



# 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 five types of RFID labels: Classic II, Micro II, Blade 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](http://zebra.com/silverline) or call your local Zebra Partner

### Printer Specifications

<b>Resolution</b>	<ul style="list-style-type: none"> <li>• 203 dpi/8 dots per mm</li> <li>• 300 dpi/12 dots per mm (optional)</li> </ul>
<b>Memory</b>	256 MB SDRAM memory 512 MB on-board linear Flash memory
<b>Maximum Print Width</b>	4.09 in./104 mm
<b>Maximum Print Speed</b>	14 ips/356 mm per second
<b>Media Sensors</b>	Adjustable dual media sensors: transmissive and reflective

### Media Characteristics

<b>Maximum Media Roll Size</b>	8.0 in./203 mm O.D. on a 3 in./76 mm I.D. core
<b>Media Thickness</b>	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
<b>Media Types</b>	Continuous, die-cut, notch, black-mark

### Ribbon Characteristics

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

# Confidex Silverline Label Specifications

Confidex Silverline Series RFID Labels	
<b>RFID Protocol</b>	EPC Global Class1 Gen2 ISO 18000-6C
<b>Operational Frequency</b>	ETSI: 865-869 MHz FCC: 902-928 MHz
<b>Memory Configuration</b>	Micro II & Slim II: Impinj Monza R-6P: EPC 96/128bit, User 32/64bit, TID 96bit Blade II & Classic II: Impinj M730: EPC 128bit, User 0bit BladeII+: Impinj M780: EPC 496bit, User 128bit, TID 96bit
Silverline Classic II Label Specifications	
<b>Read Range</b>	Up to 15 m/50 ft
<b>Dimensions</b>	100 mm W x 40 mm H x 1.3 mm thick 3.94 in. W x 1.57 in. H x 0.05 in. thick
Silverline Micro II Label Specifications	
<b>ETSI Read Range</b>	Metal up to 3.5 m/12 ft Plastic up to 1.5 m/5 ft Liquid up to 2 m/7 ft
<b>FCC Read Range</b>	Metal up to 3.5 m/12 ft Plastic up to 1.5 m/5 ft Liquid up to 2 m/7 ft
<b>Dimensions</b>	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	
<b>ETSI Read Range</b>	Metal up to 7 m/23 ft Plastic up to 4 m/13 ft Liquid up to 4 m/13 ft
<b>FCC Read Range</b>	Metal up to 7 m/23 ft Plastic up to 8 m/26 ft Liquid up to 2 m/7 ft
<b>Dimensions</b>	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	
<b>ETSI Read Range</b>	Metal up to 10 m/33 ft Plastic up to 5 m/16 ft Liquid up to 4 m/13 ft
<b>FCC Read Range</b>	Metal up to 10 m/33 ft Plastic up to 5 m/16 ft Liquid up to 4 m/13 ft
<b>Dimensions</b>	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
Silverline Blade II+ Label Specifications	
<b>Read Range</b>	Up to 7 m/23 ft
<b>Dimensions</b>	60 mm W x 25 mm H x 1.4 mm thick 2.36 in. W x 0.98 in. H x 0.055 in. thick



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