

# 13.56M RFID Reader YW-60x Serial

## Manual

(version 1.5)

ISO14443B

- English

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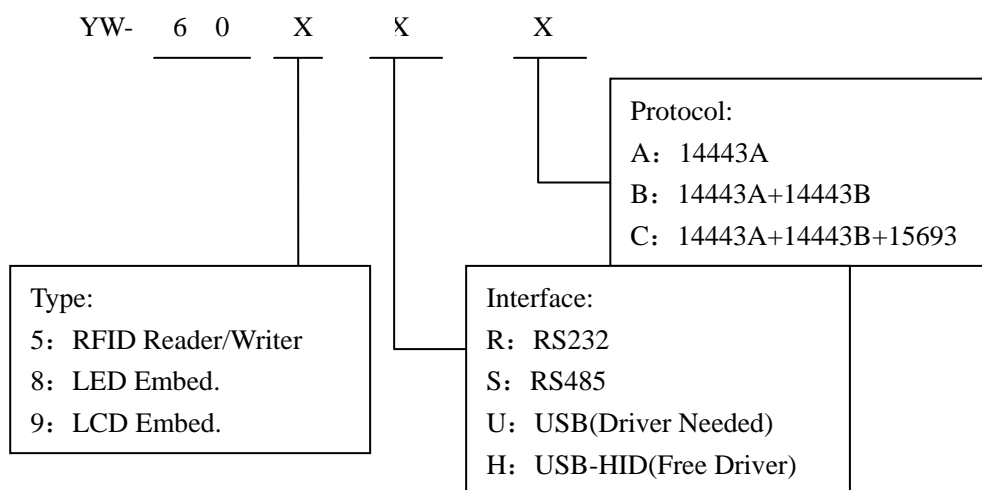
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# 1 Introduction

YW-605 RFID reader/Writer is the 13.56M HF tags Reader and Writer. She Can support ISO14443A, ISO14443B and ISO15693 RFID tags.

## 2 YW-605 Serial

13.56M RFID Reader/Writer



## 3 Feature

- ☞ Distance of read tags is 5-10cm
- ☞ DLL API supported. VC, VB, Delphi, C++Builder, C#.net, WEB example
- ☞ Beep and LED embed, which can be controlled by API.

## 4 Specifications

- ☞ Baud:19200BPS
- ☞ Power: DC5V  $\pm$  10%
- ☞ Max Con: 1.5W
- ☞ Temp: -30°C  $\sim$  +70°C
- ☞ Humidity: 35%  $\sim$  95%
- ☞ Size: 120 \* 84 \* 25 (mm)
- ☞ Weight: 100g

## 5 Program Manual

### DLL API and functions

#### 1. Get the version of DLL

**prototype:** `int stdcall YW_GetDLLVersion(void);`

**Param:** 无

**Return:** version Number is success, else is fail.

#### 2. DES

**prototype:** `int stdcall DES(unsigned char cModel, unsigned char *pkey,  
unsigned char *in, unsigned char *out);`

**Param:**

Param	Type	

cModel	unsigned char	Direction: 0 Encryption, 1 Decryption
pkey	unsigned char*	Key , 8 Bytes
in	unsigned char*	Data ,8 bytes
out	unsigned char*	Data after Des, 8bytes

Return:0

### 3. 3DES

prototype: `int stdcall DES3(unsigned char cModel, unsigned char *pKey, unsigned char *In, unsigned char *Out);`

Param:

Param	Type	
cModel	unsigned char	Direction: 0 Encryption, 1 Decryption
pkey	unsigned char*	Key, 16Bytes
in	unsigned char*	Data ,8 bytes
out	unsigned char*	Data after Des, 8bytes

Return:0

### 4. 3DES with vector

prototype: `int stdcall DES3_CBC(unsigned char cModel, unsigned char`

\*pKey, unsigned char \*In, unsigned char \*Out, unsigned char \*pIV);

Param:

