VMC - Upper computer

4.4.2 Lower computer calls out Android menu (VMC sends out)

4.4.3 Upper computer sets VMC query (POLL) interval (Upper computer sends out)

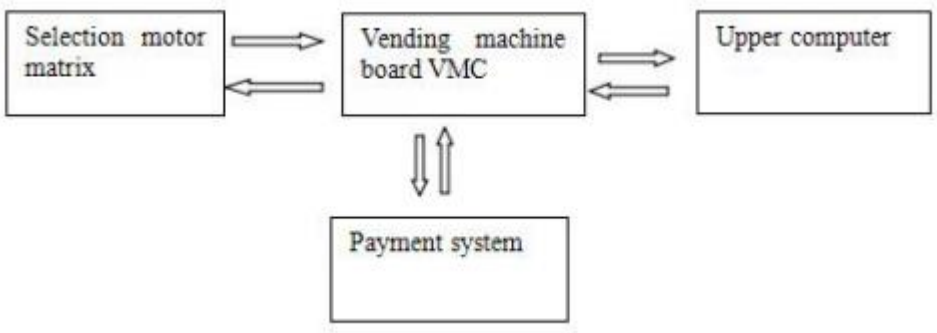
4.4.4 Request information synchronization (Both Upper computer and VMC can send out)

4.4.5 Upper computer requests to acquire VMC status (Upper computer sends out)

4.4.6 Upper computer requests VMC to deduct card or cancel deduction

1. Description

This document describes the communication process between the vending machine control board (hereinafter referred as VMC) and upper computer (controller with RS232 communication interface, such as ARM mother board, X86 mother board).



VMC receives commands from upper computer, and controls motor to rotate. VMC processes the data from payment system, then sends the data to upper computer. Upper computer communicates with VMC via RS232 asynchronous communication protocol. Baud rate 57600, 8 data bits, 1 stop bit, no parity checking.

2. Communication Process

During the whole communication process, VMC works as host, and upper computer works as slave. Ask and answer interchangeably. Each communication starts from VMC, ends by upper computer. Communication process is as below:

	VMC		Upper computer
Process 1	POLL	->	
		<-	ACK
Process 2	POLL	->	
		<-	COMMAND
	ACK	->	
Process 3	Data	->	
		<-	ACK

Poll is query command. Every 200ms, VMC will query upper computer, to check whether there is any command on the upper computer needs to be executed. If there is

a command to be executed, upper computer must send the command within 100ms after receiving POLL. If there is no command to execute, upper computer should return an ACK(answer back).

After upper computer sends out a command, upper computer will receive an ACK from VMC if the VMC receives the command correctly. If VMC has a message to send to upper computer (for example, VMC receives coins), after it sends "Data" to upper computer, upper computer needs to return ACK, to let VMC know it receives the "Data".

In process 2, after upper computer sends out a command to VMC, if upper computer doesn't receive ACK, then upper computer needs to resend the command. Upper computer can resend the command for 5 times at most. If it doesn't receive ACK after 5 times, then there may be a circuit connection problem.
In process 3, if VMC doesn't receive ACK from upper computer, it will resend the data for 5 times at most.

For the COMMAND packet and Data packet, you need to add a communication number. The communication number should be the same for the same command or data, (which means the communication number should be the same for the 5 times when resending command or data).
After the correct completion of a command/data interaction, the communication number is increased by 1. The communication number is polled from 1-255.

3. Definition

STX (2 byte)	Command (1byte)	Length (1byte)	PackNO+Text (n bytes)	XOR (1 byte)

STX: Start of packet. Packet starts with 0xfa 0xfb.

Command: Command type.

Length: PackNO+Text length

PackNO+Text: Communication number of packet + Command Text

XOR: From STX to TEXT (XOR check)

Remark: For POLL packet and ACK packet, length is 0, so communication number of packet doesn't exist. The complete data of POLL is as below:

0xfa 0xfb 0x41 0x00 0x40

Of which, 0xfa 0xfb is the start of the packet, 0x41 is POLL command， 0x00 stands for PackNO+Text length(which is 0), 0x40 stands for XOR check.

ACK is as below:

0xfa 0xfb 0x42 0x00 0x43

4. Data and Command Description

Command Description:

You can use below 3 commands only to make the machine dispense products:

4.3.2) Upper computer selects to buy (Upper computer sends out)

4.3.5) Upper computer drives selection directly (Upper computer sends out)

4.3.3) VMC dispensing status (VMC sends out)

Remark: If you only use the above 3 commands to make machine dispense products, then the inventory and price will be managed by upper computer APP, and the VMC will not manage inventory and price.

4.1 Payment system information interaction

4.1.1 VMC receives money and notifies upper computer (VMC sends out)

Command	Length	PackNO+Text
(0x21)	6(1 byte)	Communication Number (1 byte)+Mode (1 byte)+Amount (4 byte)+Card Number (when Mode is 3 or 4)

Mode: 1: Bill 2: Coin 3: IC card 4: Bank card 5: Wechat payment 6: Alipay 7: Jingdong Pay 8: Swallowing money 9: Union scan pay

If mode is 3 IC card or 4 Bank card, VMC needs to send card number.
Upper computer's current amount has nothing to do with the VMC money notification.
The VMC money notification is used for sending data to background system.
The upper computer returns ACK after it receives the data.

4.1.2 VMC reports the current amount (VMC sends out)

Command	Length	PackNO+Text
(0x23)	5(1 byte)	Communication number + current amount (4 byte)

Whenever the current amount of the VMC changes, VMC will notify upper computer of the VMC current amount. This command will help keep the upper computer amount and VMC amount the same.

4.1.3 POS display requests (VMC sends out)

Command	Length	PackNO+Text
(0x24)	19(1 byte)	Communication number + Text (16 byte) + 0x00 (1byte)+row number of displaying(1byte)

4.1.4 Upper computer requests giving change (Upper computer sends out)

Command	Length	PackNO+Text
(0x25)	1(1 byte)	Communication number (1 byte)

VMC executes the command, after completion, returns amount that gives out.

Command	Length	PackNO+Text
(0x26)	9(1 byte)	Communication number + bill change (4byte) Coin change (4byte)

4.1.5 Upper computer receives money (Upper computer sends out)

Command	Length	PackNO+Text
(0x27)	6(1 byte)	Communication number+ Mode (1byte) +Amount (4byte) + Card number (Optional)

Note: If the upper computer itself is connected with payment system or the upper computer is with e-payment system, then you can use this command to set VMC receiving amount.

