



Ingeniería Electrónica
SMART IDENT

BYT-1000
MOTORIZED BARCODE CARD READER
Specifications

User Manual

BYT-1000 Rev. A

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BYT – 1000 Bar Code Reader

REVISION HISTORY

CHECK	DATE	DESCRIPTION	REV	PAGE
1	2013.08	First edition.	A	22

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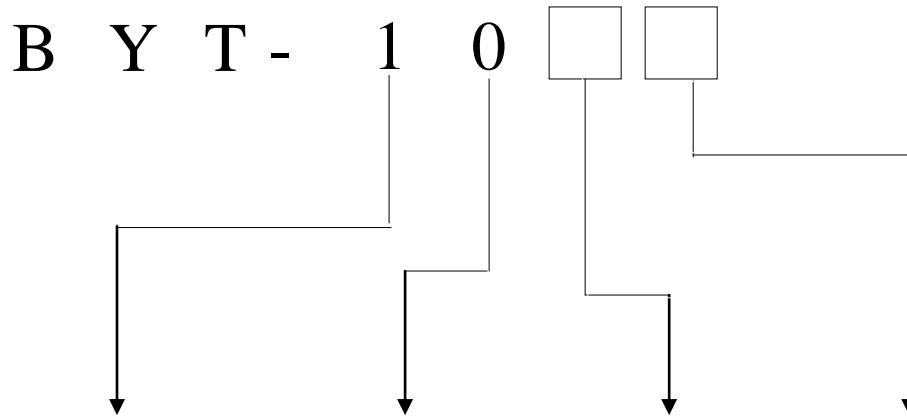
C O N T E N T S

- 1. Overview**
- 2. Features**
- 3. System Block Diagram**
- 4. Specification**
- 5. Technical Drawing**

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MODEL NAME INFORMATION



Interface	Function	Type	Bezel	Option
T : RS232C	1 :Motorized feeder module	0:	0: without Bezel 1: Short bezel 2: Shutter	0: Rear Drop 1: Rear Drop & Solenoid Capture 2: No Rear Drop & Solenoid Capture (Card shall be standby at the rear exit) 3: Capture without solenoid *The direction of feeder of 2 & 3 shall be opposite of the feeder of 0 & 1.

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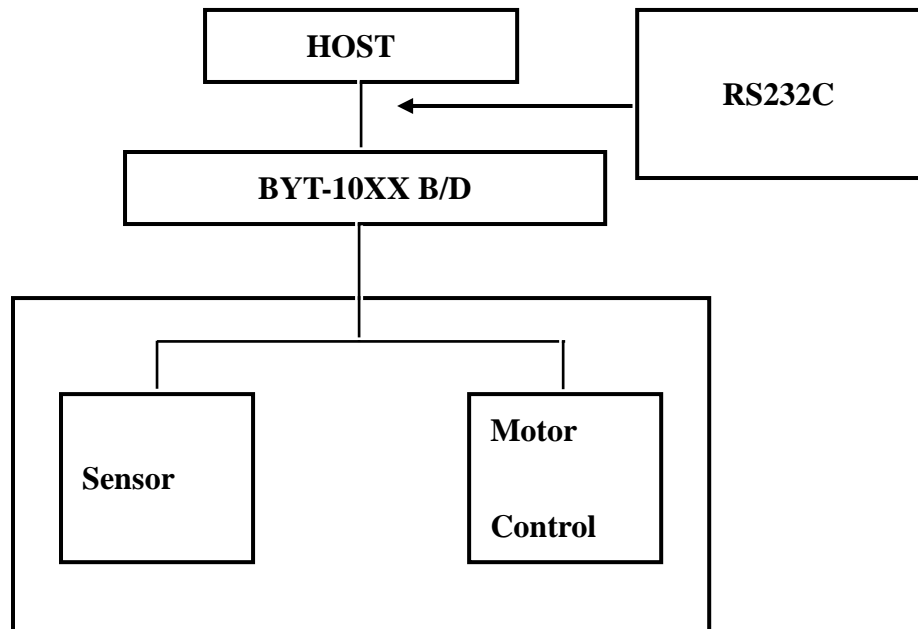
1. OVERVIEW

BYT10XX series is Bar code reader unit for one and two dimension. And it has very compact and robust mechanism, which leads to high reliability and easy-to-do maintenance. It is easy to apply BYT-10XX to various terminal products, bring price competitiveness to Users.

2. Features

1. Interface : RS232C.
2. Communication Baud Rates can be increased from 9,600 up to 19,200 bps.
3. It always monitors error and makes it recover for itself from the faulty operation.
4. Card Capture Function
 - An error card is captured below the unit.

3. System Block Diagram



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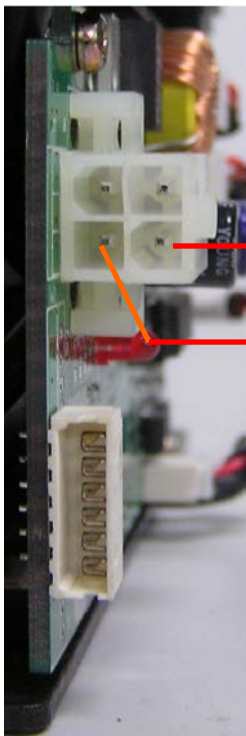
Specification

4.1. DC Power Connector

. Interface connector

- Part Number : 5557-04A, Manufacture : MOLEX

. Connector number : J6



Pin 3. +24VDC

Pin 1. GND

Pin NO	Signal Name	Cable color	Direction
1	GND	Black	Input
2	Not use		
3	+24VDC	Yellow	
4	Not use		

. Supply Voltage & Current Consumption

With Load : DC 24V ($\pm 5\%$)– 1500mA

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4.2 Interface

4.2.1 RS232C type model

. Interface connector :

Part number : 51004-0310, Manufacture : MOLEX

When use the BYT-10XX's com-cable, connect to twist cable.

When use the user's com-cable, connect to as bellows table

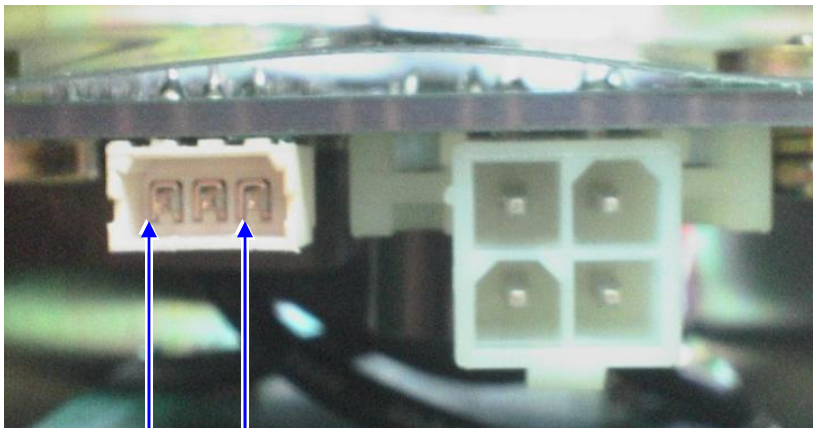
. Connector number : J1

. Connector signal table

Pin No	Signal	BYT-10XX	HOST	Dsub-9	Remark
1	RXD	←		3	Receive data
2	TXD		→	2	Transmit data
3	GND	↔		5	Signal Ground

