

# Technical Manual of BA-08 Banknote Acceptance Module





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## 1 General Description

BA-08 is a core banknote processing module with an integration of banknote validation and single banknote deposit. This module features high reliability, accessibility and maintainability.

## 2 Model and Terms

Model: BA-08 ( 1000 notes cassette, front access )

Terms: BA——Banknote Acceptor

## 3 Overview

### 3.1 Outlook



Figure 1

### 3.2 Module Structure

BA-08 consists of three major parts, including upper part, cassette and frame. The module structure is shown in the following figure:

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## 4 Features

### 4.1 Upper Part

- Its entrance indicator facilitate patrons to use;
- Fast banknotes accepting, two banknotes accepting interval is about 2.5 seconds;
- The banknotes accepting automatic correction device ensures banknotes insertion at any angles;
- Anti-stringing mechanical design effectively prevents foreign insertion and manipulation;
- The path adopts 2 pairs of even leather belts clipping the notes all through for smooth transportation
- Transport unit is well sealed to prevent dust, thus to be dustproof and reduce maintenance.
- Highly compact structure takes up less space;
- Maintenance friendly design allows bill jams to be settled with no tools at site.
- Modular and replaceable design.
- Industrial electric parts and component accommodating extreme environmental conditions
- Support online software upgrading

### 4.2 Anti-counterfeit Design

- Three-line anti-counterfeit technology, with validation scan points up to 40,000;
- Full image multi-spectrum scan(CIS) and the full image magnetic signal detection;
- Design focus on the banknotes circulation environment and features (quickly updating imitation technology , poorly used notes)

### 4.3 Cassette

- Hard and durable cassette with double safe locks;
- Independent replaceable cassette with no electronic appliances connection features high reliability;
- The transparent observation window allows operation staff to observe the denomination and status of the latest inserted banknotes from outside with the cassette closed.
- With modular design, the cassette can be easily replaced.

## 5 Technical Parameters

### 5.1 Technical Specifications

Item		Specifications
Notes feeding	Feeding direction	Lengthwise
	Face direction	4 directions
Validation	Currency	Support 100 kinds of different denominations notes (one country or multinational) in the meantime, see Annex
	Material	Paper, plastics base (polymer )
	Genuine note accepting rate	≥97%
	Notes size	Length: 80~180 mm; Width: 60~96 mm
	Bar code ( optional )	Support (ANSI/AIM BC2-1995)
Detection	Optics	Full image CIS (scan points up to 40,000)
	Magnetics	Multichannel magnetic signal detection
Speed	Pass transport speed	0.5m/s
	Accepting speed	Less than 3s/note
Capacity	Escrow	1 note
	Deposit cassette	1000 notes ( L220×H185×W100 )
Environment	Operation temperature	0℃~45℃
	Storage temperature	-20℃~60℃
	Humidity	20%RH~90%RH (non-condensing)
Upgrade	Upgrading means	Online software upgrading
Weight	Whole set	4.5kg
	Deposit cassette (empty)	1kg
Electro-magnetic compatibility		Compliant to International related standards GB/T 17626

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## 5.2 Electrical Specifications

Item	Specifications
Power interface	+12V ± 10% +3A
USB interface	USB2.0 Device A type plug( backup)
UART serial port	RS232: RXD, TXD, GND Baud rate:19200 bps Verification method: No verify Communication data bit: data bit:8 bits, starting bit:1 bit, ending bit:1bit
Power input	Vacancy
Power output	Vacancy
NetPlex communication interface	Vacancy
CCTalk communication interface	Vacancy

## 5.3 USB interface (back up)



Type B USB interface (F)

Pin NO.	Specification
Pin1	+5V
Pin2	Data-
Pin3	Data+
Pin4	SG

## 5.4 Power interface

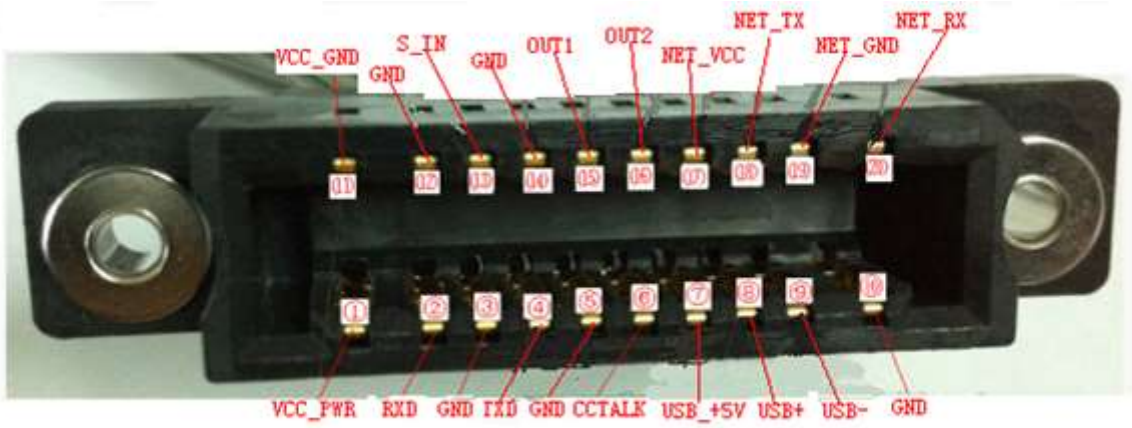
The module power interface is shown in the figure below:

