class 1 Gen2 – ISO 18000-6C	
Thickness	150µm ± 15µm	150µm ± 15µm
Operating temperature	-40 °C to +85 °C	-40 °C to +65 °C
Storage temperature	-55 °C to +125 °C	-55 °C to +125 °C
Unique serial number	32 bits in TID	32 bits in TID
EPC code	240 bits	240 bits
User memory	n/a	512 bits
TID	64 bits (read only)	64 bits (read only)
Reserved memory	64 bits (for Kill and Access passwords)	64 bits (for Kill and Access passwords)
Write endurance	10 years	10 years
Data retention	10 000 cycles	10 000 cycles

General supply conditions

Reel dimensions	Internal diameter	76 mm
	External diameter	< 200 mm (custom sizes available upon request)
Reel quantity	Inlay per reel	2500 ± 10% (custom sizes available upon request)