Param	Type	
cModel	unsigned char	Direction: 0 Encryption, 1 Decryption
pkey	unsigned char*	Key, 16Bytes
in	unsigned char*	Data ,8 bytes
out	unsigned char*	Data after Des, 8bytes
pIV	unsigned char*	Vector , 8Bytes

Return:0

## 5. Initial Serial Port

prototype: `int stdcall YW_ComInitial(int PortIndex, int Bound);`

Param:

Param	Type	
PortIndex	<code>int</code>	Port Number, 1--255
Bound	<code>int</code>	Baud, 2400—115200, 19200default

Return:1 success, 0 fail

## 6. Free Serial port

prototype: `int stdcall YW_ComFree(void);`

Param:

Return:1 success, 0 fail

### 7. Initial HID Port

prototype: `int stdcall YW_USBHIDInitial(void);`

Param:

Return:1 success, 0 fail

### 8. Free HID Port

prototype: `int stdcall YW_USBHIDFree(void);`

Param:

Return:1 success, 0 fail

### 9. Change the serial port baud

prototype: `int stdcall YW_ComNewBound(int ReaderID , int NewBound);`

Param:

Param	Type	
ReaderID	<code>int</code>	Reader ID, default ID=0
NewBound	<code>int</code>	New Baud 0x01->9600bps 0x02->14400bps 0x03->19200bps 0x04->28800bps 0x05->38400bps 0x06->57600bps 0x07->115200bps

Return:1 success, 0 fail

### 10. Set Reader ID



**prototype:** `int stdcall YW_SetReaderID(int OldID, int NewID);`

**Param:**

Param	Type	
OldID	<code>int</code>	Old Reader ID
NewID	<code>int</code>	New Read ID

**Return:** 1 success, 0 fail

### 11. Get Reader ID

**prototype:** `int stdcall YW_GetReaderID(int ReaderID);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	ReaderID=0

**Return:** >=0 success and is Reader ID, other is fail

### 12. Get Reader Fireware version

**prototype:** `int stdcall YW_GetReaderVersion(int ReaderID);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID

**Return:** >=0 success and is version, other is fail

### 13. Get Reader serial No.

**prototype:** `int stdcall YW_GetReaderSerial(int ReaderID, char *ReaderSerial);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
ReaderSerial	<code>Char *</code>	Reader Serial, 8 Bytes

**Return:** 1 success, 0 fail

#### 14. Beep control

**prototype:** `int stdcall YW_Buzzer(int ReaderID, int Time_ON, int Time_OFF, int Cycle);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
Time_ON	<code>int</code>	Beep on time, unit:100ms
Time_OFF	<code>int</code>	Beep off time, unit:100ms
Cycle	<code>int</code>	The weeks of the beep on and off

**Return:** 1 success, 0 fail

#### 15. LED control

**prototype:** `int stdcall YW_Led(int ReaderID, int LEDIndex, int Time_ON, int Time_OFF, int Cycle, int LedIndexOn);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
LEDIndex	<code>int</code>	LED index 01:Read 02:Green 04:Yellow
Time_ON	<code>int</code>	LED On Time, unit:100ms
Time_OFF	<code>int</code>	LED Off Time, unit:100ms
Cycle	<code>int</code>	The weeks of the Led on and off
LedIndexOn	<code>int</code>	The index of Led on last: 00:all off 01:Read 02:Green

		04:Yellow
--	--	-----------

**Return:**1 success, 0 fail

### 16. Set Content of 8 LED display

**prototype:** `int stdcall YW_LEDDisplay(int ReaderID, int Alignment, char *LEDText);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
Alignment	<code>int</code>	Alignment 1:Left 2:Center 3:Right
LEDText	Char *	The string to be displayed The char can be below 0123456789AbCdEF.-

**Return:**1 success, 0 fail

### 17. Set the Status of Antenna

**prototype:** `int stdcall YW_AntennaStatus(int ReaderID, bool Status);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
Status	<code>bool</code>	True: Open RF Antenna False:Close RF Antanna