Mode: 1: Bill 2: Coin 3: IC card 4: Bank card 5: Wechat payment 6: Alipay 7: Jingdong Pay 8: Swallowing money 9: Union scan pay

The card number is optional.

4.1.6 Upper computer sets whether to accept coins and notes (Upper computer

sends out)

Command	Length	PackNO+Text
(0x28)	6(1 byte)	Communication number + Mode(1byte)+value(2byte)

Description: Mode: 0: Notes 1: Coin

Value: 2 bytes constitute 16 bits. Each bit represents a value channel. bit0 represents value channel 0. bit1 represents value channel 1. 0xffff represents to accept all value. 0x0000 represents to prohibit all value.

4.2 Selection configuration information interaction

4.2.1 VMC reports selection price, inventory, capacity and product ID (VMC sends out)

Command	Length	PackNO+Text
(0x11)	12(1 byte)	Communication number+ selection Number (2 byte)+ selection price(4 byte)+ selection inventory (1 byte)+ selection capacity (1 byte)+ selection commodity number (2 byte) + selection status (1 byte)

Selection status: 1. selection pause 0. Normal
Upper computer doesn't need to calculate the selection inventory. It can get inventory info from this command.

4.2.2 Set selection price (Both VMC and upper computer can use this command)

Command	Length	PackNO+Text
(0x12)	7(1 byte)	Communication number+ selection number (2 byte)+ selection price (4 byte)

If selection number is 1000, it means to set the price of all the selections on the first top tray at the same price. The tray number of the first top tray is 0.
1001 is to set the price of all the selections on tray 1 at same price.

1009 is to set the price of all the selections on tray 9 at same price. And so on.
0000 is to set the price of all the selections on the machine at same price.

4.2.3 Set selection inventory (Both VMC and upper computer can use this command)

Command	Length	PackNO+Text
(0x13)	4(1 byte)	Communication number+ selection number (2 byte)+ selection inventory (1 byte)

Whole tray and whole machine inventory setting is the same as price setting.

4.2.4 Set selection capacity (Both VMC and upper computer can use this command)

Command	Length	PackNO+Text
(0x14)	4(1 byte)	Communication number+ selection number(2 byte)+ selection capacity(1 byte)

Whole tray and whole machine capacity setting is the same as price setting.

4.2.5 Set selection product ID (Both VMC and upper computer can use this command)

Command	Length	PackNO+Text
(0x15)	5(1 byte)	Communication number+ selection number(2 byte)+ selection commodity number (2 byte)

Whole tray and whole machine selection commodity setting is the same as price setting.

4.2.6 Press one key on Lower computer to set fully loading (VMC sends out)

Command	Length	PackNO+Text
(0x17)	1(1 byte)	Communication number

Press the fully loading button on VMC, then VMC will send out this command.

4.3 Dispensing information interaction

4.3.1 Upper computer checks whether a specific selection is working normally (Upper computer sends out)

Command	Length	PackNO+Text
(0x01)	4(1 byte)	Communication number + selection number(2 byte)

After VMC receives the command, it will check whether the selection is working normally. It executes the command and returns below data.

Command (0x02)	Length 4(1 byte)	PackNO+Text Communication number+ 0x01: Normal 0x02: Out of stock 0x03: selection doesn't exist 0x04: selection pause 0x05: There is product inside elevator 0x06: Delivery door unlocked 0x07: Elevator error 0x08: Elevator self-checking faulty 0x09: Microwave oven delivery door closing error 0x10:Microwave oven inlet door opening error 0x11:Microwave oven inlet door closing error 0x12: Didn't detect box lunch 0x13: Box lunch is heating 0x14: Microwave oven delivery door opening error 0x15: Please take out the lunch box in the microwave 0x16: Staypole return error 0x17: Main motor fault 0x18: Translation motor fault 0x19: Staypole push error 0x20: Elevator entering microwave oven error 0x21: Elevator exiting microwave oven error 0x22: Pushrod pushing error in microwave oven 0x23: Pushrod returning error in microwave oven +selection number (2 byte)

4.3.2 Upper computer selects to buy (Upper computer sends out)

Command (0x03)	Length 3(1 byte)	PackNO+Text Communication number+ selection number (2 byte)

After VMC receives the command, it will select the selection number. This is equivalent to selecting the selection number via keypad. The returning data of this command is the same as that of command "Upper computer checks whether a specific selection is working normally". By sending this command, upper computer selects an selection.

4.3.3 VMC dispensing status (VMC sends out)

Command (0x04)	Length 5(1 byte)	PackNO+Text Communication number+Status(1 byte)+selection number(2 byte)+Microwave number(1 byte)

Command (0x04)	Length 3(1 byte)	PackNO+Text Communication number+ 0x01 Dispensing 0x02 Dispensing successfully 0x03 Selection jammed 0x04 Motor doesn't stop normally 0x06 Motor doesn't exist 0x07 Elevator error 0x10 Elevator is ascending 0x11 Elevator is descending 0x12 Elevator ascending error 0x13 Elevator descending error 0x14 Microwave delivery door is closing 0x15 Microwave delivery door closing error 0x16 Microwave inlet door is opening 0x17 Microwave inlet door opening error 0x18 Pushing lunch box into microwave 0x19 Microwave inlet door is closing 0x20 Microwave inlet door closing error 0x21 Don't detect lunch box in microwave 0x22 Lunch box is heating 0x23 Lunch box heating remaining time, second 0x24 Please take out the lunch box (successful purchase) 0x25 Staypole return error 0x26 Microwave delivery door is opening 0x28 Staypole push error 0x29 Elevator entering microwave oven error 0x30 Elevator exiting microwave oven error 0x31 Pushrod pushing error in microwave oven 0x32 Pushrod returing error in microwave oven 0xff Purchase terminated + selection number (2 byte)

4.3.4 VMC selects selection or cancel selection (Both VMC and upper computer can send out)

Command (0x05)	Length 3(1 byte)	PackNO+Text Communication number + selection number (2byte)

This command is mainly used by VMC. It informs the upper computer that the selection is made or canceled.

