



Introducing Monza[®] 5 UHF Gen 2 RFID Tag Chip

Optimized for High-Performance, Item-Level Tagging



Impinj's new Monza[®] 5 tag chips enable unmatched read reliability and encoding performance to yield optimal RFID business results with low applied tag cost.

Monza 5 tag chips deliver:

- › Industry's highest read sensitivity, enabling smaller tag designs, longer read ranges, and practical use cases
- › Fastest encoding speed available—over 3,000 tags/minute
- › Patented SafeWrite™ encoding mechanism that monitors conditions for reliable writes
- › Highest write sensitivity—more than four times as sensitive as competitors
- › Easy-to-deploy, reliable and scalable chip-based serialization method with Monza Self-Serialization
- › 48 bits serialized Tag Identifier (TID) memory for authentication and anti-cloning application support
- › FastID™ inventory, which boosts TID-based inventory speeds by up to 2-3 times (patent pending)
- › Repassivation layer, providing consistent performance and easing inlay and label manufacturing (patent pending)

With unique features that support fast authentication and facilitate the reading of difficult-to-reach tags, Monza 5 tag chips are the ideal solution for item-level tagging of apparel, electronics, cosmetics, and jewelry, or any other application that requires high-volume, high-performance, serial-numbered tags.

Inlay Manufacturers



Monza 5 tag chips provide features to enable efficient and consistent inlay manufacturing without adding overhead:

- › Repassivation layer for higher consistency in tag performance
- › Backward compatibility with Monza 3 tag chips for easy transition
- › Designed to meet retailers' performance requirements

Consumer Goods Manufacturers



Monza 5 tag chips deliver scalable, high-performance source tagging:

- › Broadband performance in all regions and on differing materials
- › Bulk and inline encoding support
- › High write-reliability for lower applied tag cost
- › Scalable serialization built-in with Monza Self-Serialization

Retail



Monza 5 tag chips enable inventory accuracy, on-shelf-availability, and increased customer satisfaction:

- › Longer, more reliable reads deliver system dependability
- › Performance enables practical use case deployment
- › Fast inventory speeds improve customer experience

Monza 5 Tag Chip Overview

Description	Measure
Read Sensitivity (Dipole Antenna)	-20 dBm
Write Sensitivity (Dipole Antenna)	-16 dBm
Die Size	465 μ m x 465 μ m
EPC Memory	96-128 bits
Tag Identification Memory	48 bits
Maximum Write Speed	Over 3,000 tags per minute
Temperature Range	-40 °C to +85 °C
Memory Retention (non-volatile)	100,000 cycle or 50-year
Air Interface Protocol	EPCglobal UHF Class 1 Gen 2 / ISO 18000-6C

Monza Tag Chip Models

Model	User Memory	EPC Memory	Serialized TID	True3D™ Dual Antenna	QT™ Memory Security
Monza 5		up to 128	✓		
Monza 4D	32	up to 128	✓	✓	
Monza 4E	up to 128	up to 496	✓	✓	
Monza 4QT	512	up to 128	✓	✓	✓

Monza 5 Tag Chip Ordering Information

Part Number	Form	Product	Processing Flow
IPJ-W1600-E00	Wafer	Monza 5 tag chip	Bumped, thinned (to ~100 μ m), and diced



About Impinj, Inc.

Impinj, Inc. is the world's leading innovator in UHF Gen 2 RFID solutions for both item-level and supply-chain tagging. Impinj draws on its technical expertise and industry partnerships to deliver a wide range of products and solutions, comprising high-performance tag chips, readers, reader chips, software, antennas and RFID subsystem integration. Impinj's products provide robust performance, integration and cost effectiveness to a global customer base across numerous vertical markets with applications including inventory management, asset tracking, authentication and serialization. For more information on Impinj, visit www.impinj.com.