**Return:**1 success, 0 fail

### 18. Set Work Mode of Tags

**prototype:** `int stdcall YW_SearchCardMode(int ReaderID, int SearchMode);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
SearchMode	<code>char</code>	Tags 0x41-----IS014443A 0x42----- IS014443B 0x31----- IS015693 0x53-----ST Serail 0x52-----AT88RF020

**Return:** 1 success, 0 fail

## Functions of IS014443B

### 19. Reset Type B Tags

**prototype:** `int stdcall YW_TypeB_Reset(int ReaderID, unsigned char Mode, int *rtLen, unsigned char *pData);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
Mode	unsigned <code>char</code>	Request Mode 0x52----- All Card 0x26----- Active Card
rtLen	<code>int *</code>	Length of pData
pData	<code>Char *</code>	Reset information of reset

**Return:** 1 success, 0 fail

### 20. Excute COS Command of Type B Tags

```

prototype: int stdcall YW_TypeB_COS(int ReaderID, int LenCOS,
unsigned char *Com_COS, int *DataLen, unsigned char *pData);

```

**Param:**

Param	Type	
ReaderID	int	Reader ID
Mode	unsigned char	Request Mode 0x52----- All Card 0x26----- Active Card
LenCOS	int	Length of COS Command
Com_COS	unsigned char*	COS Command
rtLen	int *	Length of pData
pData	Char *	Data returned after execute COS Command

**Return:** 1 success, 0 fail

## Function of AT88RF020 tags

### 21. Key Check of AT88RF020

```

prototype: int stdcall YW_AT88RF020_Check(int ReaderID, unsigned char
*Key);

```

**Param:**

Param	Type	
ReaderID	int	Reader ID
Key	Char *	Key (8 bytes)

**Return:** 1 success, 0 fail

### 22. Read block of AT88RF020 tags

```

prototype: int stdcall YW_AT88RF020_Read(int ReaderID, int
BlockID, unsigned char *pData);

```

Param:

Param	Type	
ReaderID	int	Reader ID
BlockID	int	The block ID
pData	Char *	data read

Return: 1 success, 0 fail

### 23. Write Data of AT88RF020 Tags

prototype: int stdcall YW\_AT88RF020\_Write(int ReaderID, int BlockID, unsigned char \*pData);

Param:

Param	Type	
ReaderID	int	Reader ID
BlockID	int	block ID
pData	Char *	Data will be written

Return: 1 success, 0 fail

### 24. Lock Block of AT88RF020 Tags

prototype: int stdcall YW\_AT88RF020\_Lock(int ReaderID, unsigned char \*LockByte);

Param:

Param	Type	
ReaderID	int	Reader ID
LockByte	Char *	Lock data(4 bytes)

Return: 1 success, 0 fail

### 25. Count of AT88RF020 tags

prototype: int stdcall YW\_AT88RF020\_Count(int ReaderID, unsigned char \*Signature);

Param:

Param	Type	
ReaderID	int	Reader ID
Signature	Char *	Signature(6 bytes)

Return: 1 success, 0 fail

## 26. Unselect Card of AT88RF020 tags

prototype: int stdcall YW\_AT88RF020\_DeSel(int ReaderID);

Param:

Param	Type	
ReaderID	int	Reader ID

Return: 1 success, 0 fail

## 27. Multi Read block of AT88RF020 tags

prototype: int stdcall YW\_AT88RF020\_ReadMulti(int ReaderID, int BlockID, int BlockNums, int \*LenData, unsigned char \*pData);

Param:

Param	Type	
ReaderID	int	Reader ID
BlockID	int	Block ID
BlockNums	int	Number of Blocks
LenData	Int*	Length of pData
pData	unsigned char *	Data read

Return: 1 success, 0 fail

## 28. Multi Write Block of AT88RF020 tags

prototype: int stdcall YW\_AT88RF020\_WriteMulti(int ReaderID, int

BlockID, int BlockNums, int LenData, unsigned char \*pData);

Param:

Param	Type	
ReaderID	int	Reader ID
BlockID	int	Block ID
BlockNums	int	Number of Blocks
LenData	Int	Length of pData
pData	unsigned char *	Data will be written

Return: 1 success, 0 fail

Functions of ST card, SR176, SR512, SRIX4K etc.