When you set selection number as 0x0000, it means to cancel selection. When upper computer sends out this command, it is regarded as to cancel selection by default.

4.3.5 Upper computer drives selection directly (Upper computer sends out)

Command (0x06)	Length 5(1 byte)	PackNO+Text Communication number+Enable drop sensor or not(1 byte) + Enable elevator or not (1 byte) selection number (2 byte)

If you want the upper computer to control dispensing directly, you can use this command.
Enable drop sensor or not: 0: No 1: Enable
Enable elevator or not: 0: No 1: Enable
After executing the commands, VMC returns by "VMC dispensing status".

Upper computer requests to acquire machine status (Upper computer sends out)

Command (0x53)	Length (1 byte)	PackNO+Text Communication number

After VMC receives the command, it executes and sends the machine status to upper machine, as below:

Command (0x54)	Length (1 byte)	PackNO+Text Communication number + 0x00: Normal 0x01: There is product in elevator 0x02: Delivery door is not closed 0x03: Elevator error 0x04: Elevator self-checking error

4.4 Other Commands

4.4.1 Upper computer checks IC card balance (Upper computer sends out)

Command (0x61)	Length 1(1 byte)	PackNO+Text Communication number + Command (1 byte)

Command 1: Check balance
2: Cancel to check balance

When IC card reader/POS reader is connected with VMC, if upper computer wants to check IC card balance, it can send this command. After VMC receives this command, it will check IC card balance, and inform upper computer of the balance by below command.

Command (0x62)	Length 6(1 byte)	PackNO+Text Communication number +Status (1 byte) + Balance (4 byte)

Status 1: Normal
2: Card error

4.4.2 Lower computer calls out Android menu (VMC sends out)

Command	Length	PackNO+Text
(0x63)	1(1 byte)	Communication number

4.4.3 Upper computer sets VMC query (POLL) interval (Upper computer sends out)

Command	Length	PackNO+Text
(0x16)	2(1 byte)	Communication number (1 byte) +interval (1 byte)

间

Interval 1:100ms, 2:200ms, 5:500ms, and so on. The maximum can not exceed 2s.

4.4.4 Information synchronization command (Both VMC and upper computer can send out)

Command	Length	PackNO+Text
(0x31)	1(1 byte)	Communication number

Since the start time of upper computer and VMC is inconsistent, this command is needed for synchronization. When upper computer software starts, it must send this command. When VMC starts, it also must send this command. When upper computer receives this command from VMC, it must send this command to VMC once again. After VMC receives this command, it will send selection price, inventory, capacity and product ID to upper computer. The process is as below:

VMC		Upper computer
Request info synchronization	->	
	<-	ACK
POLL	->	
	<-	Request info synchronization

4.1.5 Upper computer requests to acquire machine status (Upper computer sends out)

Command	Length	PackNO+Text
(0x51)	1(1 byte)	Communication number

After VMC receives the command, it sends the machine status to upper machine, as below:

Command (0x52)	Length 1(1 byte)	PackNO+Text Communication number+ Bill acceptor status+ Coin acceptor status+ Card reader status+Temperature controller status+ Temperature+ Door status+ Bill change(4 byte)+ Coin change(4 byte)+ Machine ID number (10 byte) + Machine temperature (8 byte, starts from the master machine. 0xaa Temperature has not been read yet) + Machine humidity (8 byte, start from master machine)

4.1.6 Upper computer requests VMC to deduct card or cancel deduction

Command (0x64)	Length 1(1 byte)	PackNO+Text Communication number + Deduction amount (4 byte)

This command is mainly used under below 2 conditions:
A. Upper computer is using shopping cart function.
B. Card reader is connected with VMC.
When VMC receives this command, it will requests the card reader to deduct money. After deducting successful, VMC will inform upper computer by 4.1.1 VMC collects money notice.
If the deduction amount is 0, it means to cancel deduction.

4.1.7 VMC sends microwave info

Command (0x66)	Length 1(1 byte)	PackNO+Text Communication number + Microwave amount(1 byte)+Microwave status

This command is used to report microwave info.
Microwave amount means there is how many microwaves on the machine.
Microwave status: 0-Available 1-Unavailable.
Microwave amount corresponds to the status byte amount, which means, if there are 2 microwaves, then there are 2 status byte.

4.5 Menu Commands (Replace keypad and 5 inches display)

Command (0x70)	Length (1 byte)	PackNO+Text Communication number + Command type + Parameters

4.5.1 Coin system setting

Command type: 0x01
Parameters:

0x00		Read the current coin system configuration
0x01+ Coin System Type	Coin System Type 0x01: Coin acceptor 0x02: HOPPER	Set coin system type

VMC returns:

Read the current coin system configuration on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number + Command type (0x01) + Operation type (0x00) + Coin system type (0x01: Coin acceptor 0x02: HOPPER)

Set coin system type on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number + Command type (0x01) + Operation type (0x01)+ Status (0x00: Set successfully 0x01: Set failed)

4.5.2 Selection mode setting

Command type: 0x02
Parameters:

0x00+ Layer number	Layer number range: 0-99	Read selection mode of the specific layer number
0x01+ layer number + Selection mode	Selection mode 0x01: Spiral 0x0: Belt 0x03: Hook	Set selection mode of the specific layer number

VMC returns:

Read selection mode of the specific layer number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number + Command type (0x02) + Operation type (0x00) + Selection mode (0x01: Spiral 0x02: Belt 0x03: Hook)

Set selection mode of the specific layer number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number + Command type (0x02) + Operation type (0x01)+ Status (0x00: Set successfully 0x01: Set failed)

4.5.3 Motor AD setting

Command type: 0x03
Parameters:

0x00+ Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to 9	Read motor AD of the specific machine
0x01+ Machine number + Motor AD	Motor AD: Range 20-250	Set motor AD of the specific machine

VMC returns:

Read motor AD of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number + Command type (0x03) + Operation type (0x00)+ Status (0x00: Read successfully 0x01: Slave machine communication error) + Motor AD

Set motor AD of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number + Command type (0x03)+ Operation type (0x01)+ Status (0x00: Set successfully 0x01: Slave machine communication error)

4.5.4 Selection coupling setting

Command type: 0x04

Parameters:

