Introduction:

PC2MDB (RS232-MDB) is used to connect the PC or other RS232 device to VMC

PC2MDB will reply the VMC Poll command automatically, so for user don't need to consider the Poll command. Any data from VMC except the poll command will be redirected to RS232 port.

Any data if you want to send the HEX data to VMC, just send to adapter box together with checksum ,then the adapter box will send to VMC during the VMC poll request.

So for user only need to be familar with the Vending session with VMC during PC software development. And user should read the MDB protocol carefully to finish the test and development.

Any other questions, you can add wafer online service skype: wafer-service

Now we start the RS232-MDB Test:

- 1. Know your Vending machine
 - a) Vending machine must support the cashless payment device
 - b) Vending machine has the MDB connector for MDB cashless devices
 - c) Disconnect other MDB payment devices before test the MDB adapter box
- 2. Connect the PC2MDB to VMC and PC Simply plug the PC2MDB to VMC (Vending machine controller) and the PC RS232 port
- Open the PC-MDB Test tool (SerialTool.exe) Select the right Com port in the SerialTool and select the "Hex Send" as the following picture

🗶 Shanghai Wafer Mi	croelectronics Co., Ltd Com Test	: Tools	0 %	
File Data Help				
	COM port Setup	HEX Characters	Send 1 2 3	
	Port COM port COM4 Baud 9600 Parity No parity Byte Size 8 Stop Bits 1	Modem Flow Contro None Auto Answe Buffer Input Buf. 8192 Output Buf. 8192	4 5 6 7 8 9 0 ms/per	
Hex Show Save	Default iy sent interval 800 insyper ind Send Port Settings	<u>DK</u> <u>Cancel</u> <u>New HI-09 Multi-coin coin accept</u> <u>Wafer GSM-RELAY new products onl</u> <u>Wafer GSM-KEY products for autom</u>	nic Hide loard Kiosk vendin tor Line natic door	
Closed port:4 Sent: 4 Received: 0				

4. Power on the VMC (RS232-MDB adapter box will be powered on at the same time through the MDB bus)

After powered on,keep to look at the RS232-MDB adapter box status LEDs, when the adapter box can be connected to the VMC,the MDB Master LED will flash some times during Power on data exchange

If No "MDB Master LED" flashing happen, then Please check:

- (1) If the MDB address is switched at the 10H (Normally VMC will Priority support 10H)
- (2) Power off and Power on the VMC again to try
- (3) Switch the MDB address to 60H to Power off and power on the VMC again to try
- (4) Contact your VMC manufacture, if that VMC can support the MDB cashless device
- 5. If MDB Master LED flash some times and that means VMC has found this PC2MDB cashless devices

After power on the PC2MDB, Serial tool will get a self ID data:" Firmware version and the config data Report"

If serial tool cann't get this data, you need to check the serial port is properly selected If adapter box is connected successfully to the VMC ,then you can get other more data from VMC,for example 11..... or 14..... (Start with 11, 12, 14 or other)

You don't need to do anythings, our adapter box is already do the communication with the VMC with the config data.

If you can get the data 140115,Then Now Congraturations, PC2MDB adapter has successfully connected to VMC

🗶 Shanghai Wafer Microelectronics Co., Ltd Com Test Tools	1		×
File Data Help			
CN0199-WFV-Jun 16 2017.22:40:13 010109720A02070D9D 09494453303030303031303030 53630324944534D4442564D4343454F303200 03E1 1010 1010 11		HEX Characters Send	
00200000114 1101045600016D 170049445330303030303030303636	V	010109720A02070D9D	1
30324944534D4442564D43434F4E303221 140115		0102115601023C01AA	2
1300000A00708D (2)	1	0000	3
00 (3) 1302007085 From VMC 130417 00 (5) 140115		03FFFF01	4
		03001417	5
		0500E8ED	6
	₹	0707	7
	•	0606	8
	1	03FFFF01	9
	-	010100705400010077	-
		Auto Send Interval 500	ms/per
Hex Show Save contents Clear contents Shan	ghai	Wafer Microelectronic	Hide
Open file Send file New	Kiosk	Computer Development Board	1
Send char Begularly sent Interval 900 ms/per	MDB-R	S232 Control Board for Kios	sk vendig
E New Inc. E Hensend Cond. Storestel	HI-09	Multi-coin coin acceptor	
I new une IV nex serio Send Llose port Yafe	Wafer GSM-RELAT new products online		
0000	n com	ALL products for automatic	: <u>door</u>
Opened port:2 Sent: 10 Received: 0			

Following is the Prototype VMC test data brief explanation:

(1) 11000300020117	VMC Setup – Config data	(Page. 126/313)
(2) 1101FFFF000010	VMC Setup – Max /Min Price	(Page. 128/313)
(3) 1700	VMC Setup	(Page. 159/313)
(4) 140115	VMC Reader enable	(Page. 154/313)

After powered on, if you want to change the config data -----

(5) 010109720101070D93

This is the config data for VMC, if you change it with your data according to MDB protocal, then press the Line 1 to send to PC2MDB Adapter box and press the Line 2 to ask the VMC to read the data again

Note: The first 8 bytes is the config data and the last data 93 is Checksum

When you compile your data during test and not sure the Checksum, then just send the first 8 bytes, the adapter box will reply you the checksum data, the you put the Checksum data at the end of the data group, then the adapter will reply you " 00 "

- 6. Now you need to read the "Mdb_version_4-2.pdf " file carefully, especially about the MDB cashless device (From 7.1 ,page 117/313)
- 7. What adapter box has done by itself?
 - (1) Adapter box will reply the poll command from VMC automatically.
 - (2) When power on, Adapter box will reply the Config data that is saved in the memory to VMC
 - (3) You can change the config data by yourself,and next time VMC power on again will read the new config data
- 8. Try to add the credit value to VMC

Press the test Line 3 button to send the data : 03006467 (Page: 131/313)

This command is to start the Begin Session to tell the VMC, that card funds available for vending

VMC VEND Request data: 13000064000B8 (Page: 144/313)

(VMC send the information of the item price and number to card reader to confirm the credit)

Then Card reader should reply with Vend approve or Vend denied

For example : 05000A0F

VMC Reply after vending success:	1302000B20	130417
For example : 0606		
VMC cacel the vending and reply:	130417	

9. Test with Wafer MDB Test tools:



If you have order the SDK sets, then please contact waferstar to get the source code for This MDB test tools



10. What is waferstar SDK included:

- (1) Two sets RS232-MDB adapter box
- (2) MDB Test Tools

----- Following service don't included in the normal order

- (3) Two sets Good quality USB to RS232 adapter cable
- (4) Source code of WAFER MDB Test Tools
- (5) Wafer MDB protocol technical support and Easy understanding help
- (6) Ultimately technical supported until the project succeeds

(7) MDB adapter simulate MDB coin acceptor or MDB bill acceptor supported

(This is very important when some vending machine don't support MDB cashless device interface)

= You Tube

11. Check how to use at youtube:

https://www.youtube.com/watch?v=afq4uCf59Ac