# LF Base Station IC TMS3705A

The LF base station IC TMS3705A allows an efficient development and production of handheld RFID readers & vehicle immobilizers. This base station IC drives the antenna of a TI-RFid transponder system to send data modulated on the antenna signal, and to detect and demodulate the response from the transponder. It allows also minimizing the external component count.

The key functions of the base station IC TMS3705A are:
» Self-adapting to transponders with a resonance frequency
   between 129 kHz – 140 kHz
» Supports all TI-RFid LF transponder functions
» Asynchronous and synchronous data transmission to the IC
» Power management for 5V operation
» Internal full bridge antenna driver
» PLL for internal clock generation of 16 MHz
» Overcurrent protection of antenna driver

Specifications:

Part Number	RI-TMS3705ADR
Operating Frequency	Typical 134.2kHz, FSK
Operating Voltage	4.5V to 5.5V DC
Current Consumption	Charge Phase (without antenna load) typical 8 mA; max. 20mA Sleep Mode (without I/O currents) typical 15 μA; max. 0.2mA
Interface to Micro Controller	Two wire multifunctional serial interface, 15625 baud
Antenna Inductivity	400μH - 700μH recommended
ESD Protection (MILSTD 883)	-2000V to +2000V
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +100°C (125°C up to 1000hrs over lifetime)
Package / Pin count	SO 16 (10 mm x 6 mm)
Packing / Delivery	Tape on Reel, 2500 units per reel
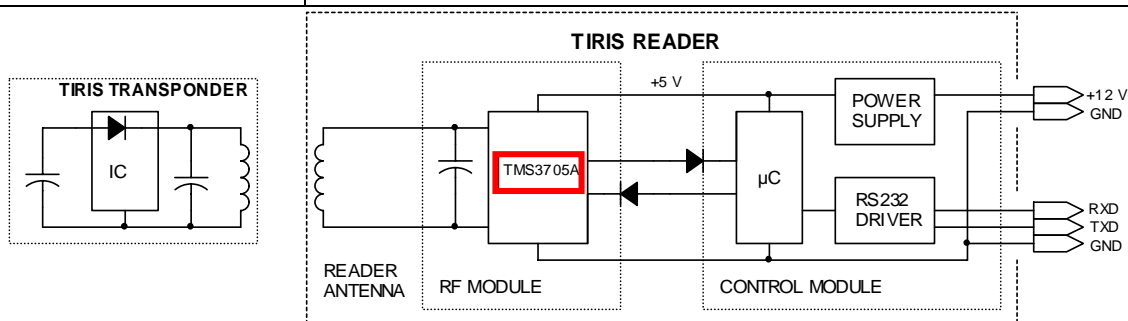
Sample Set-up of a Transponder System