

Application Note

LT6DC37C10 CM

Transponder

Transparent Commands to Read/Write
LT6 CM Transponder Module

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Introduction

The contactless LT6DC37C10 CM transponder is designed to provide access to information stored in electronic media without the need of physical or visual contact. Read and write access in addition to power transfer is accomplished with a radio frequency interface operating at 13.56 MHz.

LT6DC37C10 transponder has 16 kB EEPROM organized in 511 blocks of 32 bytes.

Functional Description

The communication between the RFID reader (e.g. ID-engine ZM) and the LT6 CM Transponder is performed through the following command operation:

- Activation of the LT6DC37C10 by the RF operating field of the RFID reader
- LT6DC37C10 waits for a 'REQUEST ALL' or 'REQUEST STANDARD' command from the RFID reader
- Transmission of 'REQUEST ALL' or 'REQUEST STANDARD' command by the RFID reader
- Transmission of type information response by the LT6DC37C10
- Transmission of 'SELECT' command by the RFID reader
- Perform 'READ/WRITE' of desired LT6DC37C10 Block by the RFID Reader

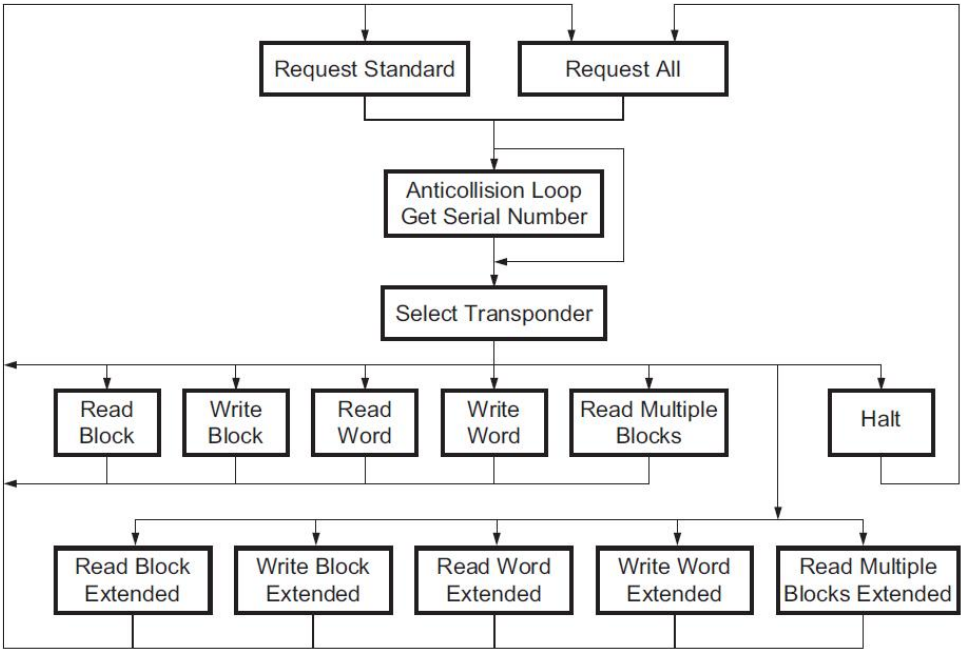


Figure 1: Possible Command Sequence*

*Source : LT6DC37C10 Datasheet

Transparent Commands Example for Reading/Writing a LT6DC37C10 Block

```
# REQUEST STANDARD
dev.Iso14a.TransparentCmdBit(Len=7, Data=buf('45'))

# REQUEST SERIAL NUMBER
UID= dev.Iso14a.TransparentCmd(EnCRCTX=False, EnCRCRX=False, SendDataLen=2,
Timeout=40, SendData=buf("93 20"))

# SELECT
dev.Iso14a.TransparentCmd(EnCRCTX=True, EnCRCRX=False, SendDataLen=7, Timeout=40,
SendData=buf('93 70') + UID)

# WRITE BLOCK EXTENDED --- Block 9
dev.Iso14a.TransparentCmd(EnCRCTX=True, EnCRCRX=False, SendDataLen=3, Timeout=40,
SendData=buf('2B 09 00'))

dev.Iso14a.TransparentCmd(EnCRCTX=True, EnCRCRX=False, SendDataLen=16, Timeout=40,
SendData= buf('AA AA AA AA BB BB BB BB CC CC CC CC DD DD DD DD'))

dev.Iso14a.TransparentCmd(EnCRCTX=True, EnCRCRX=False, SendDataLen=16, Timeout=40,
SendData= buf('11 11 11 11 22 22 22 22 33 33 33 33 44 44 44 44'))

#READ BLOCK EXTENDED --- Block 9
Read_Data_0_15_Bytes = dev.Iso14a.TransparentCmd(EnCRCTX=True, EnCRCRX=True,
SendDataLen=3, Timeout=40, SendData=buf('21 09 00'))

Read_Data_16_31_Bytes =dev.Iso14a.TransparentCmd(EnCRCTX=False,
EnCRCRX=True,SendDataLen=1, Timeout=40, SendData=buf('80'))

#END READ/WRITE BLOCK 9
```

Please check LT6DC37C10 datasheet for further commands like READ MULTIPLE BLOCKS, HALT, READ WORD, WRITE WORD.

Document History

Initials	Version	Date	Changes
IA	1.0	20210129	Initial Release
IA	1.1	20210129	Minor corrections