. Communication Method

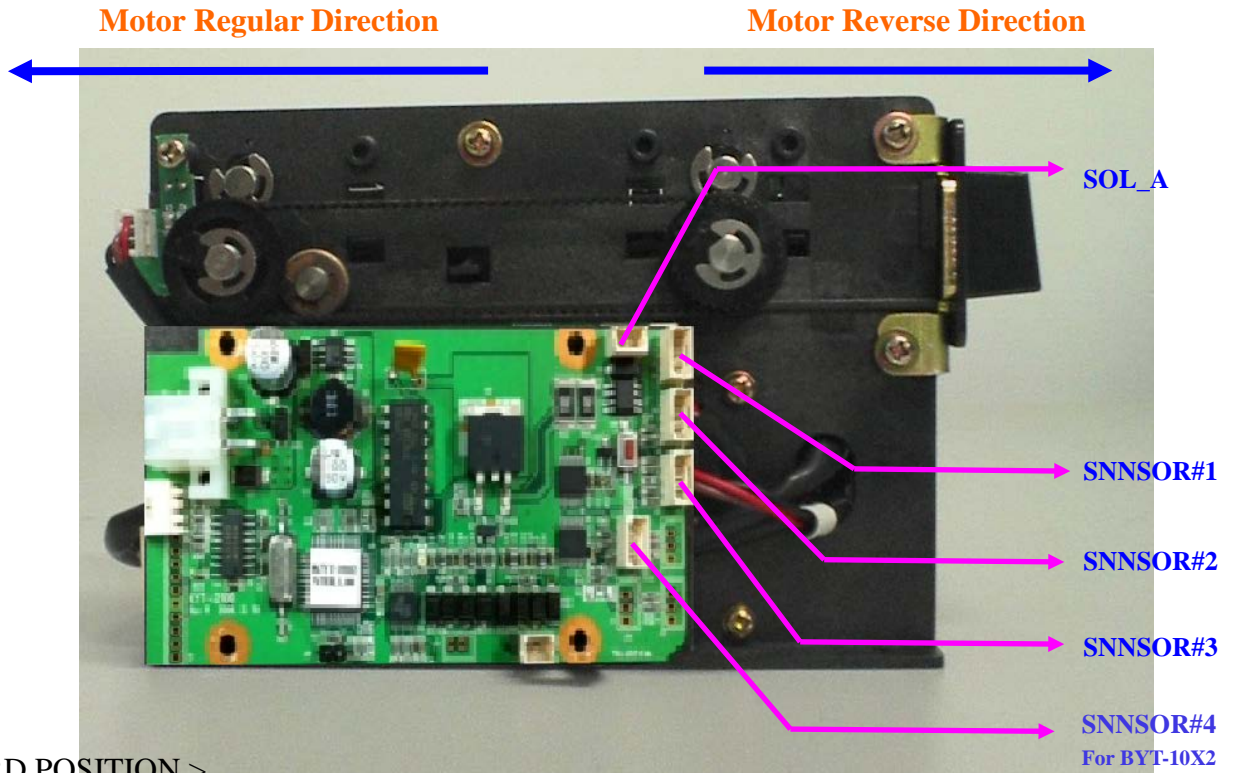
- Asynchronous, Half duplex.
- Communication speed : 9600, 19200BPS (Default : 9600BPS)
- Data Length : 8Bits
- Parity : None
- Stop Bit : 1Bit



