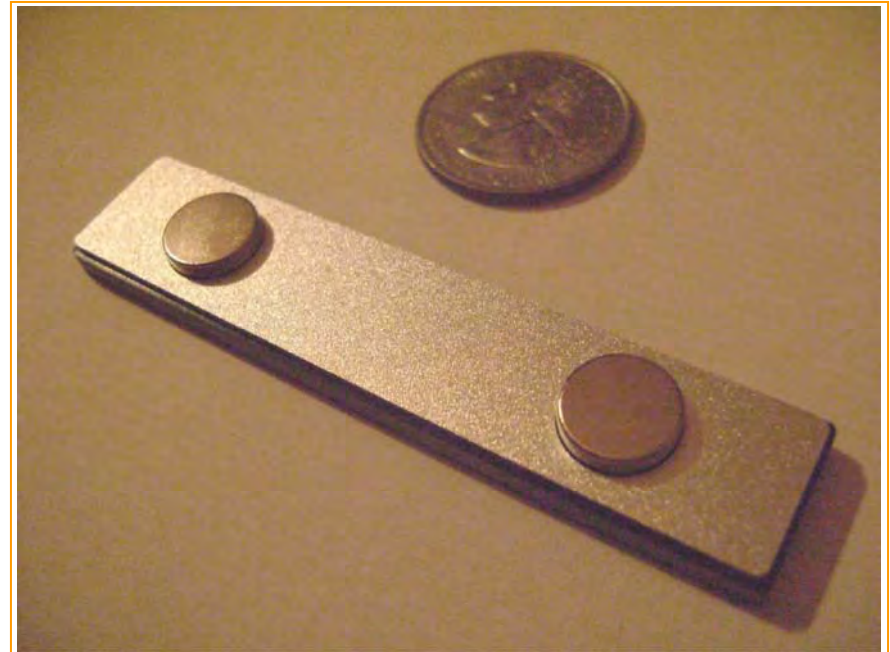


TITAN Magnet Plus G

- Passive RFID Tag
- EPC Class1 Gen2
- 2*Neodymium magnet discs
- On metal applications (except AL)
- 75mm*16mm*5.3mm (US/EU/JP)

Version of edition	v2.0
Date of latest edition	August 2011
Version of this product	v1.0
Date of release, original product	April 2011
Date of release, this product	April 2011

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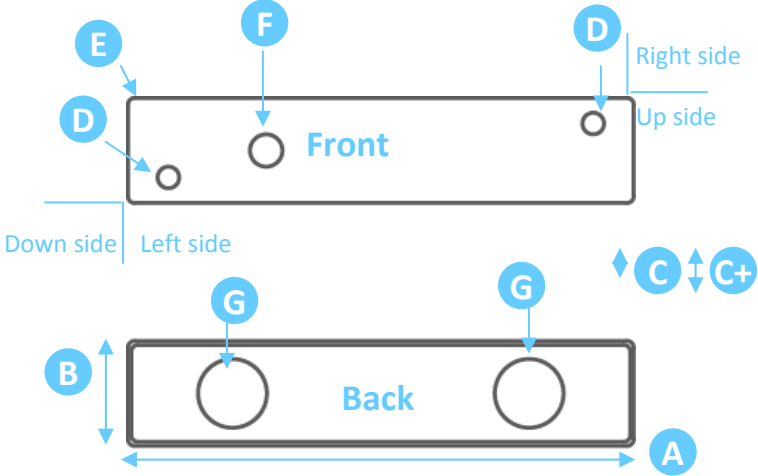
Contents:

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Specification

Titan Magnet+G (with its main body of Titan General) is newly released magnet embedded metal tag in the year of 2011. RFcamp applies 2 magnet discs of 10mm diameter, made of neodymium with unparalleled strong magnetism. Please note that neodymium magnet loses its magnetism above 80C degree.

Basic information	
Function	Passive RFID – Only on metal application * Can not be attached on aluminum
Protocol	EPC Class1 Gen2& ISO18000-6-C
Frequency band	US type 900-930MHz
	EU type 860-880MHz
	JP type 950-960MHz
Chip	Alien Higgs3**
Chip bonding	Wire bonding
Chip memory	EPC 96 bits User 512 bits TID 64 bits CRC 32 bits
Dimensions	(L)75.0mm*(H)15.6mm*(T)3.2mm
Materials	Heat pressed double layer copper clad FR4 PCB (Printed Circuit Board)
RoHS	100% Compliant
Warranty	18 months



A. Length	75.0mm
B. Height	15.6mm
C. Thickness (excluding magnet)	3.2mm
C+. Thickness (including magnet)	6.3mm
D. Hole's diameter	3.2mm
D. Hole center from right (left) side	6.1mm
D. Hole center from up (down) side	2.9mm
E. Corner radius	1.0mm
F. Chip circle's diameter	4.8mm
F. Chip circle center from left side	20.6mm
F. Chip circle center from upside	8.0mm
G. Magnet diameter	10.0mm

