Universal RFID Asset Tag

The closest thing you will find to a "one-size-fits-all" RFID solution! The Universal RFID Asset Tag is a surface-independent tag that uses a patented inlay design and passive RFID technology to obtain excellent read ranges regardless of the surface – metal, plastic, even wood. Along with the Universal Mini RFID Tag, the Universal RFID Hard Tag, Universal Micro RFID Tag and the Universal MC RFID Tag, these products make up a revolutionary product line that allows you to use only one RFID tag for your asset tracking application.

The Universal RFID Asset Tag features an inlay design that offers the lowest profile of any tags in its class – solving a common issue many customers have with other metal mount RFID tags where a thick standoff creates an obtrusive nuisance for the user.

This unique inlay adheres to a subsurface printed label constructed of durable, yet flexible polyester. This process protects the copy, logo and/or barcode against moderate solvents and caustics/acids while our four-color processing capabilities allow you to

Features	Patented inlay design obtains excellent read range regard less of surface – metal, plastic, even wood Lowest profile in its class makes label unobtrusive Subsurface printing on durable polyester protects printed copy against moderate solvents and caustics/acids Digital printing process provides for greater print capability with detailed logos or special designs Compatible with RFID Tracking Software
Product Print Options	Barcode . Data Matrix . QR Code . RFID . Serial Number . Text
Product Functionality	Abrasion Resistance . Chemical Resistance . Heat Resistance
Popular Applications	Audio / Visual . Government . Inventory . Restoration . Theater . Hospitals
Category	Manufacturing - RFID . Information Technology - RFID . Medical - RFID . Warehouse - RFID . Equipment Rental - RFID . Education - RFID . Asset Tracking - RFID . Work-in-Process - RFID . RFID Tags . Custom Asset Tags . RFID for Metal Surfaces

METAL CRAFT
ID MADE BETTER

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UNIVERSAL RFID BY METAL CRAFT

promote your company with a label that shows off your company name or logo. Our digital printing process ensures even the most detailed logos will look crisp and clean.

Potential Applications for Universal RFID Asset Tags

Asset Tracking – the barcode and human readable ID number on Universal RFID Asset Tag can be used to track information about the metal asset the RFID tag is adhered to i.e., laptops, furniture, containers, equipment and more.

Work-in-Process – the barcode and/or identification number on Universal RFID Asset Tag can identify a “batch” OR “lot” of product or just simply identify each product as it travels through the production process.

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Specifications Data

Material	**.002” thick polyester label adhered to proprietary inlay wrapped around 1/16” closed cell foam. Total product thickness is approximately .085”**
Serialization	Bar code and human-readable equivalent are produced using the latest high-resolution digital technology available, which provides excellent clarity and easy scanning.Code 39 is the standard symbology with a range of 2.7 to 5.4 CPI (characters per inch). Optional symbology is Code 128.
Label Copy	The label copy may include block type, stylized type, logos or other designs. All copy, block type, stylized type, logos, designs, and bar code are subsurface printed. This unique process provides moderate resistance to solvents, caustics, acids and abrasion.
Colors	Standard colors include black, red, yellow, green, dark blue, orange, purple and blue. Due to contrast needed for the bar code scanner, all bar codes are black.
Standard Adhesive	Pressure-sensitive acrylic adhesive
Frequency Range	Custom designed UHF inlay optimized for use at 915 MHz. (UHF, Class I Gen 2)
Sizes	2.875" x 1.375"
Packaging	Produced and shipped in roll form.

Chemical Testing

In all cases, after 3 weeks soaking in these chemicals, all the tags and labels responded properly when interrogated with a handheld RFID reader, and all the bar codes except those soaked in acetone were readable with a standard bar code reader.

Chemical Test Data

Length of immersion	Water	Glass cleaner Bathroom Cleaner pH 10.0	Bathroom cleaner pH 10.0	Isop. alcohol 99%	Acetone 100%	NaOH pH 12.0	HCl pH 1.0	Brake fluid
2 hours	no effect	no effect	no effect	no effect	no effect	no effect	no effect	no effect
24 hours	no effect	no effect	no effect	no effect	When pulled, tags came apart	no effect	no effect	no effect
1 week	no effect	no effect	no effect	P.S. adhesive softened	When pulled, tags came apart	When pulled, tags came apart	no effect	no effect
3 weeks	no effect	no effect	no effect	When pulled, tag came apart	When pulled, tags came apart	When pulled, tags came apart	no effect	no effect

Destructive Testing

Destructive Test Data

Temperature Testing

Heat Testing - Product withstood temperatures up to 240°F (115°C) for short term (10 minute) periods. They will withstand temperatures up to 160°F (71°C) for extended periods (tested for six hours with no degredation). The tests demonstrated that the transponder was not readable at temperatures above 185°F (85°C), but resumed function when temperatures were once again reduced below 185°F (85°C). Cold Testing - Tags were tested outdoors at 0°F and were readable, but read distance was reduced to half of the read distance observed at 60°F (15°C).

Temperature Test Data

Read Range Testing

In many cases the tags read intermittently for longer distances than those indicated, however, the results reported below were for continuously responding reads.

Read Range Test Data

Device used	Test results (all at 30 dBm)			
Handheld convergence CS-101	Metal	Plastic	Cardboard	Wood
Universal RFID asset tag	27.5 feet	20 feet	15 feet	15 feet

Barcode Readibility Testing

Barcode Readability Test Data

Abrasion Testing

Abrasion Test Data

Label Adhesion Testing

Label Adhesion Test Data

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Pull Testing

Pull Test Data

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