



EMBEDDABLE WIRE RFID TAG

The Vulcan RFID™ Embeddable RFID Wire Tag is a versatile best seller. Its design allows these RFID tags to **endure larger temperature ranges** than standard inlay based RFID tags.

These **durable** wire tags can be embedded in **pallets, concrete, fabric, or plastics** and still provide **reliable performance**. Their **flexible design** allows them to be used in a wide variety of form factors.

Because of their unique design, they can provide a **360° read profile** to reduce orientation sensitivity. The core of this RFID tag is a **small rugged circuit board** with a metal wire antenna. More durable than inlay tags, these wire based tags combine **strength with flexibility**.

A variety of encapsulations are available: high temperature Teflon or silicone, durable vulcanized rubber, and integrated cable ties. These **versatile** tags can be attached with a broad range of mechanical methods.

The Vulcan RFID™ Embeddable Wire Tag is great for a variety of applications including but not limited to:

- Textile Tracking
- Tool Tracking
- Pallet Tracking





Specifications

ELECTRICAL	Operating Frequency:	Global (860-960 MHz)
	Air Interface Protocol:	UHF ISO-18000-6C
	IC Type:	Alien Higgs 3
	Memory:	EPC 96 Bits, User 512 Bits, TID 64 Bits
	EPC Memory Content:	Unique, Randomized Number
	Max Read Distance:	1 - 2 m (3.3 - 6.6 ft)
	Applicable Surface Materials:	Any Material (Exception: Metallic Surfaces)

MECHANICAL	Tag Form Factor:	Hard Tag
	Tag Materials:	Polyolefin Thermoplastic
	Attachment Method:	Embedded, Heat-shrinking, Clips, Adhesive, Bands
	Dimensions (Length):	165 mm (6.5 in)
	Dimensions (Diameter):	1.5 mm (0.06 in)
	Weight:	2 g (0.004 lbs)
	Tensile Strength:	2500 psi Minimum

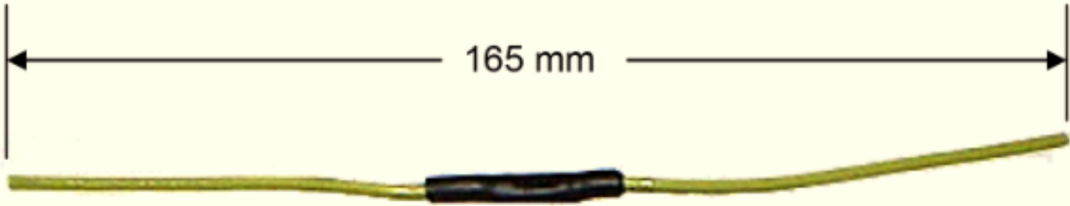
ENVIRONMENT	Operating Temperature:	-50° to +200°C (-58° to +392°F)



Diagrams

Layout and Dimensions (mm)

Length: 165mm
Wire Diameter: 1.5mm
NOTE: The wire diameter in the center 25mm chip-area is **4mm**



READ RANGE

	UHF max read-range on metal with 4W ERP
CC-71 915 MHz test (same full range 860 – 960 MHz)	660.4 cm / 260 inches (6.63 m / 21.75 feet)

The read range listed above was obtained from a lab test environment. Actual test results may be different. Testing in actual use environments is strongly recommended.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-50°C to +200°C*
Temperature Cycling Test	200 deg C, continuous for 30-days
IP classification	IP69K
Weather resistance	Excellent, including UV-resistance and sea water immersion
Chemical resistance	No physical or performance changes in: <ul style="list-style-type: none"> - Salt water - NaOH (depending on concentration) - Sulfuric acid (depending on concentration) - Motor oil (tested in 168 hour exposure) Generally good against: <ul style="list-style-type: none"> - Most solvents - Most acids and bases

* **NOTE:** The RFID tag will not be functional if the CC-71 tag is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80 deg C. The RFID tag itself will (resume) function between -50 deg C and +80 deg C.



About Vulcan RFID™ Products

Vulcan RFID™ offers a broad range of innovative RFID antennas, RFID inlays, custom RFID tags, and accessories suited for a wide variety of industries and applications. With an extensive portfolio, Vulcan RFID™ products are manufactured to withstand environments ranging from mild to extreme. All Vulcan RFID™ products are thoroughly tested and built on a name you can trust. Vulcan RFID™ products enable you to reach and sustain high levels of performance with your UHF or NFC frequency application.



Vulcan RFID™ Antennas

Vulcan RFID™ offers an extensive collection of UHF RFID antennas designed to maximize the RF performance and coverage area of an RFID system.

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Vulcan RFID™ Tags & Inlays

Vulcan RFID™ offers a broad range of RFID labels, tags and inlays built to withstand environments ranging from mild to extreme.

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