RYRR30I AT COMMAND GUIDE

AT COMMAND INSTRUCTION

1. The module has two operating mode: [1] Standalone mode [2] AT Command mode.
2. Standalone mode:
   [1] The module boots up in this mode. The module will scan the RFID TAG card in the order of ISO14443A, ISO14443B, ISO15693, Felica continuously and output the format as in AT+SCAN.
   [2] When Pin6 Low exceeds 1Sec, store <UUID> being read as a certified RFID card.
   [3] When Pin7 Low exceeds 1Sec, remove the <UUID> being read from the list of certified RFID cards.
   [4] When Pin10 Low exceeds 1Sec, all Flash will be restored to the factory default value and the module will be RESET after execution.
   [5] When a certified RFID card is read, Pin40 Lock/Unlock will output Hi, after 10 seconds, it will return to Low.
   [6] Other actions are the same as AT Command Set.
3. AT Command mode:
   [1] When input AT+MODE=1, the module enters AT Command mode. The AT Commands and the actions are as follows.

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AT Command Set

It is required to key in "enter" or "0x0D 0x0A" in the end of all AT Command.
Input AT+MODE=1 at first to execute this mode.
It is required to wait until the module replies +OK to execute the next AT command.

1. **AT** Test if the module can respond to Commands.

Syntax	Response
AT	+OK

2. **Software RESET**

Syntax	Response
AT+RST	+RST

3. **AT+MODE** Set the work mode

Syntax	Response
AT+MODE=<Parameter> <Parameter> from 0 to 1 0 : Standalone (Default) 1 : AT Command mode Example: Set the AT Command mode, AT+MODE=1	+OK
AT+MODE?	+MODE=1

4. **AT+IPR** Set the UART Baud Rate

Syntax	Response
AT+IPR=<rate> <rate> is the UART Baud Rate: 300 1200 4800 9600 19200 28800 38400 57600 115200(Default) Example: Set the Baud Rate as 9600, AT+IPR=9600 **The setting will be memorized in Flash.*	+OK
AT+IPR?	+IPR=9600

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5. **AT+SCAN** Scan TAG at a time

Syntax	Response
AT+SCAN=<Protocol>,<RSSI> <Protocol> 1：ISO14443A 2：ISO14443B 3：ISO15693 4：FELICA <RSSI> Received Signal Strength Indicator Example: Set <Protocol> as 1 to scan ISO14443A, AT+SCAN=1	+SCAN=ISO14443A,E007C4C444335583,XX

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6. **AT+TAG** List /Store/Erase usable RFID Card

Syntax	Response
AT+TAG=<List /Storage/Erase>,<UUID>,<Data> <List/Storage/Erase> 0：List the currently stored and certified <UUID> RFID cards. 1：Store <UUID> as certified RFID cards. 2：Delete the currently stored and certified <UUID> RFID cards. <UUID> UUID of the card, up to 32Bytes <Data> Self-recorded data, up to 16Bytes	+OK
Example: Store the RFID card with <UUID> F3D5F23982D45BA3. The self-recorded data is DAVID, AT+TAG=1,F3D5F23982D45BA3,DAVID	+OK
Example: Delete the RFID card with <UUID> C3D5F20082A45BA4, AT+TAG=2,C3D5F20082A45BA4	+TAG=F3D5F23982D45BA3,LINA +TAG=C3D5F20082A45BA4,DAVID . .
Example: List all <UUID> of usable RFID cards, AT+TAG=0 *Can store 32 sets of <UUID>,<Data> at most.*	

7. **AT+ADDRESS** Set the ADDRESS of RYRR30I module

Syntax	Response
AT+ADDRESS=<Address> <Address>=0~65535 (Default: 0) Example: Set module Address ID as 120, AT+ADDRESS=120 *The setting will be memorized in Flash.*	+OK
AT+ADDRESS?	+ADDRESS=120

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8. **AT+TXP** Set the transmit power of NFC module

Syntax	Response
AT+TXP=<Power> <Power> from 0 to 4 dBm 4 : 20dBm (Default) 3 : 17.5dBm 2 : 16dBm 1 : 12.5dBm 0 : 8.5dBm Example: Set the transmit power as 16dBm, AT+TXP=2	+OK
AT+TXP?	+TXP=2

9. **AT+BUZ** Open BUZZER

Syntax	Response
AT+BUZ=<On/Off> <On/Off> from 0 to 1 1 : On (Default) [1] Reading a certified RFID card will output 1Sec long sound from Pin51, PWM and output Hi for 1Sec from Pin8. [2] Reading a non-certified RFID card will make two short beeps within 1Sec. 0 : Off Example: Set to turn off BUZZER, AT+BUZ=0 **The setting will be memorized in Flash.*	+OK
AT+BUZ?	+BUZ=0

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10. **AT+GPIO** Turn on GPIO instructions

Syntax	Response
AT+GPIO=<GPIO>,<Hi/Low> <GPIO> 48：Pin48, ISO14443A 9：Pin9, ISO14443B 49：Pin49, ISO15693 50：Pin50, Felica <Hi/Low> from 0 to 1 1：GPIO outputs Hi for 1Sec(default) when reading the agreement 0：GPIO outputs Low for 1Sec when reading the agreement Example: When reading to ISO15693, Pin49 turns from Hi to Low for 1Sec, AT+GPIO=49,0 **The setting will be memorized in Flash.*	+OK
AT+GPIO?	+GPIO=48,1 + GPIO =9,1 + GPIO =49,0 + GPIO =50,1

11. Update Firmware by UART interface

Syntax	Response
AT+IAP When the module transmits the character "C" continuously, it means entering the YMODEM mode. Open SecureCRTPortable.exe for FW update.	+IAP ========== ========== = (C) Reyax Inc. = = By xxxx = ========== ========== CCCC

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12. **AT+VER?** to inquire the firmware version

Syntax	Response
AT+VER?	+VER=RYRR30I_V1.0

13. **AT+FACTORY** Set all current parameters to manufacturer defaults

Syntax	Response
AT+FACTORY All Flash will be restored to the factory default value and the module will be RESET after execution.	+FACTORY +RST

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