



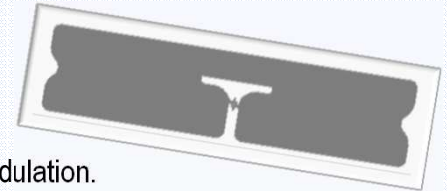
UHF RFID tag Test Platform

Test Platform:

- The UHF RFID tag test platform is a test platform dedicated to study, compare and optimize RFID tag.
- Based on the standard EPC gen 2, the test platform validates the standard like a test reader.
- Adding the flexibility to modify the data format sent: frequency, power, but also the processing of the tag's response: modulation depth, repeatability.
- At last but not the least the test platform study the wake up power but also the regulator's performances inside the tag, the matching of the antenna and the AM/PM response of the tag.

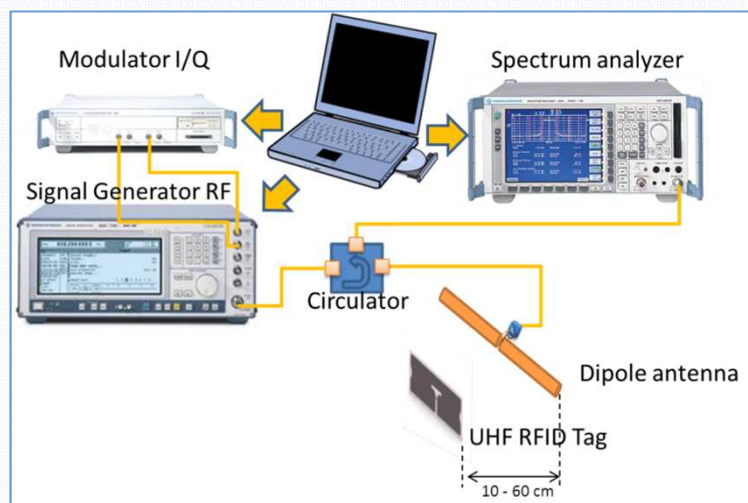
Main Features:

- Standard UHF EPC Class 1 Gen 2
- Test in the air
- Test wake up power
- Generate query to the tag, PIE encoding
- Record RN16 response's tag, Miller or FM0 modulation.



Offers:

- Bench mark RFID tag
- Compare tags' performances
- Duplicate Test Platform on site for tag's development.
- Adapt Test Platform for tag test production.
- Provide real tag's response needed for reader's development.





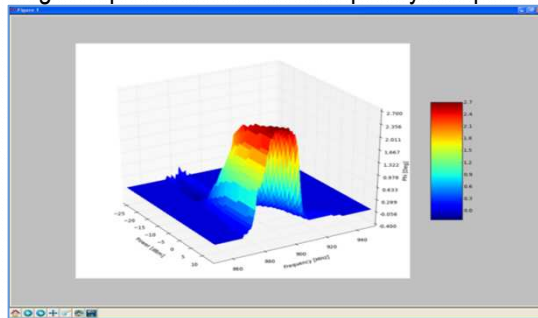
UHF RFID tag Test Platform Technical

The UHF RFID Test Platform benefits from the Expertise of NRFLab in RF test transceiver.

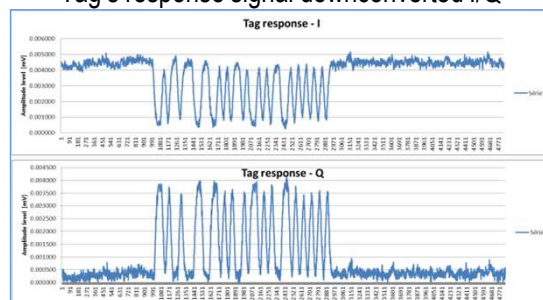
The UHF RFID test Platform provides outstanding measurements accuracy and flexibility making the development and optimization of the tag efficient and fast. Specific characteristics of the tag includes

- Wide range of power and frequency
- Very long reading range up to 60 cm
- High flexibility in the data format sent to the tag
- Fixe and independent environment enabling the repeatability and the comparisons of the tag's performances.

Tag's response level versus frequency and power



Tag's response signal downconverted I/Q



Product specification

- **Standard:**

UHF EPC Class 1 Gen 2
norm ISO 18000-63
R => T encoding PIE
T => R decoding Miller
and FM0

- **Functions tested:**

Adaptation S11
Wake up power
RN16 response
Distance max
Time response
Repeatability response
Data rate max: BLF
Modulation depth
AM/PM error

- **Parameter tunable**

Frequency, Power input,
Timing Tari, timing R=> T
calibration and T=> R
calibration, data rate,
time to wake up,
short/long preamble,
preamble, data value.

- **Low level function tested for debug:**

Rectifier, Regulator,
matching antenna,
ASK/PSK modulation.

Platform's architecture