### 29. Active ST tags

prototype: int stdcall YW\_ST\_Active(int ReaderID, unsigned char \*ChipID);

Param:

Param	Type	
ReaderID	int	Reader ID
ChipID	unsigned char *	Chip id if card (1 byte)

Return: 1 success, 0 fail

### 30. Deactive ST tags

prototype: int stdcall YW\_ST\_DeActive(int ReaderID);

Param:

Param	Type	
ReaderID	int	Reader ID

Return: 1 success, 0 fail



### 31. Get UID of SR176 Tags

**prototype:** `int stdcall YW_SR176_GetUID(int ReaderID, unsigned char *UID);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
UID	<code>unsigned char *</code>	UID of SR176 (8 Bytes)

**Return:** 1 success, 0 fail

### 32. Read Block of SR176 Tags

**prototype:** `int stdcall YW_SR176_Read(int ReaderID, int BlockID, unsigned char *pData);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
BlockID	<code>int</code>	Block ID
pData	<code>unsigned char *</code>	Data read (2 bytes)

**Return:** 1 success, 0 fail

### 33. Write data of SR176 tags

**prototype:** `int stdcall YW_SR176_Write(int ReaderID, int BlockID, unsigned char *pData);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
BlockID	<code>int</code>	Block ID

pData	unsigned char *	Data will be written(2 bytes)
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**Return:** 1 success, 0 fail

### 34. Lock Block of SR176 Tags

**prototype:** `int stdcall YW_SR176_Lock(int ReaderID, unsigned char LockByte);`

**Param:**

Param	Type	
ReaderID	int	Reader ID
LockByte	unsigned char	Lock Data (1 byte)

**Return:** 1 success, 0 fail

### 35. Get status of lock of SR176 tags

**prototype:** `int stdcall YW_SR176_LockStatus(int ReaderID, unsigned char *LockByte);`

**Param:**

Param	Type	
ReaderID	int	Reader ID
LockByte	unsigned char*	Lock Data(1 byte)

**Return:** 1 success, 0 fail

### 36. Mutli read block of SR176 tags

**prototype:** `int stdcall YW_SR176_ReadMulti(int ReaderID, int BlockID, int BlockNums, int *LenData, unsigned char *pData);`

**Param:**

Param	Type	
-------	------	--

ReaderID	int	Reader ID
BlockID	int	Block ID begin
BlockNums	int	Number of blocks
LenData	Int*	Length of pData
pData	unsigned char*	Data read

Return: 1 success, 0 fail

### 37. Multi Write block SR176 tags

prototype: int stdcall YW\_SR176\_WriteMulti(int ReaderID, int BlockID, int BlockNums, int LenData, unsigned char \*pData);

Param:

Param	Type	
ReaderID	int	Reader ID
BlockID	int	Block ID begin
BlockNums	int	Number of blocks
LenData	Int	Length of pData
pData	unsigned char*	Data will be written

Return: 1 success, 0 fail

### 38. Get UID of SR512 Tags

prototype: int stdcall YW\_SR512\_GetUID(int ReaderID, unsigned char \*UID);

Param:

Param	Type	
ReaderID	int	Reader ID
UID	unsigned char*	UID(8 byte)

**Return:** 1 success, 0 fail

### 39. Read block of SR512 Tags

**prototype:** `int stdcall YW_SR512_Read(int ReaderID, int BlockID, unsigned char *pData);`

**Param:**

Param	Type	
ReaderID	int	Reader ID
BlockID	int	Block ID
pData	unsigned char*	Data read(4 bytes)

**Return:** 1 success, 0 fail

### 40. Write Block of SR512 Tags

**prototype:** `int stdcall YW_SR512_Write(int ReaderID, int BlockID, unsigned char *pData);`

**Param:**

Param	Type	
ReaderID	int	Reader ID
BlockID	int	Block ID
pData	unsigned char*	Data will be written(4 bytes)

