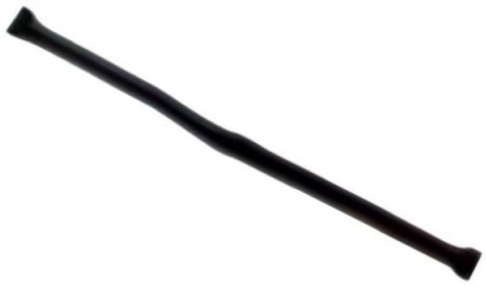
AX'Tag

AX'Tag Bitumen

Former reference : CC-101 UHF



The AX'Tag Bitumen is an UHF tag designed for construction sector. Thanks to its unique packaging, the tag can be embedded in tools and road surfaces, (concrete, asphalt, wood, plastic, metal). Even when embedded in materials such as concrete, its reading capabilities remain high-performance.

Key features

- Highly resistant (IP69K)
- Integratable in concrete
- Large reading distance (6m)
- Resistant to high temperatures (100°C) and chemicals

Applications

Identification and traceability of resources and materials (bitumen, asphalt, tar...)

Functional specifications

Type	UHF
Frequency	865-869 MHz (EU) 902-928 MHz (US)
Air interface protocol	EPC Global Class1Gen2; ISO 18000-6C
IC Type	Standard: Alien Higgs 3 (others on request) Optional: EM, Fujitsu, Impinj, NXP (others on request)
Memory	EPC memory: 128 bits (optional: up to 240 bit) EPC memory content: unique 96-bit number encoded Extended memory: 512 bit TID: factory-programmed, non-changeable, unique 64-bit ID.
Read range	Real-world: 3 – 6 meters

Physical specifications

Dimensions	Length: 14 cm / Wire Diameter: 5 mm
Tag Material	Self extinguishing dense polyolelin
Tensible strenght	2500 psi minimum
Applicable surface	Any material. NOTE: metal reduces read distance significantly unless modifies

V2.0
Non-contractual datasheet

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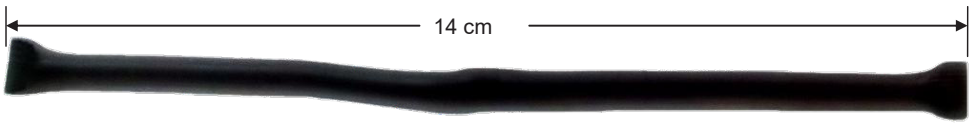
Environmental and industry compliance

Certificates	RoHS compliant ATEX-compliant
IP classification	IP69K
Operating Temperature	-50°C to +100°C
Temperature Cycling Test	100°C, continuous for 30 minutes 200°C continuous with degradation of the plastic but not the tag
Weather ability	Excellent, including UV-resistance and sea water immersion
Chemical resistance	No physical of performance changes in: - Salt water - NaOH (depending on concentration) - Sulfuric acid (depending on concentration) - Motor oil (tested in 168 hour exposure) Generally good against : - Most solvents - Most acids and bases

**According to tests performed under optimal conditions, environmental resistance to be qualified in any industrial application*

Note: The RFID tag will not be functional if the tag is left at the maximum indicated temperatures such that the internal soak temperature exceeds +80°C. The RFID tag itself will function between -50°C and +80°C.

Plan view



Read range

	UHF max read-range on metal with 4W ERP
CC-101 (915 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.

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Supported services

Option available:
- Tag pre-encoding

For further details, please contact AXEM Technology

Installation instructions

TAG PLACEMENT

The CC-101 can me mounted on metal surface to the metal surface (metal returnable containers, metal canisters, metal pallets, mettal pipes, high value metal items, aerospace applications, military applications...)

When selecting the mounting location, ensure the following:
- Wrap the tag around or along an object
- Embed the tag into fiberglass, comosites, wood, concrete, compression or injection molds...
- Epoxy the tag into the surface
- Clips or eyelets

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