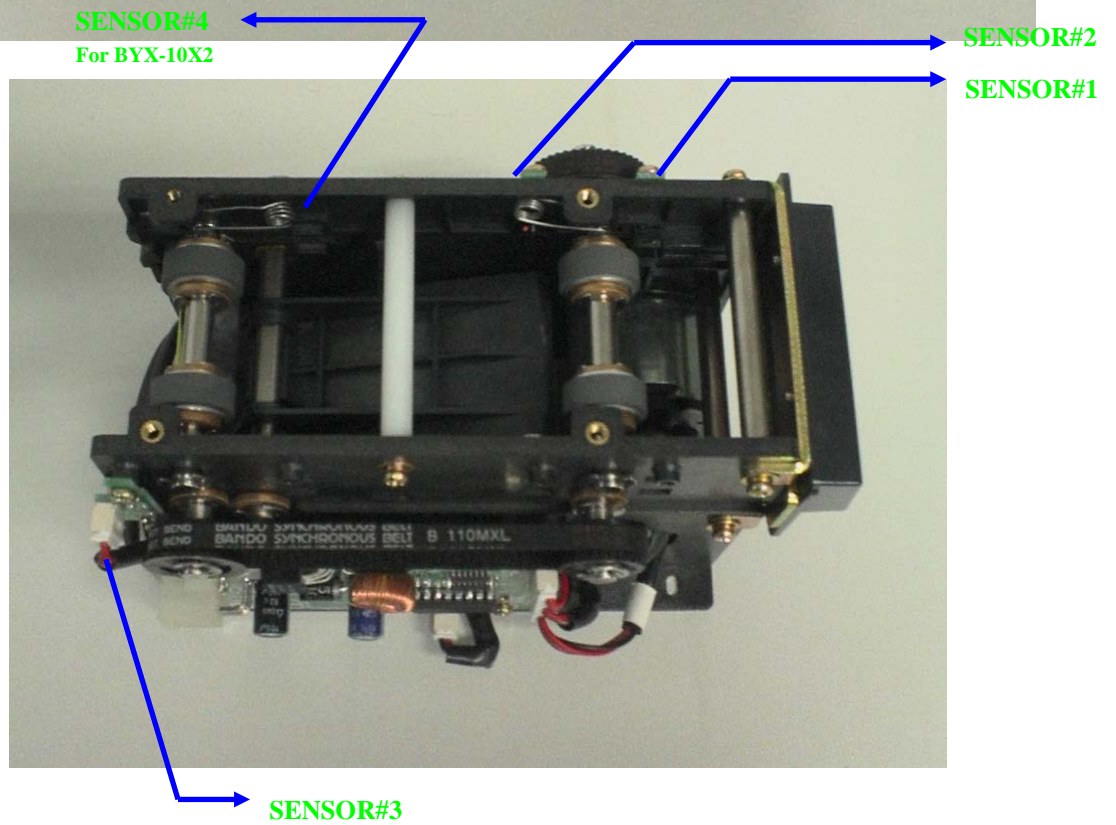
③ ①

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< CARD MOVE >

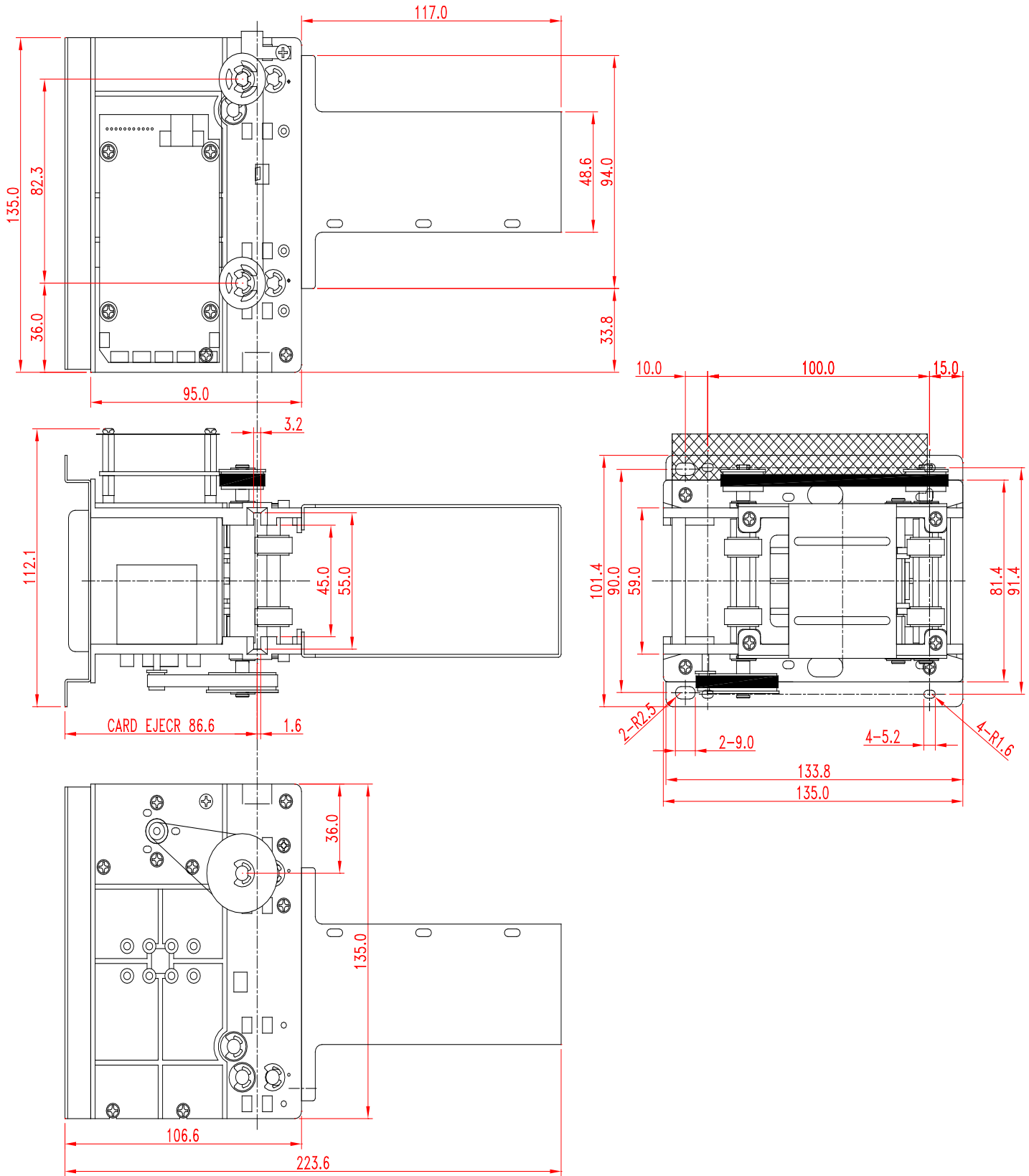


< CARD POSITION >



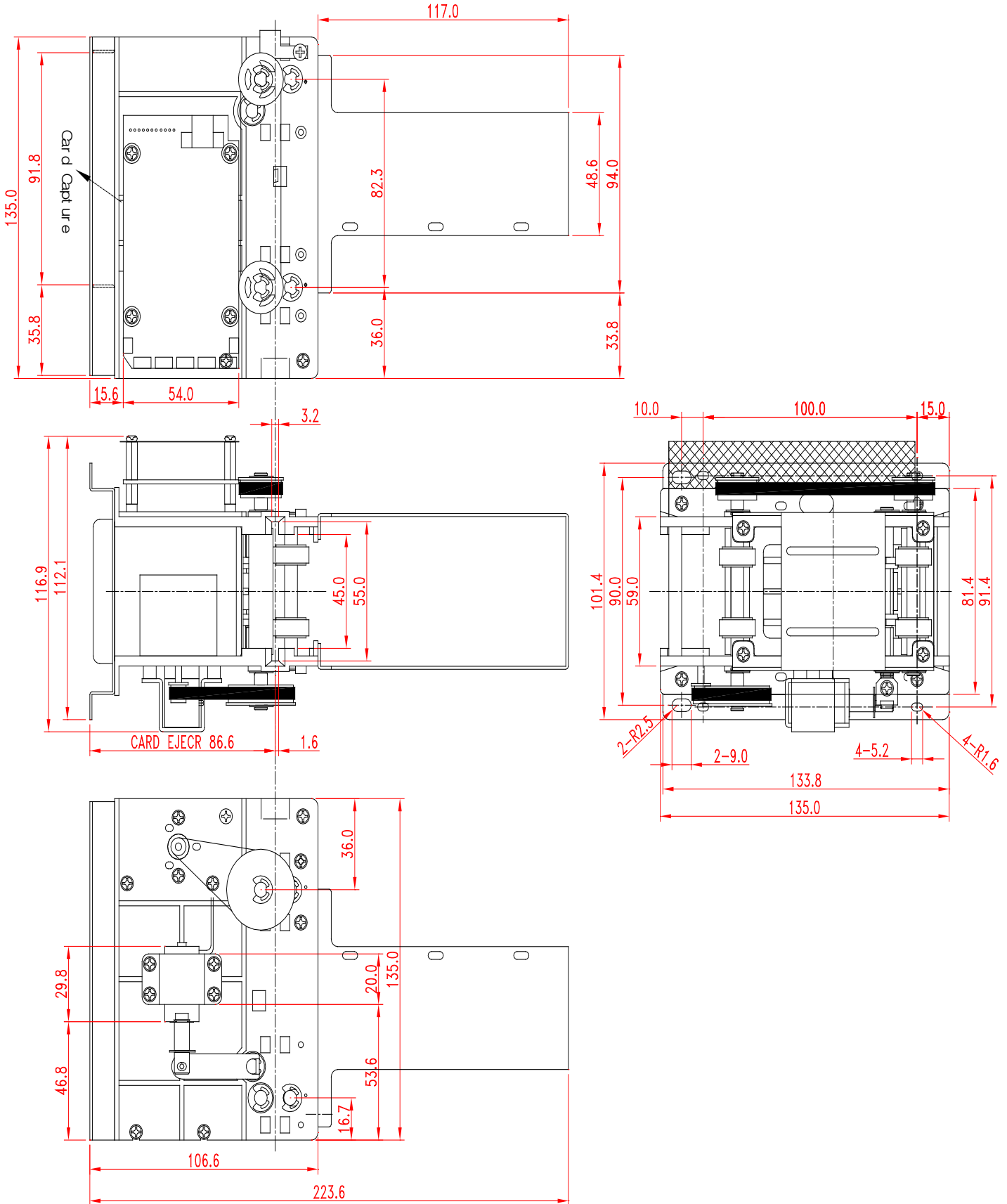
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MODEL – BYT-1000



