Modular multi stackers DE5245, RFID card dispenser + global capture mechanism.
Specifications
RS232c Protocol, tentative

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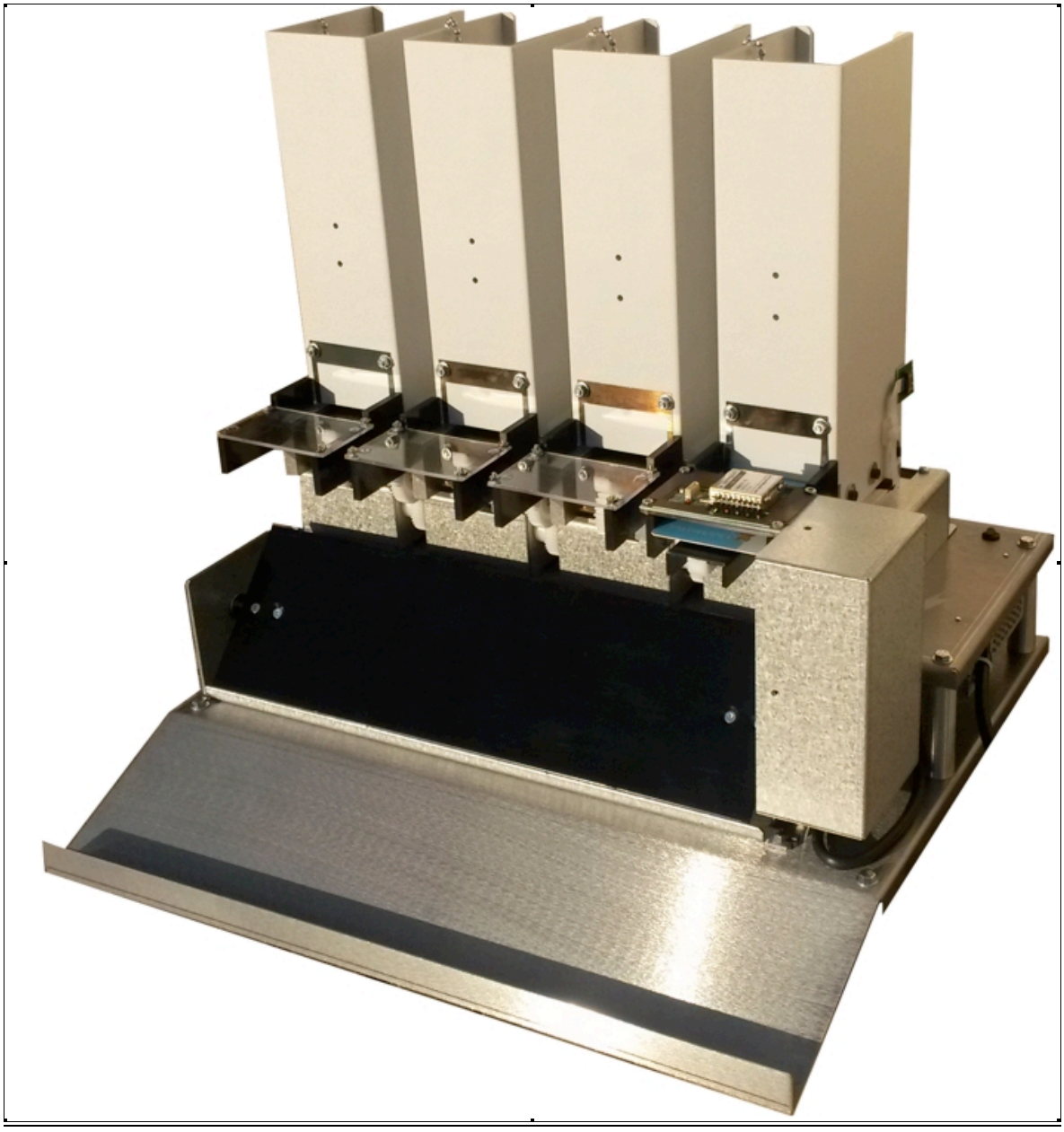

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1. Overview

The DE5245 is a dispenser of RFID cards of the newest generation, with the RS232c interface.
The DE5245 only operates under PC control
The DE5245 does not contain its own RFID coupler. A polycarbonate support allows the integrator to install his own.