0x00+ Selection number	Selection number: 1-1000	Read the coupling status of specific selection number
0x01+ Selection number+ Coupling status	Coupling status 0x01: No coupling 0x02: 2 selections coupling 0x03: 3 selections coupling	Set the coupling status of specific selection number

VMC returns:

Read the coupling status of specific selection number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number + Command type (0x04) + Operation type (0x00)+ Coupling status (0x01: No coupling 0x02: 2 selections coupling 0x03: 3 selections coupling)

Set the coupling status of specific selection number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type (0x04)+ Operation type (0x01)+ Status (0x00: Set successfully 0x01: Set failed)

4.5.5 Clear selection coupling

Command type: 0x05
Parameters:

0x01		Clear selection coupling

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x05)+Operation type(0x01)+ Status (0x00: Set successfully 0x01: Set failed)

4.5.6 Coupling synchronizing time

Command type: 0x06
Parameters:

0x00+ Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read coupling synchronizing time of the specific machine
0x01+ Machine number+ Coupling synchronizing time (2 byte)	Coupling synchronizing time: Range: 1200-2200ms	Set coupling synchronizing time of the specific machine

VMC returns:

Read coupling synchronizing time of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number +Command type (0x06)+Operation type (0x00)+Status (0x00: Read successfully 0x01: Slave machine communication error) + Coupling synchronizing time (2 byte)

Set coupling synchronizing time of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication umber+Command type(0x06)+Operation type(0x01)+ Status(0x00: Set successfully 0x01: Slave machine communication error)

4.5.7 MotorShort Value Setting

Command type: 0x07
Parameters:

0x00+ Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read motorshort value of the specific machine
0x01+ Machine number+ MotorShort Value (2 byte)	MotorShort Value: Range: 700-900	Set motorshort value of the specific machine

VMC returns:

Read motorshort value of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x07)+Operation type (0x00)+ Status (0x00: Read successfully 0x01: Slave machine communication error) + Motorshort value

Set motorshort value of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type (0x03)+Operation type (0x01)+Status (0x00: Set successfully 0x01: Slave machine communication error)

4.5.8 Machine ID Setting

Command type: 0x08
Parameters:

0x00		Read machine ID
0x01+Machine ID (10 digits)		Set machine ID

VMC returns:

Read machine ID

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+ Command type(0x08)+ Operation type (0x00) +Machine ID (10 byte ASCII)

Set machine ID

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+ Command type (0x08)+ Operation type (0x01)+ Status (0x00: Set successfully 0x01: Set failed)

4.5.9 System Time Setting

Command type: 0x09
Parameters:

0x00		Read machine time
0x01+ Machine time (7-byte numeric type)	YYYYMMDDHHMMSS (For example: 20171130095003)	Set machine time

VMC returns:

Read machine time

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+ Command type (0x09)+Operation type (0x00) + Machine time (7-byte numeric type)

Set machine time

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number + Command type (0x09)+ Operation type (0x01)+Status (0x00: Set successfully 0x01: Set failed)

4.5.10 Decimal Point Digit Setting

Command type: 0x10
Parameters:

0x00		Read decimal point digit of the machine
0x01+ Decimal point digit of the machine	Decimal point digit 0 digit 1 digit 2 digit	Set decimal point digit of the machine

VMC returns:

Read decimal point digit of the machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type (0x10)+ Opearation type (0x00) + Decimal point digit of the machine

Set decimal point digit of the machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number +Command type (0x10)+Operation type (0x01)+Status (0x00: Set successfully 0x01: Set failed)

4.5.11 Delivery Door Close Time Setting

Command type: 0x11
Parameters:

0x00+ Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read delivery door close time of the specific machine
0x01+ Machine number+ Delivery door close time	Delivery door close time: Range: 3-250S	Set delivery door close time of the specific machine

VMC returns:

Read delivery door close time of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type(0x11)+ Operation type(0x00)+ Status (0x00:Read successfully 0x01:Slave machine communication error)+ Delivery door close time

Set delivery door close time of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type(0x11)+ Operation type(0x01)+ Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.12 Connecting Lift Setting

Command type: 0x12
Parameters:

0x00+ Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read the lift connecting status of the specific machine
0x01+ Machine number+ Connect lift + Overcurrent protection	Connect lift 0x01: YES 0x02: NO Overcurrent protection 0x00: NO 0x01: YES	Set the lift connecting status of the specific machine

VMC returns:

Read the lift connecting status of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type(0x12)+ Operation type(0x00)+ Status (0x00:Read successfully 0x01:Slave machine communication error) + Connect lift+ Overcurrent protection

Set the lift connecting status of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type(0x12)+ Operation type(0x01)+ Status (0x00:Set successfully 0x01: Slave machine communication error)

4.5.13 Anti-theft Board Close Time

Command type: 0x13

Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read the anti-theft board close time for the specific machine
0x01+Machine number+ Anti-theft board close time (2 bytes)	Anti-theft board close time: Range 20-3600ms	Set the anti-theft board close time for the specific machine

VMC returns:

Read the anti-theft board close time for the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type (0x13)+ Operation type(0x00)+ Status (0x00:Read successfully 0x01:Slave machine communication error) + Anti-theft board close time

Set the anti-theft board close time for the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+ Command type(0x13)+ Operation type(0x01)+ Status (0x00:Set successfully 0x01: Slave machine communication error)

4.5.14 50C Coin Count (For Chinese market only)

Command type: 0x14
Parameters:

0x00		Read 50c coin count on machine
0x01+50c coin count (2 byte)		Set 50c coin count on machine

VMC returns:

Read 50c coin count on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+ Command type (0x14)+ Operation type (0x00) + 50c coin count on machine (2 byte)

Set 50c coin count on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x14)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.15 1 Dollar Coin Count (For Chinese market only)

Command type: 0x15
Parameters:

0x00		Read 1 dollar coin count on machine
0x01+1 Dollar Coin Count (2 byte)		Set 1 dollar coin count on machine

VMC returns:

Read 1 dollar coin count on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x15)+Operation type(0x00) + 1 dollar coin count on machine (2 byte)

Set 1 dollar coin count on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x15)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.16 Light Control Setting

Command type: 0x16
Parameters:

0x00		Read light control status on machine
0x01+ Start time+End time	Start time: Hour End time: Hour (For example.: 20-7, set the lights on from 20:00pm to 7:00am.)	Set light control status on machine

VMC returns:

