RFID On-metal Tagging Solution

Print and Encode RFID Labels for Metal Asset Tracking

Zebra's RFID On-metal Tagging Solution is ideal for on-demand RFID asset tagging for all surfaces, including metal. The benefits of RFID are well known in industries from manufacturing and retail to transportation and healthcare. RFID systems— labels, printers and readers—enable inventory and equipment tracking in real time, helping you make maximum use of virtually all your assets.

The Challenge: Easily Identify Metal Assets and Maintain RFID Read Performance

Historically, read performance has deteriorated significantly when a traditional RFID label was applied to a metal surface. It limits the use of RFID technology for tracking valuable assets like tools, automotive and machine parts, IT equipment, returnable containers, medical devices and equipment.

An Innovative Total Solution

To produce an effective read range, tags must be slightly thicker than traditional RFID labels, making them incompatible with standard thermal RFID printers. Resolving this challenge, Zebra partnered with Confidex to enable you to print and encode thicker metal tags.

Now, with the ZT411 RFID On-metal Solution, we're building on that partnership to give you greater flexibility that is globally available—including simple-to-install, field-upgradeable technology and 300 dpi print quality.

The Ideal Combination

Zebra's ZT411 RFID On-metal Tagging Solution is optimized to print and encode Silverline labels with high-quality Zebra ribbons. This gives you excellent print quality and encoding accuracy. Silverline labels are available in four sizes to meet the needs of a wide variety of applications.

RFID On-metal Tagging Solution At A Glance

- Total Solution: Silverline RFID tags and Zebra's ZT411 RFID On-metal Tagging Solution
- Prints and encodes RFID labels that work directly on all surfaces, including metal
- Choose from four types of RFID labels: Classic, Micro II, Slim II and Blade II
- Read range of up to 10 m
- Reliable, flexible and scalable

Vertical Market Asset Tracking

Manufacturing
Asset tracking of tools, fixtures, metal parts and returnable containers

Healthcare
Asset tracking of wheel chairs, beds, oxygen canisters, IV pumps and medical diagnostic instruments

IT Equipment Tracking
Asset tracking of mobile computers, printers, antennas and infrastructure components

RFID On-metal Tagging Solution Specifications

ZT411 RFID On-metal Tagging Printer

ZT411 RFID On-metal Solution Features

Printhead assembly is engineered specifically to accommodate thicker media such as Silverline labels

Adjustable sensor assembly to support both standard media and increased thickness of Silverline labels

RFID

- Prints and encodes labels with a minimum pitch of 0.6"/16 mm
- Supports labels compatible with UHF EPC Gen 2 V2/ISO 18000-6C
- Compliant with Global RFID radio to support multinational deployments
- Automatically eliminates complex RFID placement guidelines with adaptive encoding technology
- Variable inlay placement supports a range of inlay positions for maximum media flexibility
- Track performance with RFID job-monitoring tools
- Supports industry standard multi-vendor chip-based serialization (MCS)
- Supports block permalocking of user memory compatible with ATA Spec 2000
- Integrated ThingMagic® RFID reader/encoder

Standard Features

- Print Methods: Thermal transfer and direct thermal
- Construction: Metal frame and bi-fold metal media cover with enlarged clear viewing window
- Side-loading supplies path for simplified media and ribbon loading
- Element Energy Equalizer™ (E3™) for superior print quality
- Connectivity: USB 2.0, high-speed, RS-232 Serial, 10/100 Ethernet, Bluetooth 4.1, Dual USB Host
- 4.3-inch, full-color touch display enables you to see status at a glance and manage settings via the intuitive menu, including the RFID interface
- Bi-colored status LEDs for quick printer status
- ENERGY STAR® qualified

For more information on Zebra's RFID On-metal Tagging Solution zebra.com/silverline or call your local Zebra Partner

Printer Specifications

Resolution	• 203 dpi/8 dots per mm • 300 dpi/12 dots per mm (optional)
Memory	256 MB SDRAM memory 512 MB on-board linear Flash memory
Maximum Print Width	4.09 in./104 mm
Maximum Print Speed	14 ips/356 mm per second
Media Sensors	Adjustable dual media sensors: transmissive and reflective

Media Characteristics

Maximum Media Roll Size	8.0 in./203 mm O.D. on a 3 in./76 mm I.D. core
Media Thickness	Optimized to print Silverline labels up to 1.5 mm thick; the ZT411 RFID On-metal Solution can also print on all labels appropriate for the standard ZT411
Media Types	Continuous, die-cut, notch, black-mark

Ribbon Characteristics

Outside Diameter	450 m: 3.2 in./81.3 mm O.D. on a 1.0 in./25.4 mm I.D. core
Standard Length	1476 ft./450 m
Width	2.00 in./51 mm to 4.33 in./110 mm
Ribbon	Recommended ribbon for use with Silverline labels is 5095 Performance Resin Ribbon

Confidex Silverline Label Specifications

Confidex Silverline Series RFID Labels

RFID Protocol	EPC Global Class1 Gen2 ISO 18000-6C
Operational Frequency	ETSI: 865-869 MHz FCC: 902-928 MHz
Memory Configuration	Classic: Impinj Monza 4i: EPC 256bit, User 480bit, TID 96bit Micro II & Slim II: Impinj Monza R-6P: EPC 96/128bit, User 32/64bit, TID 96bit Blade II: Impinj Monza M730: EPC 128bit, User 0bit

Silverline Classic Label Specifications

Read Range	Up to 6 m/20 ft
Dimensions	100 mm W x 40 mm H x 1.1 mm thick 3.94 in. W x 1.57 in. H x 0.04 in. thick

Silverline Micro II Label Specifications

ETSI Read Range	Metal up to 3.5 m/12 ft Plastic up to 1.5 m/5 ft Liquid up to 2 m/7 ft
FCC Read Range	Metal up to 3.5 m/12 ft Plastic up to 1.5 m/5 ft Liquid up to 2 m/7 ft
Dimensions	45 mm W x 13 mm H x 1.3mm thick 1.77 in. wide x 0.51 in. high x 0.05 in. thick

Silverline Slim II Label Specifications

ETSI Read Range	Metal up to 7 m/23 ft Plastic up to 4 m/13 ft Liquid up to 4 m/13 ft
FCC Read Range	Metal up to 7 m/23 ft Plastic up to 8 m/26 ft Liquid up to 2 m/7 ft
Dimensions	100 mm W x 13 mm H x 1.3 mm thick 3.94 in. W x 0.51 in. H x 0.05 in. thick

Silverline Blade II Label Specifications

ETSI Read Range	Metal up to 10 m/33 ft Plastic up to 5 m/16 ft Liquid up to 4 m/13 ft
FCC Read Range	Metal up to 10 m/33 ft Plastic up to 5 m/16 ft Liquid up to 4 m/13 ft
Dimensions	60 mm W x 25 mm H x 1.2 mm thick 2.36 in. W x 0.98 in. H x 0.05 in. thick