

**Product Bulletin**

**Texas Instruments UHF EPC Gen 2 Strap**

Since 1989, TI has been providing innovative solutions for the RFID market from both a product perspective as well as a manufacturing ease of use perspective. The most recent innovation brought to the EPC Gen 2 market is the strap.

The strap is a manageable form factor that facilitates high-speed production of inlays, smart labels, as well as direct attachment onto boxes or packaging materials. Delivered on a continuous reel of 40,000 units, the strap includes TI's Gen 2 integrated circuit and two etched aluminum attachment pads on a thin substrate material.

In utilizing the strap form factor, inlay manufacturers, label converters, and box or packaging manufacturers can RFID-enable their products without the investment of expensive chip-handling equipment or cost-prohibitive clean room environments.

TI's Gen 2 integrated circuit is intended for use in the manufacture of passive RFID tag products operating in the 860 to 960 MHz frequency band. Meeting all of the EPCglobal Gen 2 and ISO/IEC 18000-6c required specifications with 192 bits of memory, this chip also goes beyond the standard requirements to provide additional functionality by supporting "block write" and "block erase" commands. In addition, a Schottky diode provides better sensitivity than competitive products, enabling excellent RFID tag performance.

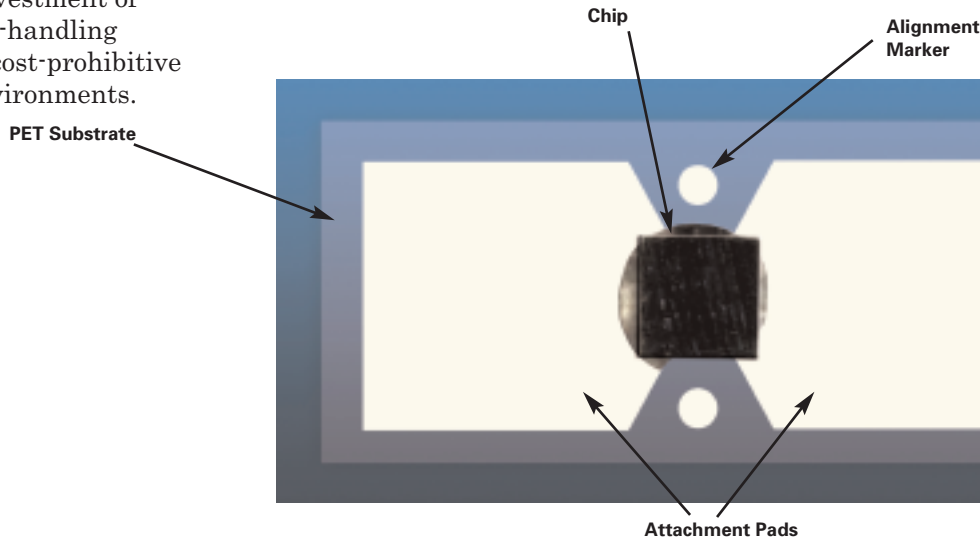
While primarily intended for the supply chain market, the Gen 2 chip and strap may also be used in asset tracking, baggage tagging, manufacturing, and a wide assortment of other applications where long read range is required.

**Key Features**

- Form factor designed to enable high-speed conversion into inlays, smart labels, or directly onto box or packaging materials
- Includes TI's Gen 2 chip (v. 1.0.9) and ISO/IEC 18000-6c and two connection pads on a thin substrate

**Gen 2 chip features:**

- Global frequency operability, 860-960 MHz
- Supports optional Gen 2 commands: Block Write, Block Erase
- 192-bit memory: 96-bit EPC, 32-bit access password, 32-bit kill password, 32-bit TID memory
- Chip designed for high-performance, low power consumption based on the most advanced silicon process node for RFID (130 nm)
- Suitable for E-field and H-field applications
- RoHS compliant



## Specification Table

Part Number	RI-UHF-STRAP-08
IC Supported Standard	EPCglobal Class 1, Gen 2 and ISO/IEC 18000-6c
IC Operating Frequency	860 – 960 MHz
EPC Memory	96 bits EPC user programmable
TID Memory	32 bits factory pre-programmed
Data Retention	10 years at + 25°C
Write/Erase Cycles	100,000 + 25°C preliminary
Operating Temperature	-40°C to + 65°C (Read), -25°C to +65°C (Write)
Storage Temperature (single)	-40°C to + 85°C
Storage Temperature (on reel)	-40°C to + 45°C
Bending Radius	15 mm ( 0.6")
Strap Pitch	4.0 mm (+0.1 mm, -0.4 mm), 0.16" (+0.004", -0.016")
Width of Strap	9.0 mm (± 0.25 mm)
Material/Thickness	50 micron (~2 mils) PET substrate
Connection Pad Material	Etched aluminum
Quantity per Reel	40,000
Reel Diameter	12.5 mm (0.5") inside dim.; 330 mm (13") outside dim.
Reel Thickness	17 mm (0.66")

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For more detailed information, please visit the document center at [www.ti-rfid.com](http://www.ti-rfid.com). TI also offers Gen 2 chips in a wafer format. Additional information on the IC version and all of the RFID products from Texas Instruments is available at [www.ti-rfid.com](http://www.ti-rfid.com).

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