Read light control status on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x16)+Operation type(0x00) +Start time+ End time

Set light control status on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x16)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.17 Unionpay/POS setting

Command type:0x17
Parameters:

0x00		Read Unionpay/POS status on machine
0x01+Enable Unionpay/POS	Enable Unionpay/POS 0x00: YES 0x02: NO	Set Unionpay/POS status on machine

VMC returns:

Read Unionpay/POS status on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x17)+Operation type(0x00) + Unionpay/POS status on machine

Set Unionpay/POS status on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x17)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.18 Bill Value Accepted Setting

Command type: 0x18
Parameters:

0x00		Read bill value accepted on machine
0x01+ bill value accepted	Bill value accepted: Range 1-100	Set bill value accepted on machine

VMC returns:

Read bill value accepted on machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x18)+Operation type(0x00) + bill value accepted on machine

Set bill value accepted on machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x18)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.19 Bill Accepting Mode Setting

Command type: 0x19
Parameters:

0x00		Read bill accepting mode on machine
0x01+Bill accepting mode	Bill accepting mode 0x01:Always accept (No-mandatory) 0x02: Hold Credit Temporarily 0x03: Force Vend (Mandatory)	Set bill accepting mode on machine

VMC returns:

Read bill accepting mode on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x19)+Operation type(0x00) + bill accepting mode on machine

Set bill accepting mode on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x19)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.20 Bill Low-change Setting

Command type: 0x20
Parameters:

0x00		Read bill low-change on machine
0x01+ Low change	Low change: Range 0-100	Set bill low-change on machine

VMC returns:

Read bill low-change on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x20)+Operation type(0x00) +bill low-change on machine

Set bill low-change on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x20)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.21 Automatic Change Time Setting

Command type: 0x21
Parameters:

0x00		Read automatic change time on machine
0x01+ Automatic change time (2 byte)	Automatic change time: Range >0	Set automatic change time on machine

VMC returns:

Read automatic change time on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x21)+Operation type(0x00) +automatic change time on machine (2 byte)

Set automatic change time on machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x21)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.22 Automatic Holding Time Setting

Command type: 0x22

Parameters:

0x00		Read automatic holding time on machine
0x01+automatic holding time (2 byte)	Automatic holding time: Range>=300	Set automatic holding time on machine

VMC returns:

Read automatic holding time on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x22)+Operation type(0x00) + automatic holding time on machine (2 byte)

Set automatic holding time on machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x22)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.23 Remaining Credit Management

Command type: 0x23
Parameters:

0x00		Read remaining credit management mode
0x01+Remaining credit management mode	Remaining credit management mode 0x01: Holding credit 0x02: Return change 0x03: Change first, holding credit then	Set remaining credit management mode

VMC returns:

Read remaining credit management mode

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x23)+Operation type(0x00) +remaining credit management mode

Set remaining credit management mode

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x23)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.24 Drop Sensor Setting

Command type: 0x24
Parameters:

0x00+ Layer number	Layer number range: 0-100. If you set at 100, you can operate on the whole machine.	Read the drop sensor status for the specific layer number
0x01+ Layer number+ Drop sensor setting	Drop sensor setting 0x01: Enable 0x02: Close If you set at 100, you can operate on the whole machine.	Set the drop sensor for the specific layer number

VMC returns:

Read the drop sensor status for the specific layer number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x24)+Operation type(0x00)+Drop sensor setting

Set the drop sensor for the specific layer number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x24)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.25 Belt Detection Setting

Command type: 0x25
Parameters:

0x00+Selection number (2 byte)	Selection number 1-500: Operate on a single selection 2000-2049: Operate on tray 0 to tray 49 3000-3009: Operate on machine 0 to machine 9	Read the belt detection setting of the specific selection
0x01+ Selection number (2 byte)+ Timeout (2 byte) + Stop Time (2 byte)		Set the belt detection setting of the specific selection

VMC returns:

Read the belt detection setting of the specific selection number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x25)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+ Timeout (2 byte) + Stop Time (2 byte)

Set the belt detection setting of the specific selection number

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x25)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.26 Extra 1/4 turn setting

Command type: 0x26

Parameters:

0x00+ Selection number (2 byte)	Selection number 1-1000: Operate on a single selection 2000-2099: Operate on tray 0 to tray 99 3000-3009: Operate on machine 0 to machine 9	Read the extra 1/4 turn setting of the specific selection
0x01+ Selection number (2 byte)+ Status	Status: 0x00: Enable 0x01: Close	Set the extra 1/4 turn setting of the specific selection

VMC returns:

Read the extra 1/4 turn setting of the specific selection

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x26)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Status

Set the extra 1/4 turn setting of the specific selection

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x26)+Operation type(0x01)+Status (0x00:Set successfully 0x01: Slave machine communication error)

4.5.27 Jammed Selection Setting (The selection can be used or not after the selection is jammed)

Command type: 0x27
Parameters:

0x00+ Layer number	Layer number range: 0-100. If you set at 100, you can operate on the whole machine.	Read the jammed selection setting of the specific layer
0x01+ Layer number + Jammed selection setting	Jammed selection setting 0x01: Disable this selection 0x02: Continue service If you set at 100, you can operate on the whole machine	Set the jammed selection of the specific layer

VMC returns:

Read the jammed selection setting of the specific layer

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x27)+Operation type(0x00)+ Jammed selection setting

Set the jammed selection of the specific layer

Command	Length	PackNO+Text
4.5.43 (0x71 4.5.44)	(1 byte)	Communication number+Command type(0x27)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.28 Temperature Controller Setting

Command type: 0x28
Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read temperature controller status of the specific machine
0x01+Machine number+ Temperature controller working mode+ Temperature	Temperature controller working mode 0x01: Heating mode 0x02: Refrigeration mode 0x03: Constant temperature 0x04: Close	Set temperature controller status of the specific machine

VMC returns:

Read temperature controller status of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x28)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Temperature controller working mode+Temperature+ Minimum temperature setting+ Maximum temperature setting

Set temperature controller status of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x28)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.29 Compressor Working Period

Command type: 0x29
Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read compressor working period of the specific machine
0x01+Machine number+Working period 1 start time+ Working period 1 end time+ Working period 2 start time+ Working period 2 end time+ Working period 3 start time+ Working period 3 end time	Working hours (0-24) If you set start time at 00, and set end time at 00, the compressor will not work the whole day	Set compressor working period of the specific machine