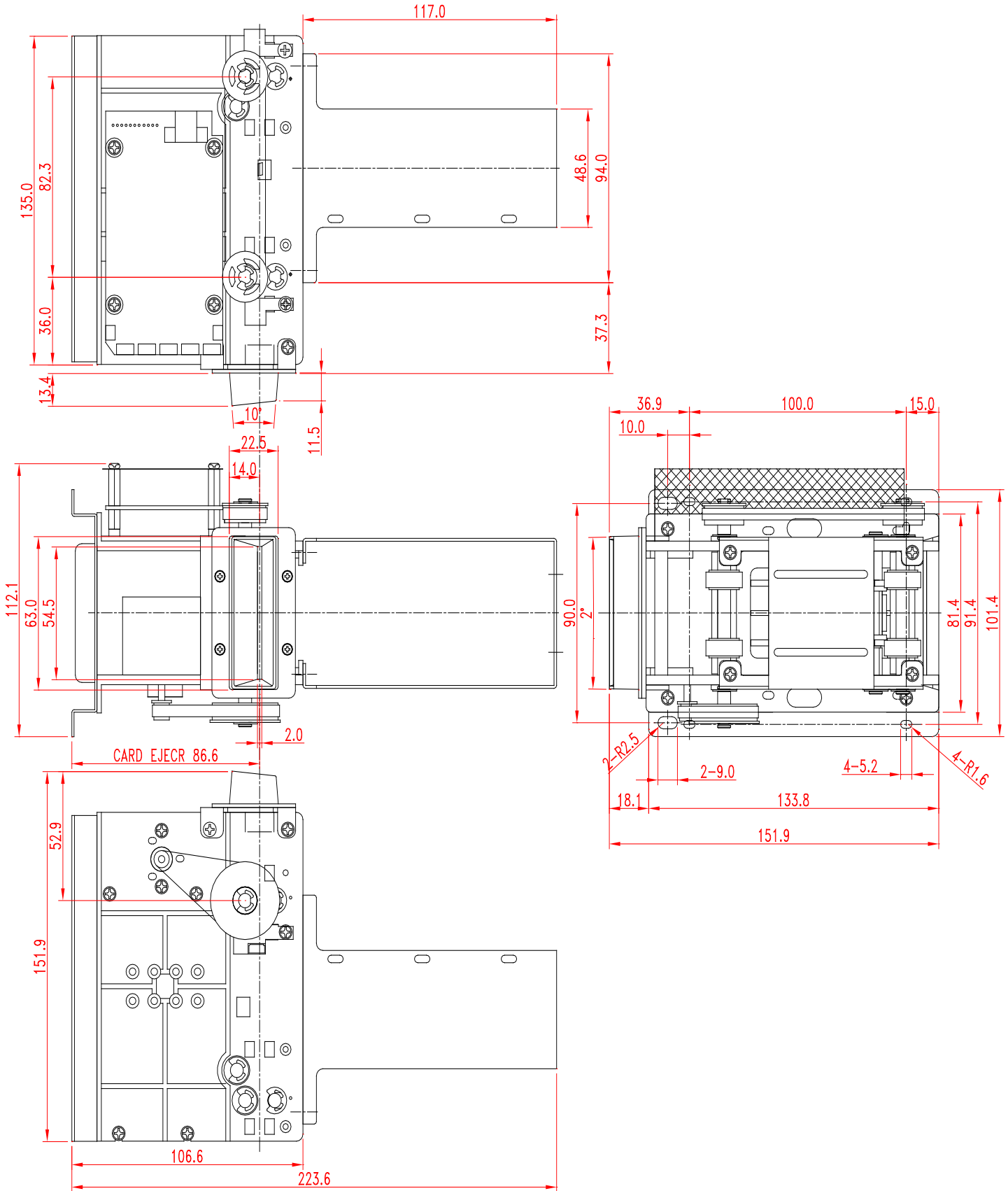
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MODEL – BYT-1001 , BYT-1002



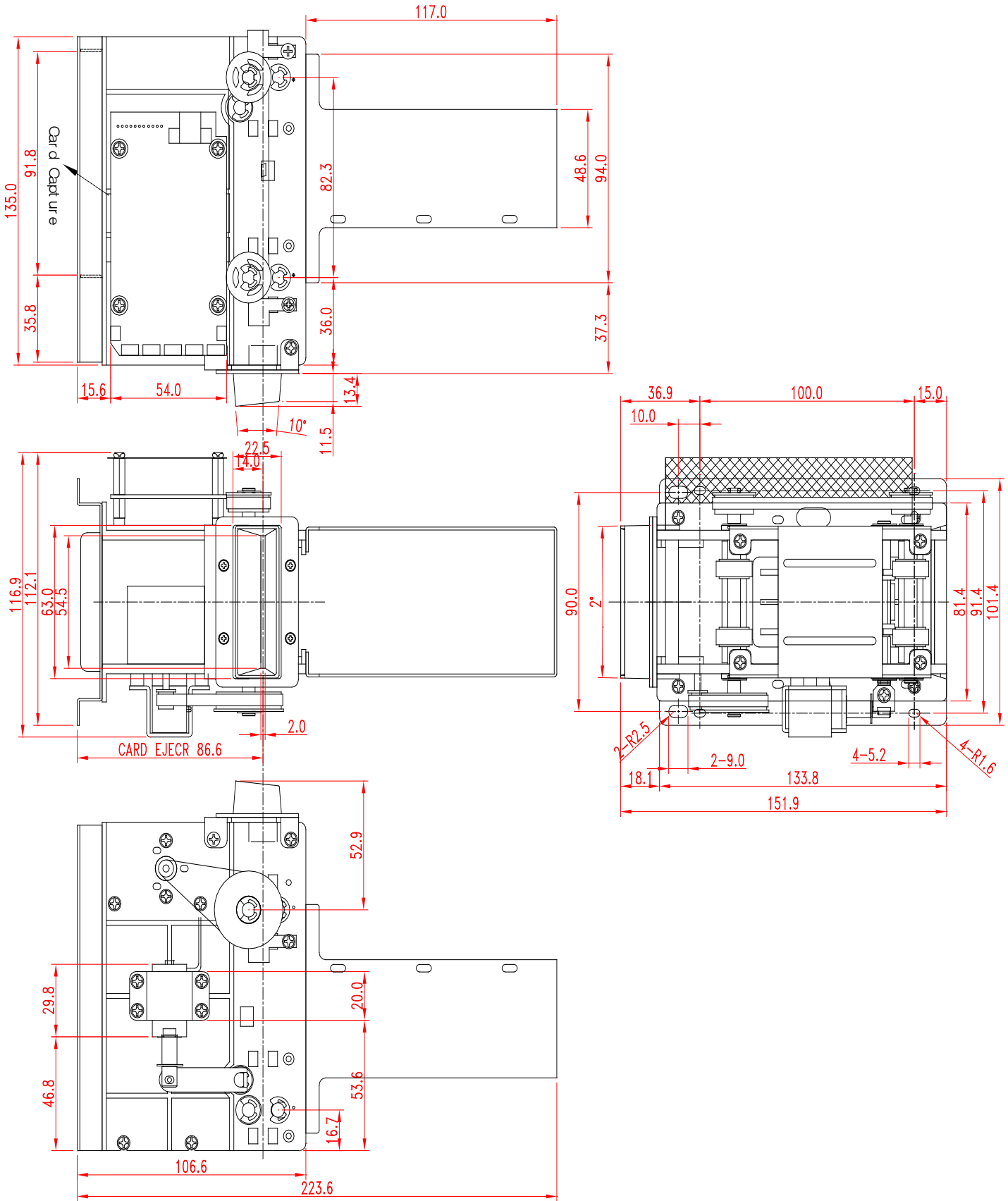
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MODEL – BYT-1010



