Impinj to Ship 50M Gen 2 Chips in 2005

Alien Technology is among the nine RFID hardware vendors turning Impinj's Monza chips into inlays, strap assemblies or smart labels.

By Mary Catherine O'Connor

Sept. 8, 2005—Impinj, a Seattle semiconductor company and manufacturer of passive RFID chips, says it expects to fulfill orders for its Monza Gen 2 chips totalling more than 50 million units before the end of the year. Impinj says several million chips have already been manufactured, and its customers are converting them into inlays and smart labels. Two-thirds of the chips ordered will be created between now and 2006, the company states.

Impinj is supplying chips to nine companies manufacturing RFID Gen 2 smart labels, inlays or strap assemblies (where chips are attached to metal pads that can be bonded to an antenna): Alien Technology, Avery Dennison, Hana RFID, IER, KSW Microtec, Precisia, Rafsec, RF IDentics and RSI ID Technologies. Impinj has not divulged how many chips each company has ordered individually, but says the quantities are relatively even. "It's a broad mix of customers, and they all have a healthy consumption," says William Colleran, Impinj president and CEO.

"We've had a relationship with Impinj going back to the Gen 2 specification development [with EPCglobal]," says Alien's vice president of corporate development and product strategy, Tom Pounds. "They've developed a nice Gen 2 product, it's available and ready to go, and it's a good match for what the market needs."

"We're excited about the pickup [in orders] and the breadth of the customers that are ordering the chips," says Colleran "We see a lot healthy competition and innovation among these companies; they have various inlay assembly techniques. We're happy they're using Impinj chips in these processes, and we'll see which of them are the most successful."

Colleran says the high number of orders for Impinj Gen 2 chips is a positive sign of the demand for Gen 2 hardware—especially when compared with the demand for Gen 1. "When Alien closed its latest round of funding, the company said it'd shipped its 50 millionth tag," says Colleran. "That took a number of years, but we'll ship the bulk of the orders for 50 million chips in the second part of this year."

According to Colleran, providing chips to Alien is a big win for Impinj. "People have thought of Alien and Impinj as competitors in the past," he says, "but we're a chip company, and their core competency is in inlay and strap assembly. So our core competencies are actually quite complementary. The fact they they're sourcing from Impinj is a big deal because right now they have the lion's share of the market for UHF tags, so that portends good things for us—and, we think, for them, because we have very high-performance silicon."

Impinj debuted its Gen 2 chips, dubbed Monza, in April (see Impinj Announces Gen 2 Tags, Reader). Taiwan Semiconductor Manufacturing Co. (TSMC) is manufacturing the Monza chips and shipping them to Impinj's Seattle plant. Once Impinj places an order with TSMC, Colleran says, there will be a lead time of eight to 10 weeks before it receive the chips.

Colleran notes that before his company ships the Gen 2 chips to its own customers, where they are attached to antennas to form inlays, Impinj first tests the chips' functionality. If the customer requires it, Impinj also adds "bumps" made of gold or a gold alloy to the chips. Bumps provide connection points between the chip and antenna.

Though Impinj has been providing EPC Gen 1 tags to some of its customers, by outsourcing the inlay assembly, it will not be providing Gen 2 tags. "We've seen so much demand for chips, we don't see a need to make inlays," says Colleran.

In April, semiconductor giant Philips said it would take orders for its Gen 2 chips in September 2005, for deliveries beginning in October. Impinj has not yet released any pricing information for its Monza chips. However, in April, Philips said its chips would be priced at $0.09, in volume quantities of 10,000 units (see Philips, Partners Testing Gen 2 Chips).

In June, Texas Instruments said it would begin volume manufacturing of Gen 2 inlays and straps in July, with an estimated production of 1 million inlays in July alone. (See TI to Begin Production of Gen 2 Inlays, Straps.)