VMC returns:

Read compressor working period of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x29)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Working period 1 start time+ Working period 1 end time+ Working period 2 start time+ Working period 2 end time+ Working period 3 start time+ Working period 3 end time

Set compressor working period of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x29)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.30 Clear Sales Info

Command type: 0x30
Parameters:

0x01+ Password (6 byte)		Clear sales info

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+ Command type(0x30)+ Operation type(0x01)+ Status (0x00:Clear successfully 0x01:Wrong password)

4.5.31 Clear Security Code Setting

Command type: 0x31
Parameters:

0x01+ Verify password (6 byte)+ New security code (6 byte)		Clear Security Code Setting

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x31)+Operation type(0x01)+Status (0x00:Set successfully0x01: Wrong password)

4.5.32 Clear Jammed Selection

Command type: 0x32
Parameters:

0x00		Query selection jammed status
0x01	Android should clear the jammed selection according to the jammed selection info it receives.	Clear jammed selection

VMC returns:

Query selection jammed status

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x32)+Operation type(0x00)+ Selection number (1 byte)+ Jammed selection N (2 byte for each selection)+ Selection number (1 byte) + Belt selection self-test failure N(2 byte for each selection)

Clear jammed selection

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x32)+Operation type(0x01)+Status (0x00: Clear successfully 0x01: Clear failed)

4.5.33 Clear Motor Error

Command type: 0x33
Parameters:

0x00		Query motor error
0x01		Clear motor error

VMC returns:

Query motor error

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x33)+Operation type(0x00)+ Selection number (1 byte)+ Motor error N (2 byte for each selection)

Clear motor error

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x33)+Operation type(0x01)+Status (0x00: Clear successfully 0x01: Clear failed)

4.5.34 Clear Lift Error

Command type: 0x34
Parameters:

0x00		Query lift error times
0x01		Clear lift error

VMC returns:

Query lift error times

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x34)+Operation type(0x00)+ Lift error times

Clear lift error

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x34)+Operation type(0x01)+Status (0x00:Clear successfully 0x01: Clear failed)

4.5.35 Clear extra 1/4 turn error

Command type: 0x35
Parameters:

0x00		Query extra 1/4 turn selection
0x01		Clear extra 1/4 turn selection

VMC returns:

Query motor error status

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type (0x35) +Operation type (0x00)+ selection amount (1 byte) + Jammed selection N (2 byte for each selection)

Clear motor error

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x35)+Operation type(0x01)+Status (0x00: Clear successfully 0x01: Clear failed)

4.5.36 Query Temperature Controller Status

Command type: 0x36

Parameters:

0x00+ Machine number	Machine number 0: Stands for master machine 1-9: Stands for salve machine 1 to slave machine 9	Read the temperature controller status of the specific machine

VMC returns:
Read the temperature controller status of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type (0x36)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Temperature (May be negative temperature)+Temperature controller status (0x00: Normal, 0x01: Excessive compressor current, 0x02: Compressor broken circuit, 0x03: Excessive current of Evaporating fan, 0x04: Evaporating fan broken circuit, 0x05: Excessive current of condensation fan, 0x06: Condensation fan broken circuit, 0x07: Temperature sensor error)

4.5.37 Temperature Controller Parameters Setting

Command type: 0x37
Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for salve machine 1 to slave machine 9	Read temperature controller parameters of the specific machine
0x01+Machine number+Temperature controller parameters	Temperature controller parameters: Lowest temperature (Range 0-60) Highest temperature (Range 0-60) Return difference value (Range 2-8) Delay Starting time (Range 0-8) Sensor correction (Range -10-10) Defrosting period (Range 0-24 Hours) Defrosting time (Range 1-40 Minutes) Protect (1-ON, 0-OFF)	Set temperature controller parameters of the specific machine

VMC returns:

Read temperature controller parameters of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type (0x37)+Operation type (0x00)+Status (0x00:Read successfully 0x01:Slave machine communication error) + Temperature controller parameters (See the list of parameters above)

Set temperature controller parameters of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+ Command type (0x37)+ Operation type (0x01)+Status (0x00:Set successfully 0x01: Slave machine communication error)

4.5.38 Selection Test

Command type: 0x38
Parameters:

0x01+ Mode+ selection number (2 byte)	Mode: 1-Motor turns 2-Motor doesn't turn	Selection test

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x38)+Operation type(0x01)+ Selection status(0x00: Successful 0x01:The motor can't stop properly 0x02: Selection doesn't exist 0x03: Communication error 0x04: Motor short circuit)

4.5.39 Coin Out Testing

Command type: 0x39

Parameters:

0x01+ Coin system type + number of changes (2 byte) + Coin type	Coin system type: 0x01- Coin acceptor 0x02-HOPPER Coin type (For Chinese coins): 0x01- 50c coin 0x02- 1 dollar coin (If coin system type is coin acceptor, then set coin type at 0)	Coin out testing

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x39)+Operation type(0x01)+Change status(0x00: Change completed 0x01: Change error)+Changed coin number (2 byte)

4.5.40 Query Coin Number (Coin number of each currency)

Command type: 0x40
Parameters:

0x00		Query Coin number

VMC returns:

)

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x40)+Operation type(0x00)+Status(0x00:Coin acceptor normal 0x01: Coin acceptor faulty)+Coin amount (4 byte) +16 channels amount (1 byte for each channel)

4.5.41 Query Selection Number

Command type: 0x41
Parameters:

0x00		Query selection number

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x41)+Operation type(0x00)+Selection number+Machine No. N+Valid selection number N+ Short circuit motor number N (There may be multiple cabinets)

4.5.42 Query Selection Configuration

Command type: 0x42
Parameters:

0x00+ Selection number (2 byte)		Query selection configuration

VMC returns:

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x42)+Operation type(0x00)+ Selection price (4 byte)+Inventory (2 byte)+Capacity (1 byte)+Product ID (2 byte)+Selection Mode (1 byte 0x01:Coil 0x02: Belt 0x03: Hook) + Drop sensor status (1 byte 0x00:Enable 0x01: Close) +Jammed set (1 byte 0x00: can't buy 0x01: Continue service)+Turn 1/4 circle (1 byte 0x00: Close 0x01: Enable)