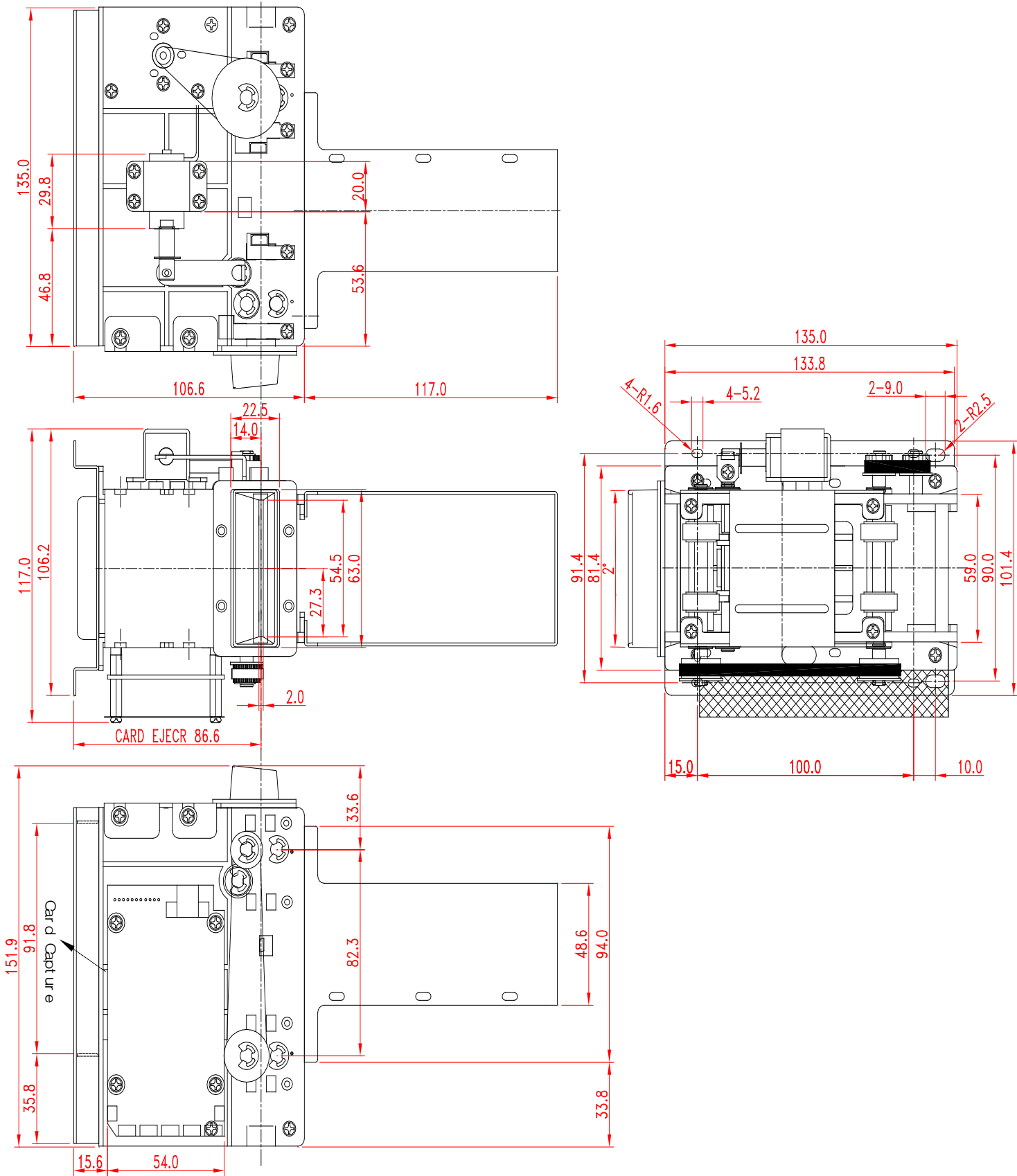
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MODEL – BYT-1011



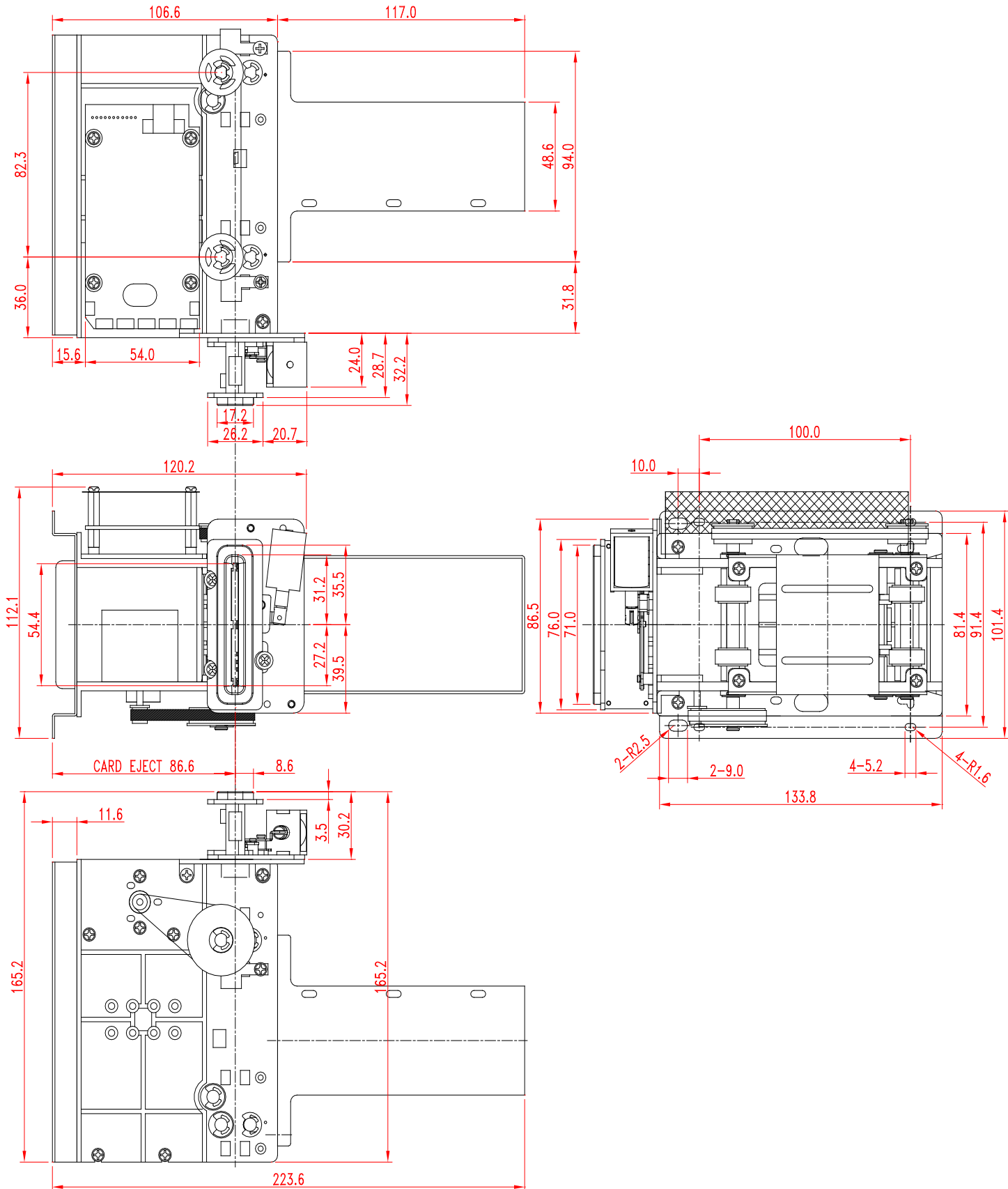
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MODEL – BYT-1012