**Return:** 1 success, 0 fail

### 41. Lock Block of SR512 Tags

**prototype:** `int stdcall YW_SR512_Lock(int ReaderID, unsigned short LockByte);`

**Param:**

Param	Type	
-------	------	--

ReaderID	int	Reader ID
LockByte	unsigned short	Lock Data

**Return:** 1 success, 0 fail

#### 42. Get Lock Data of SR512 tags

**prototype:** int stdcall YW\_SR512\_LockStatus(int ReaderID, unsigned short \*LockByte)

**Param:**

Param	Type	
ReaderID	int	Reader ID
LockByte	unsigned short*	Lock Data

**Return:** 1 success, 0 fail

#### 43. Multi Read Block of SR512 Tags

**prototype:** int stdcall YW\_SR512\_ReadMulti(int ReaderID, int BlockID, int BlockNums, int \*LenData, unsigned char \*pData)

**Param:**

Param	Type	
ReaderID	int	Reader ID
BlockID	int	Block ID begin
BlockNums	int	Number of blocks
LenData	Int*	Length of pData
pData	unsigned char *	Data read

**Return:** 1 success, 0 fail

#### 44. Multi Write Block of SR512 tags

**prototype:** `int stdcall YW_SR512_WriteMulti(int ReaderID, int BlockID, int BlockNums, int LenData, unsigned char *pData)`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
BlockID	<code>int</code>	Block ID begin
BlockNums	<code>int</code>	Number of blocks
LenData	<code>Int</code>	Length of pData
pData	unsigned char *	Data will be written

**Return:** 1 success, 0 fail

#### 45. Key Check of SR1X4K tags

**prototype:** `int stdcall YW_SR1X4K_Check(int ReaderID, unsigned char *Key, unsigned char *Signature)`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
Key	unsigned char*	Key(6 bytes)
Signature	unsigned char*	Out signature(3 bytes)

**Return:** 1 success, 0 fail

### Functions of SAM

#### 46. SAM Baud

**prototype:** `int __stdcall YW_SAM_ResetBaud(int ReaderID, int SAMIndex, int BaudIndex);`

**Param:**

Param	Type	
ReaderID	int	Reader ID
SAMIndex	int	SAM Index
BaudIndex	int	0x00->9600 (Default) 0x01->19200 0x02->38400 0x03->55800 0x04->57600 0x05->115200

**Return:** 1 success, 0 fail

#### 47. SAM Reset

**prototype:** int \_\_stdcall YW\_SAM\_Reset(int ReaderID, int SAMIndex, int \*rtLen, unsigned char \*pData);

**Param:**

Param	Type	
ReaderID	int	Reader ID
SAMIndex	int	SAM Index
rtLen	int *	Length of PData
pData	unsigned char *	Data return of Sam Reset

**Return:** 1 success, 0 fail

#### 48. Excute COS Command of SAM

**prototype:** int \_\_stdcall YW\_SAM\_COS(int ReaderID, int SAMIndex, int LenCOS, unsigned char \*Com\_COS, int \*rtLen, unsigned char \*pData);

**Param:**

Param	Type	
-------	------	--

ReaderID	<code>int</code>	Reader ID
SAMIndex	<code>int</code>	SAM Index
LenCOS	<code>int</code>	Length of COS Command
Com_COS	<code>unsigned char *</code>	COS Command
rtLen	<code>unsigned char *</code>	Length of pData
pData	<code>unsigned char *</code>	Data return after execution of COS Command

**Return:** 1 success, 0 fail

#### 49. SAM PPS Baud

**prototype:** `int __stdcall YW_SAM_PPSBaud(int ReaderID, int SAMIndex, int BaudIndex);`

**Param:**

Param	Type	
ReaderID	<code>int</code>	Reader ID
SAMIndex	<code>int</code>	SAM Index
BaudIndex	<code>int</code>	0x00->9600 (Default) 0x01->19200 0x02->38400 0x03->55800 0x04->57600 0x05->115200

**Return:** 1 success, 0 fail



## 6 Order Information

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