4.5.43 Daily Sales

Command type: 0x43
Parameters:

0x00+yyyymmdd (4 byte)	Within one month	Query daily sales

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x43)+Operation type(0x00)+Total transaction number+Total transaction amount+Cash transaction number+Cash transaction amount+Wechat transaction number+Wechat transaction amount+Alipay transaction number+Alipay transaction amount+Union scanning code transaction number+Union scanning code transaction amount+Token code transaction number+Token code transaction amount+Union card transaction number+Union card transaction amount+IC transaction number+IC transaction amount+Holding credit transaction number+Holding credit transaction amount (The above are 4 byte)

4.5.44 Monthly Sales

Command type: 0x44
Parameters:

0x00+yyyymm (3 byte)		Query monthly sales

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x44)+Operation type(0x00)+Total transaction number+Total transaction amount+Cash transaction number+Cash transaction amount+Wechat transaction number+Wechat transaction amount+Alipay transaction number+Alipay transaction amount+Union scanning code transaction number+Union scanning code transaction amount+Token code transaction number+Token code transaction amount+ Union card transaction number+ Union card transaction amount+IC transaction number+IC transaction amount+Holding credit transaction number+Holding credit transaction amount (The above are 4 byte)

4.5.45 Yearly Sales

Command type: 0x45
Parameters:

0x00+yyyy (2 byte)		Query yearly sales

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x45)+Operation type(0x00)+Total transaction number+Total transaction amount+Cash transaction number+Cash transaction amount+Wechat transaction number+Wechat transaction amount+Alipay transaction number+Alipay transaction amount+Union scanning code transaction number+Union scanning code transaction amount+Token code transaction number+Token code transaction amount+Union card transaction number+Union card transaction amount+IC transaction number+IC transaction amount+Holding credit transaction number+Holding credit transaction amount (The above are 4 byte)

4.5.46 Entire Machine Sales

Command type: 0x46
Parameters:

0x00		Query entire machine sales

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x46)+Operation type(0x00)+Total transaction number+Total transaction amount+Cash transaction number+Cash transaction amount+Wechat transaction number+Wechat transaction amount+Alipay transaction number+Alipay transaction amount+Union scanning code transaction number+Union scanning code transaction amount+Token code transaction number+Token code transaction amount+Union card transaction number+Union card transaction amount+IC transaction number+IC transaction amount+Holding credit transaction number+Holding credit transaction amount (The above are 4 byte)

4.5.47 Selection Sales Message

Command type: 0x47
Parameters:

0x00+ Selection number (2 byte)		Query selection sales message

VMC returns:

)

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x47)+Operation type(0x00)+Transaction number (4 byte)+Transaction amount (4 byte)

4.5.48 Drop Sensor Frequency Adjustment

Command type: 0x48
Parameters:

0x01+Machine number	0: Stands for master machine 1-9：Stands for salve machine 1 to slave machine 9	Set drop sensor frequency adjustment

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x48)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.49 Drop Sensor Sensitivity

Command type: 0x49
Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Read the drop sensor sensitivity of the specific machine
0x01+Machine number+ Sensitivity (1 byte)		Set the drop sensor sensitivity of the specific machine

VMC returns:

Read the drop sensor sensitivity of the specific machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x49)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Sensitivity

Set the drop sensor sensitivity of the specfic machine

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x49)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.50 Drop Sensor Test

Command type: 0x50
Parameters:

0x01+Machine number+ Test mode	Test mode 0x00-Auto test 0x01-Manual test	Drop sensor test

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x50)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)+Test status (0-successfully, 1-Failed)

4.5.51 Lift layer-location

Command type: 0x51
Parameters:

0x00+Machine number+Aisle layer number (1 byte)		Read the pulse of the specific layer
0x01+Machine number+Aisle layer number(1 byte)+ Pulse (2 byte)	Aisle layer number: Range 0-9 Pulse: Range 0-4000	Lift layer-location

VMC returns:

Read the pulse of the specific layer

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x51)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Pulse (2 byte)

Set lift location pulse

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x51)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)+Location status(0-Successfully, 1-Delivery door isn't closed, 2-Lift self-checking failed)

4.5.52 Lift Speed

Command type: 0x52
Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Query lift speed
0x01+Machine number+Lift speed	Lift speed: Range: 15-50	Set lift speed

VMC returns:

Read lift speed of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x52)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Lift speed

Set lift speed of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x52)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.53 Lift Sensitivity Setting

Command type: 0x53
Parameters:

0x00+Machine number	Machine number 0: Stands for master machine 1-9: Stands for slave machine 1 to slave machine 9	Query lift sensitivity
0x01+Machine number+Lift sensitivity	Lift sensitivity: Range 0-50	Set lift sensitivity

VMC returns:

Read lift sensitivity of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x53)+Operation type(0x00)+Status(0x00:Read successfully 0x01:Slave machine communication error)+Lift sensitivity

Read lift sensitivity of the specific machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x53)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)

4.5.54 Lift Test

Command type: 0x54
Parameters:

0x01+Machine number+Layer number	Layer number: 0-9	Lift Test

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x54)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Slave machine communication error)+Test result (0: Normal, 1-Lift overload, 2-Anti-theft board error, 3-Delivery door unlocked 4-Translation motor overload)

4.5.55 Microwave Location on Lunch Box Machine

Command type: 0x55
Parameters:

0x00+ Microwave serial number + Machine number		Query microwave location pulse on Lunch Box machine
0x01+Layer Pulse (2 byte)+ Lunch box pulse (2 byte) + Microwave serial number+Machine number	Microwave serial number: 1-The upper microwave 2-The bottom microwave	Microwave Location on Lunch Box Machine

VMC returns:

Read microwave location pulse on Lunch Box machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x55)+Operation type(0x00) +Layer pulse (2 byte)+Lunch box pulse (2 byte)

Set microwave location pulse on Lunch Box machine

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x55)+Operation type(0x01) +Location status(0-Successfully, 1-Failed)

4.5.56 Set space between boxes on trays

Command type: 0x56
Parameters:

0x01+Layer number+Start location pulse (2 byte) +Space pulse (2 byte)	Layer number 0-9 Tray Layer number 11 Microwave layer	Set space between boxes on trays

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x56)+Operation type(0x01) +Set status(0-Successfully, 1-Translation motor overload 2-Limit protection 3-Overload protection 4- Lift error)