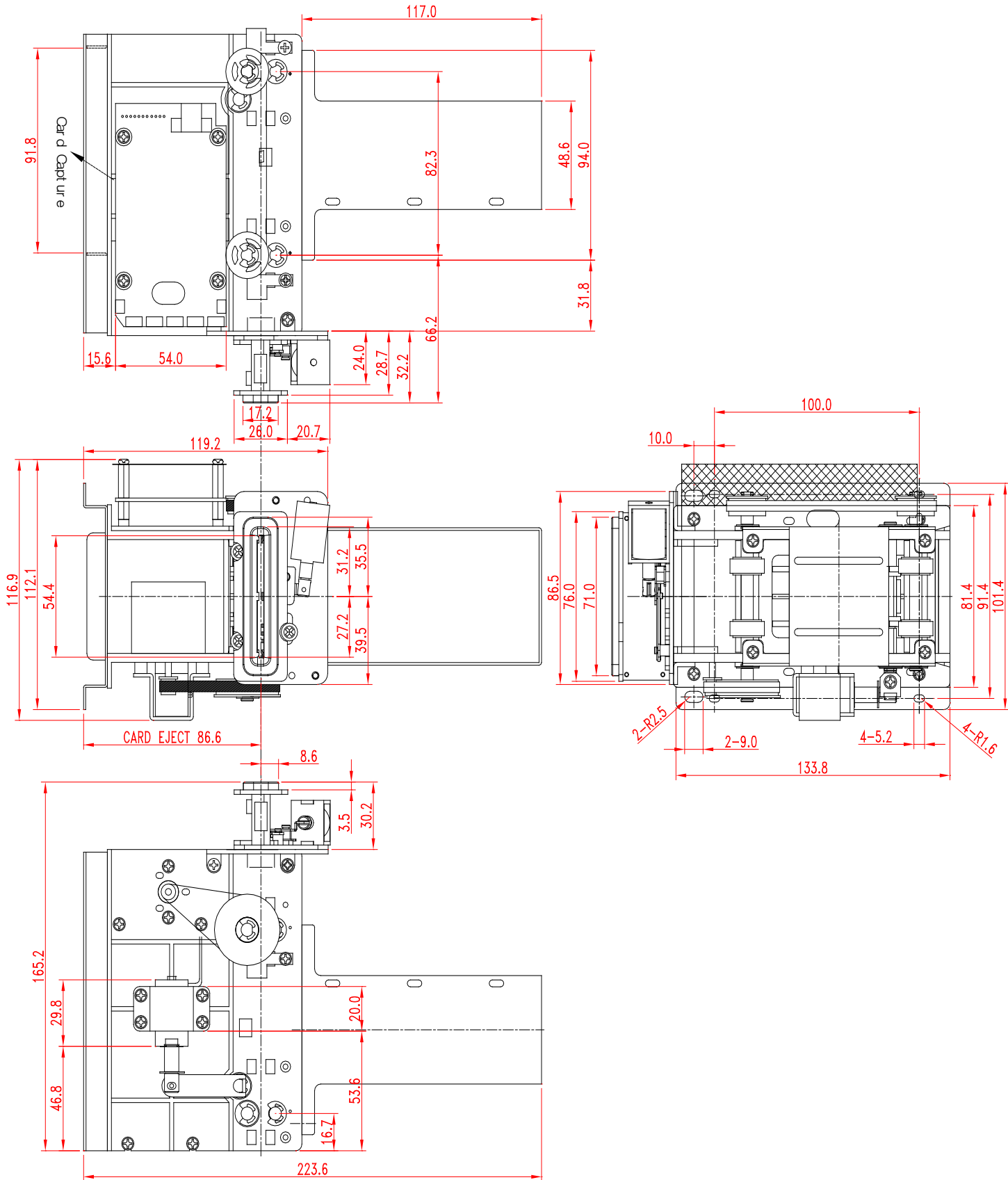
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MODEL - BYT-1020



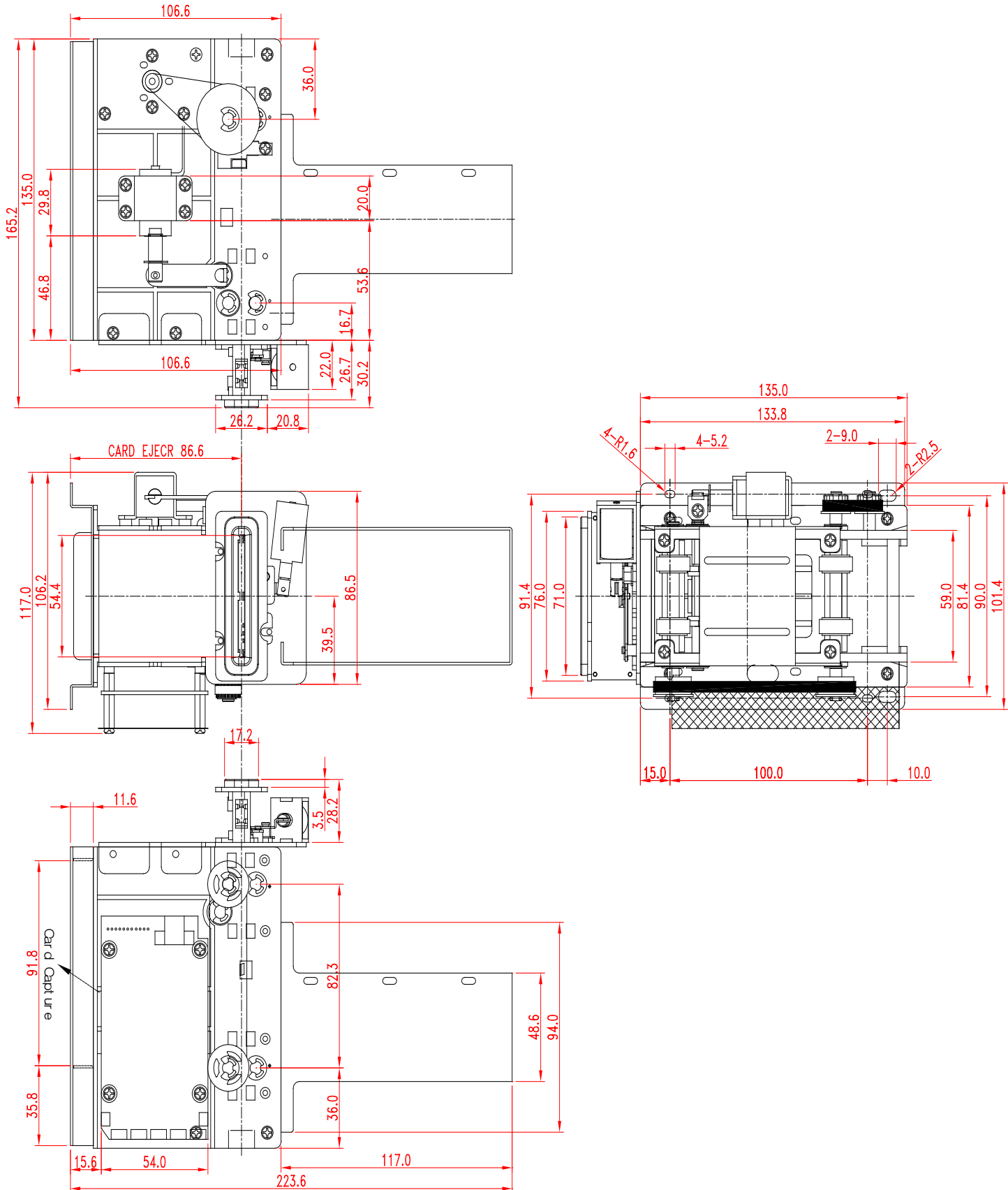
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MODEL – BYT-1021



