

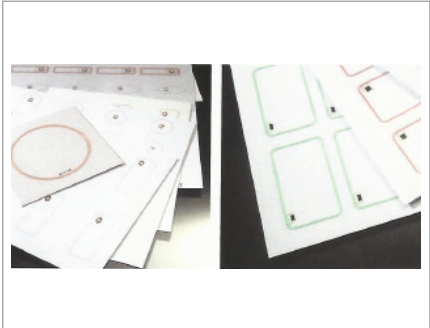


## OVERVIEW

• Product History at SMARTRAC	High volume production, customized samples on request
• Product description	Laminated (PRELAM <sup>®</sup> ) or unlaminated inlay in sheet form embedded with module and antenna

## PRODUCT HIGHLIGHTS

• Antenna	High Frequency: The leading antenna technology patented world wide - wire embedded Low Frequency: Air coil wound
• Interconnection Method	Reliable and proven Thermal Compression bonding (TC bonding)
• Construction	Multi-layered construction
• Sheet Registration	Reference edges, printed cross marks, copper wire fiducials, registration holes
• Applications	Automated fare collection, identification, and ticketing



## IC FEATURES

• General Remark	SMARTRAC works with any type of ICs available on the market. The company is independent from chip manufacturers. With most of the leading IC suppliers, SMARTRAC has completed the qualification of our inlays embedded with their chips
• Standards	Contactless ISO 14443, ISO 15693

## TRANSPONDER SPECIFICATIONS

• Antenna Size	ID-1, or according to customer's specifications
• Sheet Dimensions	3x7, 4x10, 6x6 and customized layouts
• Materials	PVC, PET-G, PC, other materials on request

## MECHANICAL PROPERTIES

• Inlay Thickness	Typically 400 µm (depending on module type)
-------------------	---

## ELECTRICAL PROPERTIES

• Operating Frequency	Nominal Low Frequency: 125kHz Nominal High Frequency: 13.56 MHz (transponder trimming according to specifications)
• Antenna Q-Factor	> 20