

TSC-RF013 Module

Protocol Manual

Version 1.01
2009.12.14

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I \ Descriptions

Mandatory Fields

Optional Fields

Command

Format: Request:

STX	LENS	FLAGS	COMMAND	DATA ₁	DATA ₂	...	DATA _n	CRC
0x02	8bits	8bits	8bits	8bits	8bits	...	n*8bits	16bits

Response:

STX	LENS	Response Code	DATA ₁	DATA ₂	...	DATA _n	CRC
0x02	8bits	8bits	8bits	8bits	...	n*8bits	16bits

STX is the ASCII code for a Start of Transmission. (**STX = 0x02**)

LENS specifies how many bytes are in the request or the response, not including the [STX] and not including the [LENS].

FLAGS specify command options.

COMMAND specifies the command type of the host request.

Response Code specifies the response message from the module.

DATA₁, DATA₂, ... , DATA_n are optional for the command type data.

CRC is a two-byte field calculated by the host controller.

The CRC is calculated over all the fields in the request or response not including the initiator and terminator bytes.

The CRC polynomial, $x^{16} + x^{12} + x^5 + 1 = 0x8408$, is used in a forward CRC calculation with a preset value of 0x0000.

II 、 Function Summary

Flags List

Value	Function
0x20	General use, with CRC field.
0x68	With CRC field, Tag ID and RF transmitter stays on after the command has been executed.
0x28	With CRC field and RF transmitter stays on after the command has been executed.

Command List

Value	Name
0x14	SELECT_TAG
0x24	REDA_TAG
0x44	WRITE_TAG

Response Code List

Code	Description
0x94	SELECT_TAG fail
0x14	SELECT_TAG pass
0xA4	READ_TAG fail
0x24	READ_TAG pass
0x44	WRITE_TAG pass
0xC4	WRITE_TAG fail

III \ Description of the Transmission

《》 Select Tag

Request : Host → Module

[02] [05] [20] [14] [01] [9F 9D]

02 = STX

05 = LENS, 5 Bytes {[20][14][00][9F 9D]}

20 = FLAGS, With CRC field.

14 = COMMAND, SELECT_TAG

01 = Data₁, Tag Type = I-Code SLI

9F 9D = CRC, Calculated by the host controller.

Response : Module Host

Fail : No tag or Wrong tag

[02] [03] [94] [F8 C5]

Pass:

[02] [0C] [14] [01] [E0 07 00 00 30 03 EC 97] [11 AE]

[E0 07 00 00 30 03 EC 97] : Tag UID

《》 Select Tag With Tag UID[E0 07 00 00 30 03 EC 97]

Request : Host Module

[02] [0D] [68] [14] [01] [E0 07 00 00 30 03 EC 97] [EA BB]

Response : Module Host

Fail : No tag or Wrong tag

[02] [03] [94] [F8 C5]

Pass:

[02] [03] [14] [7C CD]

《》 **Read Tag**

Request : Host Module

[02] [07] [28] [24] [01] [02]#1 [01]#2 [A3 3A]

#1 : Starting Block

#2 : Number of Blocks

Response : Module Host

Fail : No tag or Wrong tag

[02] [03] [A4] [C9 46]

Pass:

[02] [07] [24] [00 00 00 00] [7C CD]

[00 00 00 00] : Block Data

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《》 **Write Tag**

Request : Host Module

[02] [0B] [28] [44] [01] [02]_{#1} [01]_{#2} [00 00 00 00]_{#3} [7A 5B]

#1 : Starting Block

#2 : Number of Blocks

#3 : Write Data

Response : Module Host

Fail : No tag or Wrong tag

[02] [03] [C4] [AA 40]

Pass:

[02] [03] [44] [2E 48]

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CAUTION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

Information for the OEMs and Integrators

The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.

This device is intended for OEM integrators only.

Please See the full Grant of Equipment document for other restrictions.

This device must be operated and used with a locally approved access point.

Information To Be Supplied to the End User by the OEM or Integrator

The following regulatory and safety notices must be published in documentation supplied to the end user of the product or system incorporating an adapter in compliance with local regulations. Host system must be labeled with "Contains VTV2009001", FCC ID displayed on label.