4.5.57 Mechanism Function Test on Box Lunch Machine

Command type: 0x57
Parameters:

0x01+ Mechanism + action +Machine number	Mechanism 0- Belt motor (Action: 1-forward 2-backword 3-Stop) 1- Push rod motor (Action: 1-forward 2-backword 3-stop) 2- Microwave front door(Action: 1-Upword 2-Downword 3-Stop) 3- Microwave back door(Action 1-Upword 2-Downword 3-Stop) 4- Microwave control(Action: 1-Open 2-Stop) 5- Fan(Action: 1-Open 2-Stop)	Mechanism function test on box lunch machine

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x57)+Operation type(0x01) +Set status(0-Successfully, 1-Failed)

4.5.58 Lunch Box Machine Test

Command type: 0x58
Parameters:

0x01+Starting selection(2 byte)+Ending selection+Whether or not to dispense	Whether or not to dispense (0- YES) (1- NO)	Lunch box machine test

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x58)+Operation type(0x01)+Test result(0:Normal, 1-Lift overload 2:Main motor overload 3:Translation motor overload 4-Back door open error 5-Back door close error 6-Front door open error 7-Front door close error)

4.5.59 Bill Change

Command type: 0x59
Parameters:

0x00		Query bill numbers in Bill recycler
0x01 +Bill return numbers	Bill return numbers (If setting at 0, then return all the changes out)	Bill change

VMC returns:

Query bill numbers in Bill recycler

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x59)+Operation type(0x00) +Bill numbers

Set bill change

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x59)+Operation type(0x01)+Status(0x00:Successfully 0x01: Failed)

4.5.60 Connecting Temperature Controller

Command type: 0x60
Parameters:

0x00+Machine number		Query Whether or not to connect temperature controller
0x01+Machine number +Whether or not to connect temperature controller	Whether or not to connect temperature controller 0- YES 1- NO	Set temperature controller connection

VMC returns:

Query Whether or not to connect temperature controller

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x60)+Operation type(0x00) +Query Whether or not to connect temperature controller (0-YES 1-NO)

Set temperature controller connection

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x60)+Operation type(0x01)+ Status(0-Set successfully1-Set failed)

4.5.61 Bill Acceptor Diagnosis

Command type: 0x61
Parameters:

0x01		Bill acceptor diagnosis

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x61)+Operation type(0x01)+ Bill acceptor status(0- Normal 1-Error)

4.5.62 Coin acceptor Diagnosis

Command type: 0x62
Parameters:

0x01		Coin acceptor diagnosis

VMC returns:

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x62)+Operation type(0x01)+ Coin acceptor status(0-Normal 1-Error)

4.5.63 Fully Loading

Command type: 0x63
Parameters:

0x01		Fully loading on machine

VMC returns:

Command	Length	PackNO+Text
(0x71)	(1 byte)	Communication number+Command type(0x63)+Operation type(0x01)+ Fully loading status(0-Normal 1-Error)

4.5.64 Lunch Box Heating Time Setting

Command type: 0x64
Parameters:

0x00+Selection number (2 byte)		Read lunch box heating time
0x01 +Heating time (2 byte) +Selection number (2 byte)	Heating time: Range: >0 If set selection number at 0, means set for all the selections on the machine. Set others by selection number.	Set lunch box heating time

VMC returns:

Read lunch box heating time

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x64)+Operation type(0x00) +Lunch box heating time (2 byte)

Set lunch box heating time

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x64)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.65 Set whether or not to heat the lunch box

Command type: 0x65
Parameters:

0x01+Heat or not	Heat or not 1: Heat 0: Not heat	Set whether or not to heat the lunch box when purchasing

VMC returns:

Set whether or not to heat the lunch box

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x65)+Operation type(0x01)+Status(0x00:Set successfully 0x01:Set failed)

4.5.67 Locate Lunch Box Manually

Command type: 0x67
Parameters:

0x00+Selection number (2 byte)		Read the location pulse of the specific selection
0x01+Selection number (2 byte)+Location pulse (2 byte)	When selection number is >0, it is to set for corresponding selection. When selection number is =0, it is to set the microwave location	Lunch Box Location

VMC returns:

Read the location pulse of the specific selection

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x67)+Operation type(0x00)+Pulse(2 byte)

Set lunch box pulse of the specific selection

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x67)+Operation type(0x01)+Location status(0-Successful, 1-Failed)

4.5.68 Lunch Box Speed Setting

Command type: 0x68
Parameters:

0x00		Query lunch box speed
0x01+Lunch box speed+Machine number		Set lunch box speed

VMC returns:

Read lunch box speed

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x68)+Operation type(0x00)+Lunch box speed

Set lunch box speed

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x68)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Error)

4.5.69 Lunch Box Sensitivity Setting

Command type: 0x69
Parameters:

0x00		Query lunch box sensitivity
0x01+Lunch box sensitivity+ Machine number		Set lunch box sensitivity

VMC returns:

Read lunch box sensitivity

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x69)+Operation type(0x00)+Lunch box sensitivity

Set lunch box sensitivity

Command (0x71)	Length (1 byte)	PackNO+Text
		Communication number+Command type(0x69)+Operation type(0x01)+Status(0x00:Set successfully 0x01: Error)

4.5.70 System Data Export

Command type: 0x70
Parameters:

0x01		System data export

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x70)+Operation type(0x01)+ Export status(0-Normal 1-Error)

4.5.71 System Data Import

Command type: 0x71
Parameters:

0x01		System data import

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x71)+Operation type(0x01)+ Import status(0-Normal 1-Error)

4.5.72 Test Drop Sensor on Lunch Box Machine

Command type: 0x72
Parameters:

0x01+Test ,mode +Machine number	Test mode 0x00- Sensor 1 0x01- Sensor 2 0x02- Microwave	Drop sensor test

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x72)+Operation type(0x01) +Test status(0-Successful, 1-failed)

4.5.78 Sensor Status on Lunch Box machine

Command type: 0x78
Parameters:

0x00+Machine number		Read sensor data on lunch box machine

VMC returns:

Command (0x71)	Length (1 byte)	PackNO+Text Communication number+Command type(0x78)+Operation type(0x00) + Sensor status(Sensor info is uploaded in text, separated by semicolons)