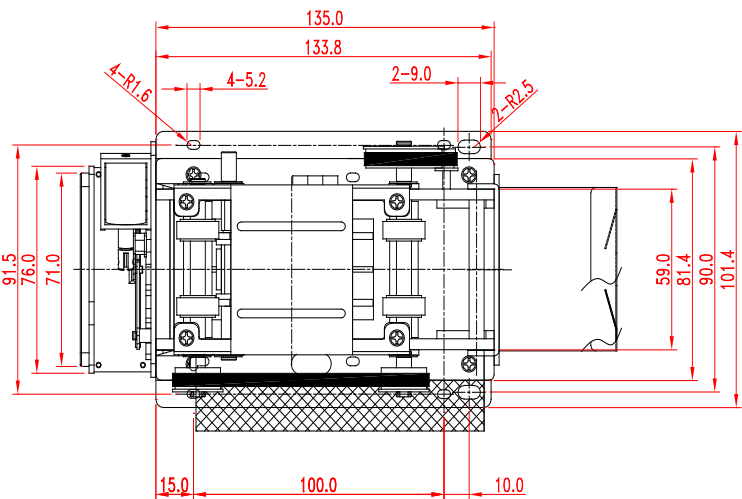
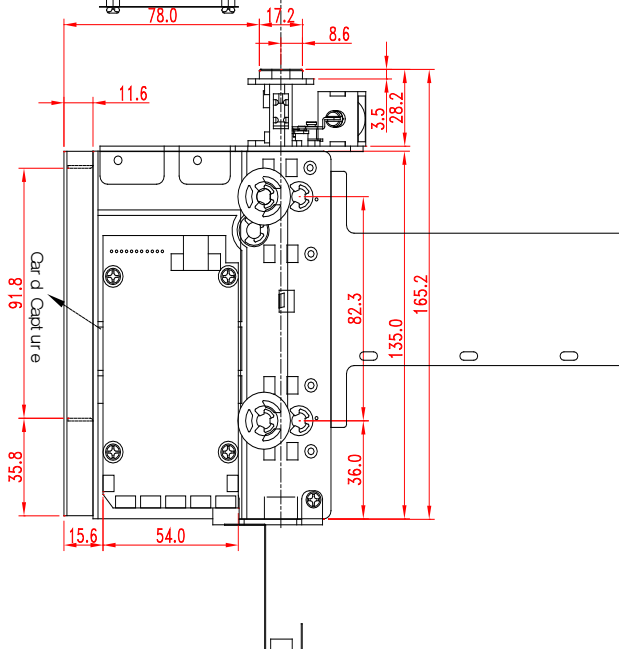
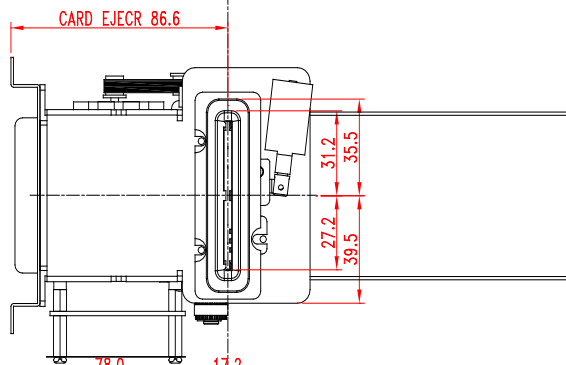
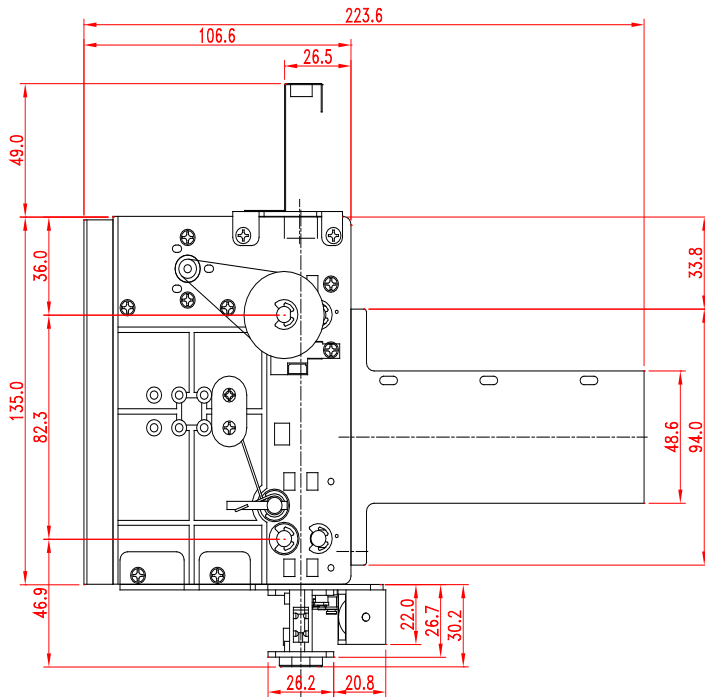
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MODEL – BYT-1022



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MODEL – BYT-1023



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6. RS232C Interface

6.1. Control Characters

NANE	Hex Value	Description
STX	02	Start of Text
ETX	03	End of Text
EOT	04	End of Transmission
ENQ	05	Enquiry
ACK	06	Positive Acknowledge
NAK	15	Negative Acknowledge
CAN	18	Cancel

6.2. Frame Format

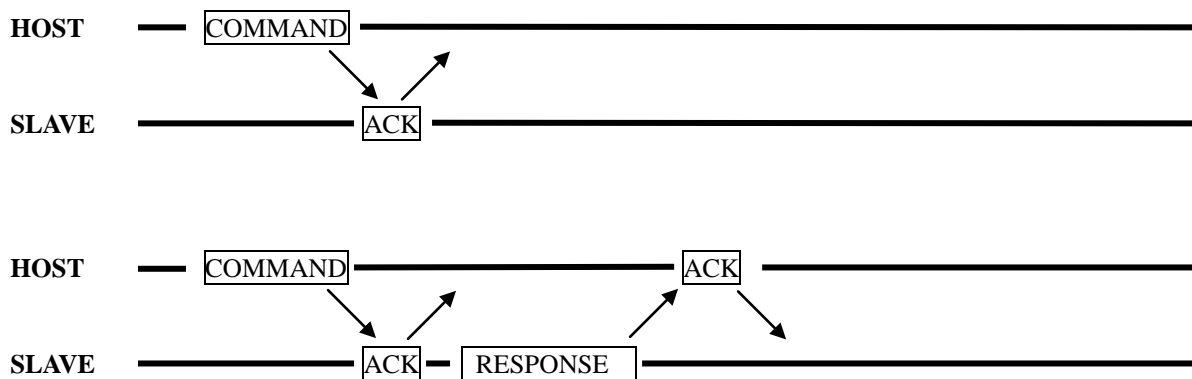
1. Command structure

STX	Command	ETX	BCC
-----	---------	-----	-----

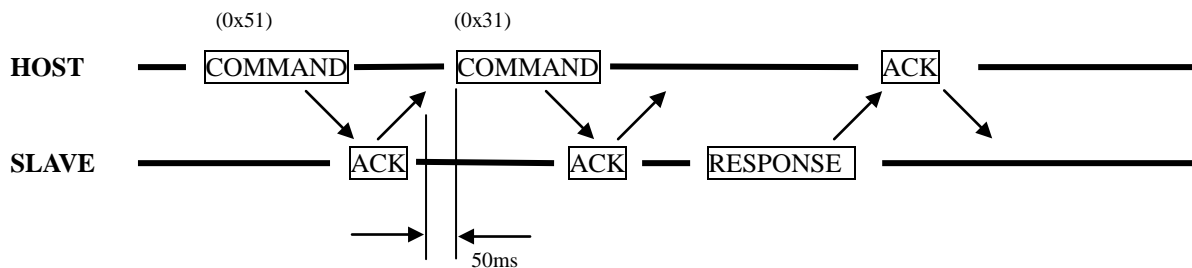
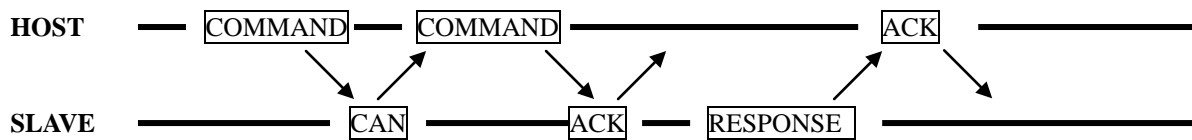
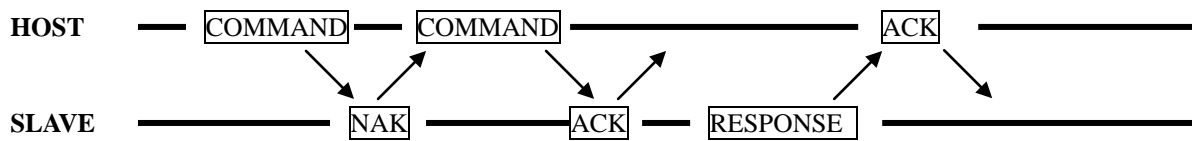
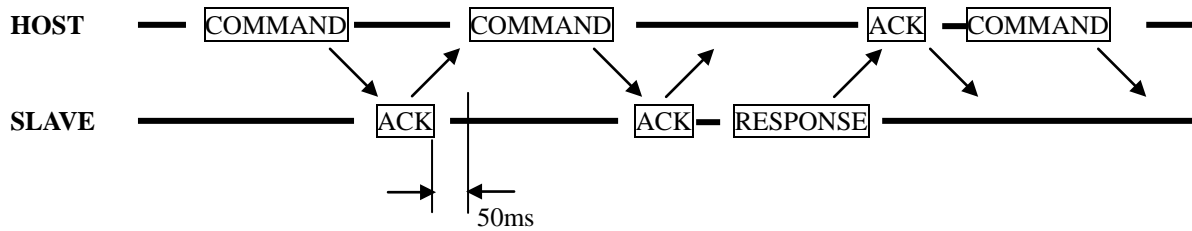
2. Response structure



6.3. Communication Protocol Sequence



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cf) To change Baud Rate , send command 50mS after receiving ACK .

