

# TI Buys Impinj Gen 2 Chips for Inlays

Texas Instruments is the latest tag manufacturer using the Impinj Monza chip for Gen 2 inlays and chip-and-strap assemblies.

By Mary Catherine O'Connor

Nov. 29, 2005—[Impinj](#) and [Texas Instruments](#) (TI) have announced that TI is using the Impinj Monza EPC Gen 2 chip in the production of its UHF Gen 2 Class 1 RFID inlays and strap products. TI will not discuss the quantity of Monza chips it is purchasing from Impinj, or the length of the agreement between the two companies. However, Bill Colleran, president and CEO of Seattle-based Impinj, says his firm will be selling the Monza chips to TI "for the foreseeable future."

Julie England, general manager of [Texas Instruments' RFID Systems Group](#), says sourcing Gen 2 chips from a third party in order to meet early demand for Gen 2 tags and straps has been part of TI's Gen 2 strategy from its inception. Its own Gen 2 chips, she explains, will not be available in production quantities until the first quarter of 2006.

"We added more risk and time to our development process by producing silicon with a longer production time, but which will result in better, more feature-rich chips," says England. "We've adopted an advanced technology node, which creates 130-nanometer chips. Most other Gen 2 tag manufacturers are using 250-nanometer nodes." By creating wafers that are 130 nanometers in thickness, she adds, TI will be able to manufacture more silicon per wafer and produce chips with more disk memory. Smaller chips can also process data more quickly due to smaller gates on the chips.

According to England, TI plans to submit its Gen 2 chips for [EPCglobal](#) certification testing during the first quarter of next year. She adds that the production capacity of Gen 2 tags made with TI chips will be in the hundreds of millions next year.

TI's Gen 2 inlays and strap products with the Monza chip are already available in production quantities. A strap product is a chip joined to a strap, with metallic pads to which an antenna is bonded to create an inlay. These chip-and-strap assemblies are available for manufacture into inlays by third parties. For use in the retail supply chain, the Gen 2 inlays must be converted by a third party into smart labels.

Thus far, only one retailer, [Wal-Mart](#), has announced plans to begin accepting cases and pallets carrying Gen 2 tags. The retail giant says it intends to phase out Gen 1 tags in its supply chain by the middle of next year.

"TI has been involved in RFID for decades, and the fact that they chose us as a partner for their Gen 2 products is very exciting for us," says Colleran. "And from an end user's perspective, it's important because there are multiple large vendors that are making Gen 2 products available. We think that during 2006, mostly during the second half of the year, there will be several hundred million Gen 2 tags shipped, and that number might even reach a billion. These will be purchased by companies in the retail supply chain, and also by pharmaceutical companies getting ready for RFID regulations that will kick in during January of 2007."

The chips Impinj is supplying TI are part of more than 50 million chips the company is shipping to tag manufacturers this year (see [Impinj to Ship 50M Gen 2 Chips in 2005](#)).

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