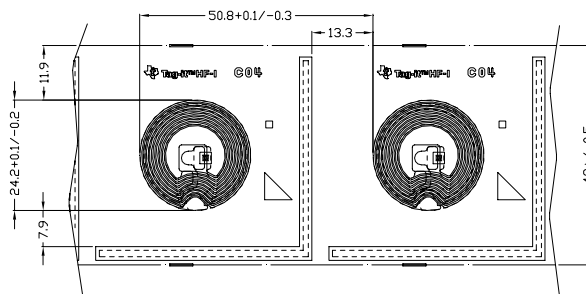# Tag-it™ HF-I Transponder Inlay
- 24.2mm Circular -

The Tag-it HF-I Transponder Inlay is compliant with the ISO/IEC 15693 standard. With a user memory of 2k bits, organized in 64 blocks, the Tag-it HF-I Transponder Inlays allows advanced solutions for a variety of applications, including product authentication, ticketing, library management, supply chain management etc. The thin and flexible Tag-it HF-I Transponder Inlays can be easily converted into paper labels or plastic labels.

Specifications:

Part Number	RI-I16-112A
Supported Standard	ISO 15693-2,-3
Recommended Operating frequency	13.56 MHz
Passive Resonance Frequency (at +25°C)	13.70 MHz ± 400kHz (includes frequency offset to compensate further integration into paper or PVC lamination)
Typ. required activation field strength to read (at +25°C)	113 dBμA/m [#]
Typ. required activation field strength to write (at +25°C)	116 dBμA/m [#]
Factory programmed Read Only Number	64 bits
Memory (user programmable)	2k bits organized in 64 x 32-bit blocks
Typical programming cycles (at +25°C)	100,000
Data retention time (at +55°C)	> 10 years
Simultaneous Identification of Tags	Up to 50 tags per second (reader/antenna dependent)
Antenna size	Ø 24.2 mm +0.1mm/-0.2mm (~0.95 in)
Foil width	48 mm ± 0.5 mm (1.89 in ± 0.02 in)
Foil pitch	50.8 mm +0.1mm/-0.3mm (2 in)
Thickness	Chip area: 0.355mm (~0.014 in) Antenna area: 0.085mm (~0.0033 in)
Base material	Substrate: PET (Polyethylenetherephtalate) Antenna: Aluminum
Smallest bending radius allowed	18 mm (~0.71 in)
Operating temperature	-25°C to +70°C
Storage temperature (single inlay)	-40°C to +85°C (warpage may occur at upper temperature range)
Storage temperature (on reel)	-40°C to +40°C
Delivery	Single row tape wound on cardboard reel with 500 mm diameter Reel outer width: approx. 60 mm (~2.36 in) Reel inner width: approx. 50 mm (~1.97 in) Hub diameter: 76.2 mm (3 in)
Typical quantity of good units per reel	5,000

Note: For highest possible read-out coverage we recommend to operate readers at a modulation depth of 20% or higher
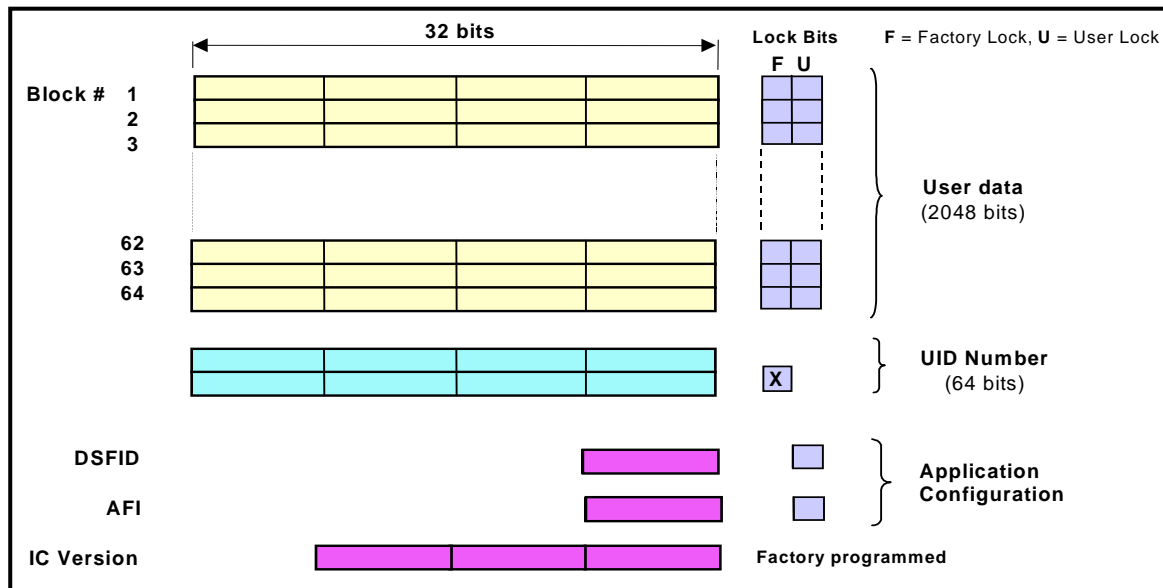[#] After integration into paper

For more information, contact the sales office or distributor nearest you. This contact information can be found on our web site at: **http://www.ti-rfid.com**

Supported Command Set

Request	Request Code	Request Mode				
		Inventory	Addressed	Non-Addressed	Select	AFI
ISO 15693 Mandatory and Optional Commands						
Inventory	0x01	✓	-	-	-	✓
Stay Quiet	0x02	-	✓	-	-	-
Read_Single_Block	0x20	✓	✓	✓	✓	✓
Write_Single_Block	0x21	-	✓	✓	✓	-
Lock_Block	0x22	-	✓	✓	✓	-
Read_Multi_Blocks	0x23	✓	✓	✓	✓	✓
Write_Multi_Blocks	0x24	-	-	-	-	-
Select Tag	0x25	-	✓	-	-	-
Reset to Ready	0x26	-	✓	✓	✓	-
Write_AFI	0x27	-	✓	✓	✓	-
Lock_AFI	0x28	-	✓	✓	✓	-
Write DSFID	0x29	-	✓	✓	✓	-
Lock DSFID	0x2A	-	✓	✓	✓	-
Get_System_info	0x2B	✓	✓	✓	✓	✓
Get_M_Blk_Sec_St	0x2C	✓	✓	✓	✓	✓
TI Custom Commands						
Write_2_Blocks	0xA2	-	✓	✓	✓	-
Lock_2_Blocks	0xA3	-	✓	✓	✓	-

✓: Implemented

 - : Not applicable

Memory Organization