** http://www.alientechnology.com/docs/products/DS_H3.pdf

Read performance

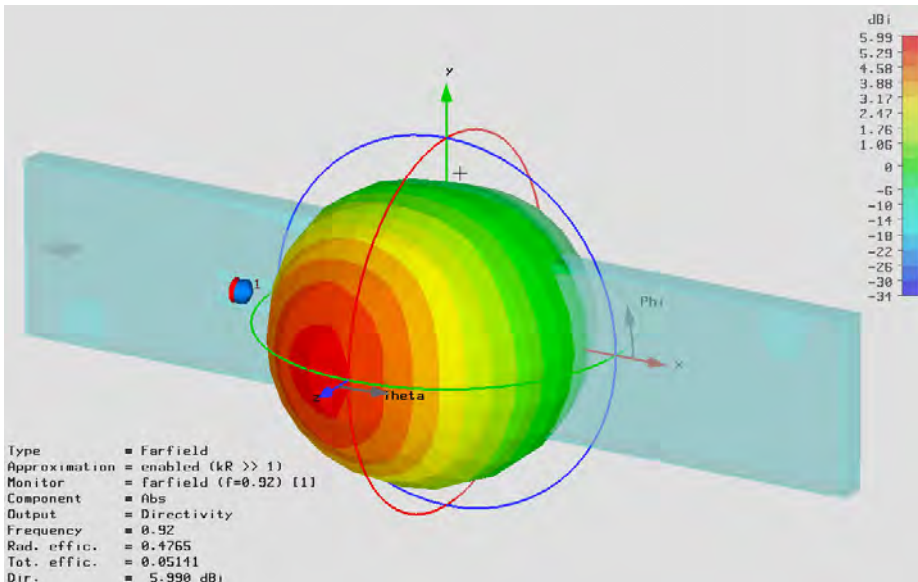
Below are Titan Magnet+G's read test data. Read range has been measured at anechoic chamber in RFID/USN Center Korea (www.ruc.or.kr), certified by EPC Global. Real read range may be different due to real RF environment, tag location& orientation, reader power& antenna gain, etc.

Titan Magnet+G	On metal		Off metal	
	Handheld**	Fixed***	Handheld**	Fixed***
Read range (meters)*	2.0	4.5	N/A	N/A

* Measured in anechoic chamber, RFID/USN center, national lab, Korea ** AT870 (manufactured by ATID Inc.) *** Alien9900+ / Alien9900+EMA

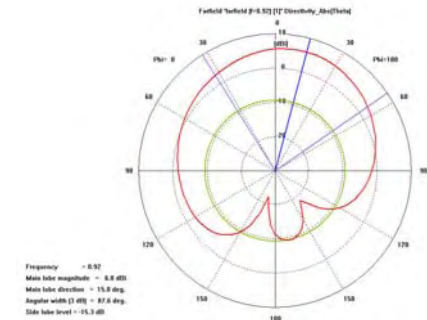
Tag radiation Pattern

3 Dimensions



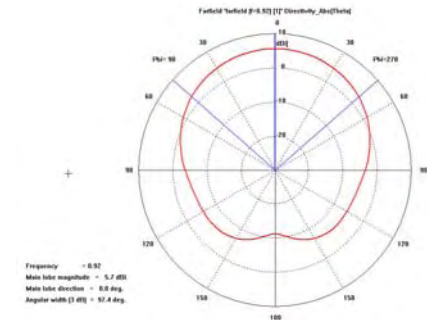
2 Dimensions

[Phi = 0°]



2 Dimensions

[Phi = 90°]



Environmental durability

Note that test results are only for main body “Titan Basic”. Neodymium magnet is weak to high temperature above 80 C degree and may be damaged by mechanical shock and vibration.

Test type	Criteria	Descriptions	Pass/Fail
Mechanical stress			
Vibration	IEC60068-2-6/64	Vibrate tags in various frequency and gravity	Pass
Trample	50Kgs	Trample on tags with 50Kgs with 1m/second – 500 times	Pass
Iron ball free fall	1Kg ball / 1.5meter	1Kg iron ball falls on tags from 1.5 meters’ height – 50 times	Pass
Water extraction press	Jensen’s machine	Withstands up to 57Kgs bar – 50 times	Pass
Ingression stress			
IP68	1.5 meter water level	Soak tags in 1.5 meter water depth – 24 hours	Pass
Temperature stress			
High temperature	200C degree	Withstand 200C degree – 24 hours	Pass
Thermal cycle	-45<>150C degree	Withstand -45<>150C degree – 500 cycles	Pass
Humidity stress			
Humidity chamber	85C degree / 85% RH	Withstand 85/85 – 168 hours	Pass
Boiling water	100C degree	Soak tags in boiling water – 48 hours	Pass
Chemical stress			
Acid	5% Sulfuric acid	Soak tags – 24 hours	Pass
Alkali	5% Sodium hydroxide	Soak tags – 24 hours	Pass
Salt water	IEC60060-2-11	Soak tags – 24 hours	Pass
Kerosene	99.9%	Soak tags – 24 hours	Pass
Diesel	99.9%	Soak tags – 24 hours	Pass
Gasoline	99.9%	Soak tags – 24 hours	Pass
Ethanol	99.9%	Soak tags – 24 hours	Pass
Methanol	99.9%	Soak tags – 24 hours	Pass
Medical enzyme	STERIS	Soak tags – 24 hours	Pass

Value added service

Upon customer's request, RFcamp provides various kinds of customized services as below in quickest way.

Chip pre-programming service

- To encode from 16 bits to 128 bits for EPC
- To encode up to 512 bits for User

Customized label with printing

- Water proof polysynthetic label
- Various label color – yellow or white, if not specified
- Black printing color – logo, text, human readable ID, barcode
- RGB printing color – logo, text, human readable ID, barcode

Laser marking

- Laser etched mark – logo, text, human readable ID, barcode



Contact information

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