6.4. Command Sets List

	Command	Description	Note
Clear	0x30	Error Clear	
Request	0x31	Status Request	
Move	0x40	Feed In	
	0x41	Feed Out(drop)	
	0x42	Feed Stop	
	0x43	Capture	
	0x44	Feed Stand By	
	0x4B	Feed Out(hold)	
Baud Rate Set	0x50	9600 BPS	
	0x51	19200 BPS	
Bar Code	0xBC	Bar Code Read	

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6.5. Command Details

6.5.1. Clear(Command : 0x30)

: Initializing Parameters(Initializing Error Bit)

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

6.5.2. Status Request(Command : 0x31)

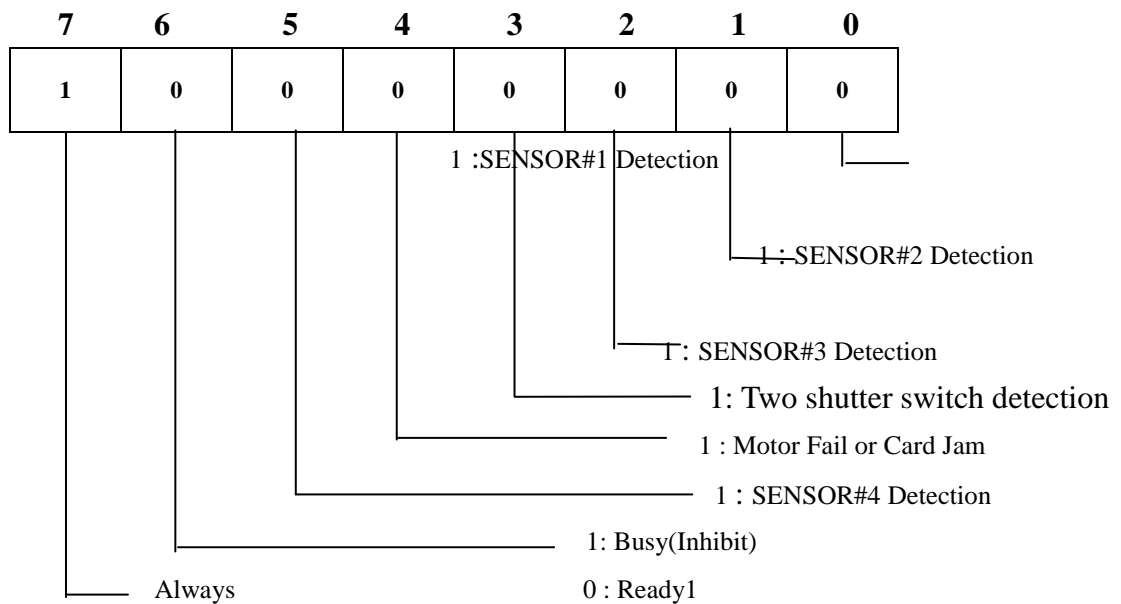
: Host's Request for status of dispenser

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

Response Packet

STX	Status	ETX	BCC
-----	--------	-----	-----



6.5.3. Feed In(Command : 0x40)

: Move the Card from SENSOR#1 to SENSOR#3.

(In Case of BYT-1xx2: Move the Card from SENSOR#3 to SENSOR#1.)

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

Ref) If the sensor not detect the card, above command is immediately terminated.

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6.5.4. Feed Out – drop (Command : 0x41)

: Move the Card from SENSOR#3 to SENSOR#1.

(In Case of BYT-1xx2: Move the Card from SENSOR#1 to SENSOR#3.)

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

Ref) If the sensor does not detect the card, above command is immediately terminated.

6.5.5. Feed Stop(Command : 0x42)

: Stop the card at the specified location while moving the card

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

6.5.6. Capture (Command : 0x43)

: The card is captured to the error box

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

6.5.7. Feed Stand By (Command : 0x44)

: Move the card to antenna area.

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

6.5.8. Feed Out- hold (Command : 0x4B)

: Move the Card from SENSOR#3 to SENSOR#1. And stop the card when passed by SENSOR#2

(In Case of BYT-1xx2: Move the Card from SENSOR#1 to SENSOR#3. And stop the card when passed by SENSOR#4)

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

Ref) If the sensor does not detect the card, above command is immediately terminated.

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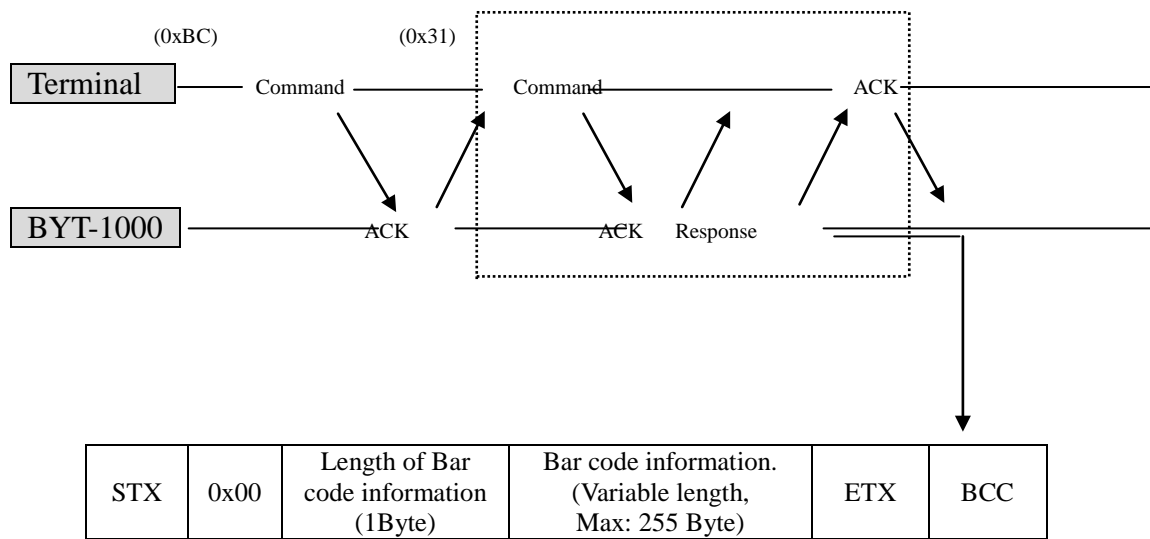
6.5.9. Bar Code Read (Command : 0xBC)

: Move the card to bar code reading area and read the bar code.

Command Packet

STX	Command	ETX	BCC
-----	---------	-----	-----

◆ Procedure of Bar Code Read command.



Ref) Continue to send 0x31 command until you get the response of Bar Code Read command that have value 0x00 as second byte.

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- Readable Symbologies

1D Barcode Symbologies	Coda Bar	2D Barcode Symbologies	PDF417
	Telepen		microPDF417
	Code 128		Data Matrix
	GS128		QR Code
	Code 93		AZTEC
	Korean Post		Maxi Code
	Code 39		
	Code 39 Start/Stop Characters		
	Tri-Optic		
	Code 11		
	MSI/Plessey		
	Interleaved 2 of 5		
	Straight 2 of 5		
	Matrix 2 of 5		
	IATA 2 of 5		
	Chinese Post		
All of UPC/EAN/JAN			