2. General specifications

Accepted cards:	Laminated Plastic PVC (non-transparent or translucent) with a Thickness between 1 and 0.6mm
Card Transport:	Motorized at 150 mm/s
Storage Capacity	250 0.76mm cards
Minimum card detection:	approx. 25 cards
Communication:	EIA RS232c 9600 N 8 1
Serial cable max.	15 meters
Power Supply:	24v DC +/- 10%
Consumption:	250mA 1.2A peak
Operating Conditions:	indoor use only Temperature range: 0 – 40°C Humidity range: 30 – 80%

4. Physical specifications of transmission and pin out connectors

Transmission mode:asynchronous, EIA RS232c
Format: 96,N,8,1

Characters service:
Stx: '**!**' 21hex
Etx: '**cr**' 0dhex

Connection Com.

DE5245 pins Sub-D fem. PC pins Sub-D m.

Pin 2: receive data ← 2
Pin 3: transmit data → 3
Pin 5: Signal Gnd < ---------- > 5
4---
|
6 ---
7---
|
8---

Power connector Molex 3069 3 pins
- 3 = + 24v
- 2 = Gnd

5. Command definitions and status word

Command ASCII	hex	definition
! A cr	**21h 41h 0Dh**	asks for status word
! B cr	**“ 42h “**	dispenses a card and presents it under antenna
! C cr	**“ 43h “**	presents a card
! D cr	**“ 44h “**	internal capture of card
! E cr	**“ 45h “**	reserved
! F cr	**“ 46h “**	positioning capture mechanism for the capture operation
! G cr	**“ 47h “**	reserved
! V cr	**“ 56h “**	asks for firmware version

After executing a command, the DE 5245 always sends the status word

6. Status and Firmware Version

(s) status word (1 byte)

Bit 0: = , bit 0 and 1 set to 1: dispenser on original position
Bit 1: = , bit 0 reset to 0 and bit 1 set to 1: card under antenna
Other values: error
Bit 2: = 1, indicates that there are less than 25 cards left in the hopper
Bit 3: = 1, indicates capture mechanism on present position. (if connected)
Bit 4: = 1, indicates capture mechanism on capture position (if connected)
Bit 5=0 1 indicate wrong command *
Bit 6=1
Bit 7=0

* a function error is generated if an command cannot be executed due to the present situation.:
Example: dispensing command if a card is already placed under the antenna.
The bit error is automatically erased after being transmitted.

The firmware version allows the software application to know the n°. of the firmware version of the dispenser.

7. Transmission protocol

Principle.

The Host sends commands, then the DE5245 (executes and automatically sends the status word.
The Host cannot send a new command before receiving the status word, which is the acknowledgment of the previous command.
If the next command is sent before, it's lost.

Dispense a card

DE5245 dispenses a card and places it under the antenna.

Host		DE5240
! B cr	→	
	←	**ack cr**
Dispenses a card from the stack and places it under the antenna RFID		
	←	**! [s] cr**

Present a card

DE 5245 presents card

Host		DE5245
! C cr	→	
	←	**ack cr**
Moves the card from the antenna to the exit		
	←	**! [s] cr**

Capture a card

Internal card capture
Before sending this command, it's necessary to send the command capture position to the DE5245 N°1, which is connected to the capture mechanism.

Host		DE5245
! D cr	→	
	←	**ack cr**
DE 5245 captures ejected card underneath.		
	←	**! [s] cr**

Capture position

Positioning the capture mechanism on capture position.
The trap stay in position during 10 s

Host		DE525
! F cr	→	**ack cr**
	←	**! [s] cr**

Status word

Ask for status word

Host		DE5240
! A cr	→	
DE5240 return	←	**! [s] cr**

This command can be send at any time, except when DE5240 process an opération. Then, the command is lost.

Firmware version

DE5240 can send his firmware version

Host		DE5240
! V cr	→	
DE5240 return	←	**! text ASCII cr**