Product Preview- Updated June 22, 2005

Texas Instruments Gen II Inlay

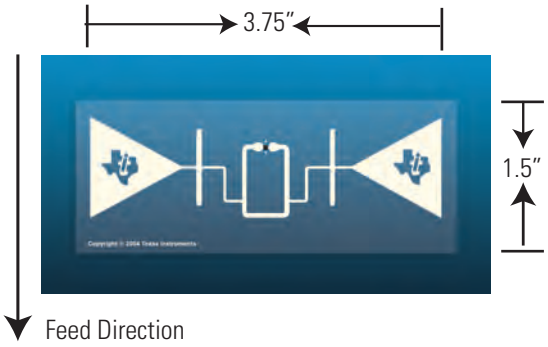
Key features:

- Innovative printed inlay antennas designed for optimal performance on wide ranging SKU's
- 100 % tested inlays
- Fit in most standard label form factors
- EPC Gen II- read/write and lock
- 96 bits EPC user memory

Description

Texas Instruments' Gen II Inlay is designed for ease of integration in the smart label conversion process. The inlays feature innovative antenna designs for optimal performance across a wide range of SKU's. The Gen II inlay portfolio includes variations in antenna designs and a standard form factor for delivery on reels to enable ease of scalability in high volume conversion and end-user application environments.

TI Gen II products are based on the EPCglobal™ Generation II specification with 96 bits of user programmable EPC™ memory field with Read, Write, and Lock capabilities.



Specifications:

Part Number	***RX-UHF-00C01-03***
Supported SKU types	UHF friendly SKU's*
IC Supported Standard	EPC UHF Gen II
Operating frequency	860- 960 MHz
EPC Memory	96 bits EPC user programmable
TID Memory	32 bits factory pre-programmed
Data retention	2 years at + 25°C
Write/erase cycle	1000 at + 25°C
Operating temperature	-40°C to + 65°C
Storage temperature (single)	-40°C to + 85°C
Storage temperature (on reel)	-40°C to + 45°C
Bending radius	15 mm (0.59")
Antenna Size	3.5" X 1" [88.90mm X 25.40mm]
Inlay pitch	1.5" [38.1mm (± 0.5mm)]
Width of inlay	3.75" [95.25mm (± 0.5mm)]
Material/ thickness	75 micron (~2.95 mils) PET substrate
Antenna Material	Printed silver ink
Reel diameter	ID: 3" core (76.2mm); OD: Max 15" (381mm)
Delivery	Single row inlay wound on cardboard reel
Quantity	10K per reel

* This inlay works with the majority of UHF friendly products. It may also work with some UHF unfriendly (UHF absorbing and reflecting) products.

Non-volatile (NVM) EPC User Memory Configuration:*

Memory Bank	Memory Bank Name	Memory Bank Bit Address	Bit Number 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01_2	EPC	70_h-$7F_h$	EPC[15:0]															
		60_h-$6F_h$	EPC[31:16]															
		50_h-$5F_h$	EPC[47:32]															
		40_h-$4F_h$	EPC[63:48]															
		30_h-$3F_h$	EPC[79:64]															
		20_h-$2F_h$	EPC[95:80]															
		10_h-$1F_h$	PROTOCOL CONTROL BITS															
		00_h-$0F_h$	CRC-16															
00_2	RESERVED	80_h-$8F_h$	Reserved															
		70_h-$7F_h$	Reserved															
		60_h-$6F_h$	Reserved															
		50_h-$5F_h$	Reserved															
		40_h-$4F_h$	LOCK_BITS[9:0]										KILL	Reserved				
		30_h-$3F_h$	ACCESS PASSWORD[15:0]															
		20_h-$2F_h$	ACCESS PASSWORD[31:16]															
		10_h-$1F_h$	KILL PASSWORD[15:0]															
		00_h-$0F_h$	KILL PASSWORD[31:16]															

* 96 bit read/write/lock EPC user memory configuration according to EPC Gen 2 (v1.0.9)

List of Commands:*

Command	Code	Length (bits)	Supported?	Protection
QueryRep	00	4	Yes	Unique command length
ACK	01	18	Yes	Unique command length
Query	1000	22	Yes	Unique command length and a CRC-5
QueryAdjust	1001	9	Yes	Unique command length
Select	1010	> 44	Yes	CRC-16
Reserved for future use	1011	-	-	-
NAK	11000000	8	Yes	Unique command length
Req_RN	11000001	40	Yes	CRC-16
Read	11000010	> 57	Yes	CRC-16
Write	11000011	> 58	Yes	CRC-16
Kill	11000100	59	Yes	CRC-16
Lock	11000101	60	Yes	CRC-16
Access	11000110	56	Yes	CRC-16
BlockWrite	11000111	> 57	No	CRC-16
BlockErase	11001000	> 57	No	CRC-16

* according to EPC Gen 2 (v1.0.9)

This **Product Preview** applies to products in the formative or design stage of development. Characteristic data or other specifications are design goals and may or may not be backed by engineering data. For more information, contact the sales office or visit us at: **http://www.ti-rfid.com**