## 5.5 Serial port

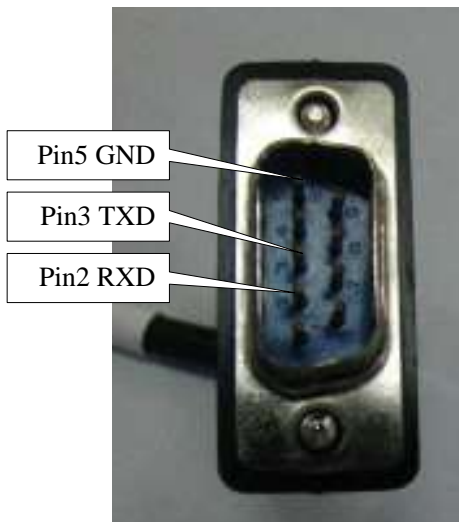
The module serial port is shown in the figure below:

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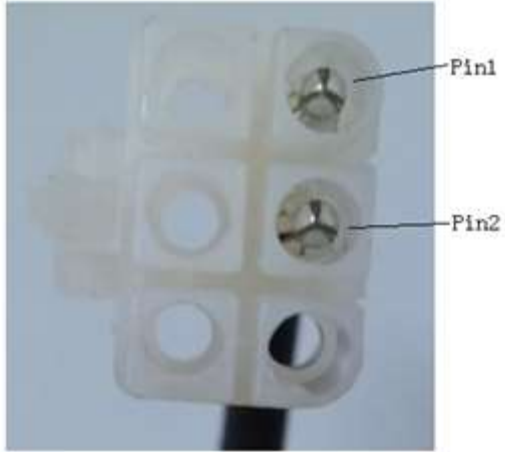




Pin	Definition	Pin	Definition
1	Voltage +12V	11	PGND
2	PC_RXD PC end RS23 receive pin	12	SGND
3	SGND	13	SIGNAL-IN
4	PC_TXD PC end RS232 send pin	14	SGND
5	SGND	15	OC_OUT1 open-collector output 1
6	CCTALK	16	OC_OUT2 open-collector output 2
7	USB_5V USB5V pin	17	NetPlex_VCC
8	USB_D+ USB data bus D+	18	NetPlex_TX
9	USB_D- USB data bus D-	19	NetPlex_GND
10	SGND	20	NetPlex_RX



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Pin NO.	Specification
Pin1	+12V
Pin2	GND

## 6 Annex

BA-08 supports Currency Types are as shown in tables as follows.

Note: It is paper banknote if there are no specifications for note material.

### 1) Supported CNY Denominations and Versions

Currency	Denomination	Version
CNY	¥1	1999
	¥5	2005、1999
	¥10	2005、1999
	¥20	2005、1999
	¥50	2005、1999
	¥100	2015、2005、1999

### 2) Supported EURO Denominations and Versions

Currency	Denomination	Version
EURO	€5	2002
	€10	2002
	€20	2002
	€50	2002
	€100	2002
	€200	2002
	€500	2002

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## 3) Supported HK Dollar Denominations and Versions

<b>Currency</b>	<b>Denomination</b>	<b>Version</b>
HKD	\$20	2003 HSBC、2003 SCB 2003 Bank Of China
	\$50	2003 HSBC、2003 SCB 2003 Bank Of China
	\$100	2003 HSBC、2005 HSBC、2008 HSBC、 2003 SCB、2003 Bank Of China 2007 Bank Of China、2009 Bank Of China
	\$500	2003 HSBC、2003 SCB 2003 Bank Of China
	\$1000	2003 HSBC、2003 SCB 2003 Bank Of China、2005 Bank Of China

## 4) Supported Indonesia Rupiah Denominations and Versions

<b>Currency</b>	<b>Denomination</b>	<b>Version</b>
IDR	1 Rupiah	
	5 Rupiah	
	10 Rupiah	
	20 Rupiah	
	50 Rupiah	
	100 Rupiah	
	100 000 Rupiah	

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## 5) Supported Malaysia Ringgit Denominations and Versions

<b>Currency</b>	<b>Denomination</b>	<b>Version</b>
MYR	1 Ringgit	
	5 Ringgit	
	10 Ringgit	
	20 Ringgit	
	50 Ringgit	
	100 Ringgit	

## 6) Supported Singapore Dollar Denominations and Versions

<b>Currency</b>	<b>Denomination</b>	<b>Version</b>
SGD	1 S\$	
	5 S\$	
	10 S\$	
	20 S\$	
	50 S\$	
	100 S\$	

## 7) Supported Thailand THB Denominations and Versions

<b>Currency</b>	<b>Denomination</b>	<b>Version</b>
THB	20THB	
	50THB	
	100THB	
	500THB	

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