TS248

PC INTERFACE

PROVISIONAL SPECIFICATION

Data: 2012-6-6

1. COMMAND LIST

ECR-PC

No.		Command
1	Reception system configuration data	1
2	Reception of all PLU Preset Data with stock	2
~~3~~	~~Reception of all PLU Preset Data without stock~~	~~3~~
4	Reception of all PLU stock Data	4
5	Reception of Single PLU Preset Data with stock	5
7	Reception of all Department Preset Data	7
8	Reception of Single Department Preset Data	8
9	Reception of all Clerk Preset Data	9
10	Reception of single Clerk Preset Data	10
11	Reception of all Store header Data	11
12	Reception of all Footer logo Preset Data	12
13	Reception of all system status Preset Data	13
14	Reception of all cooking message Preset Data	14
15	Reception of Single cooking message Preset Data	15
16	Reception of all persentage Preset Data	16
17	Reception of all FCE Preset Data	17
18	Reception of all coupon Preset Data	18
19	Reception of all payment Preset Data	19
~~20~~	~~Reception of all DPLU Preset Data~~	~~20~~
21	Reception of all TAX Preset Data	21
22	Reception of all Menu Preset Data	22
23	Reception of single Menu Preset Data	23
~~24~~	~~Reception of screen layout Preset Data~~	~~24~~
25	Reception of Refund Preset Data	25
26	Reception of port Preset Data	26
27	Reception of KP Preset Data	27
28	Reception of Gift certificate Preset Data	28
29	Reception of RP Preset Data	29
30	Reception of Key descriptor Preset Data	30
31	Reception of Bundle PLU Preset Data	31
32	Reception of single Bundle PLU Preset Data	32
33	Reception of Bundle saving text Preset Data	33
34	Reception of pcash Preset Data	34
35	Reception of Flash report Preset Data	35
36	Reception of Register description Preset Data	36
37	Reception of Service tax Preset Data	37
38	Reception of Supplier Preset Data	38
39	Reception of Weighing PLU preset Data	39
40	Receiption of dept group Desc preset Data	40
41	Receiption of table group preset Data	41
42	Receiption of table parameter preset Data	42
43	Receiption of Floor Plan Layout preset Data	43

PC-ECR

No.		Command
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~~3~~	~~Overwrite all PLU Preset Data without stock~~	~~103~~
4	Overwrite all PLU stock Data	104
5	Overwrite Single PLU Preset Data with stock	105
7	Overwrite all Department Preset Data	107
8	Overwrite Single Department Preset Data	108
9	Overwrite all Clerk Preset Data	109
10	Overwrite Single Clerk Preset Data	110
11	Overwrite all Store header Preset Data	111
12	Overwrite all Footer logo Preset Data	112
13	Overwrite all system status Preset Data	113
14	Overwrite all cooking message Preset Data	114
15	Overwrite Single cooking message Preset Data	115
16	Overwrite all persentage Preset Data	116
17	Overwrite all FCE Preset Data	117
18	Overwrite all coupon Preset Data	118
19	Overwrite all payment Preset Data	119
~~20~~	~~Overwrite all DPLU Preset Data~~	~~120~~
21	Overwrite VAT Preset Data	121
22	Overwrite of all Menu Preset Data	122
23	Overwrite of single Menu Preset Data	123
~~24~~	~~Overwrite of screen layout Preset Data~~	~~124~~
25	Overwrite of refund Preset Data	125
26	Overwrite of port Preset Data	126
27	Overwrite of KP Preset Data	127
28	Overwrite of Gift certificate Preset Data	128
29	Overwrite of RP Preset Data	129
30	Overwrite of key descriptor Preset Data	130
31	Overwrite of Bundle PLU Preset Data	131
32	Overwrite of Single Bundle PLU Preset Data	132
33	Overwrite of Bundle saving Text Preset Data	133
34	Overwrite of pcash Preset Data	134
35	Overwrite of Flash report Preset Data	135
36	Overwrite of Register description Preset Data	136
37	Overwrite of Service tax Preset Data	137
38	Overwrite of Supplier Preset Data	138
39	Overwrite of Weighing PLU preset Data	139
40	Overwrite of dept group Desc preset Data	140
41	Overwrite of table group preset Data	141
42	Overwrite of table parameter preset Data	142
43	Overwrite of Floor Plan Layout preset Data	143
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Report&EJ

1	Reception of Report Data(X/Z)(financial)	201
2	Reception of Report Data(X/Z) (Periodic)	202
3	Reception of PLU Report Data(X/Z)(financial)	203
4	Reception of Clerk Report Data(X/Z)	205
5	Reception of PTD Clerk Report Data(X/Z)	206
6	Reception of Hourly Report Data(X/Z)	207
7	Reception of CLERK LOG Report Data(X/Z)	208
8	Reception of X Table Report Data(X/Z)	209
9	Reception of Active Table Report Data(X)	210
10	Reception of EJ Report Data(X)	211
11	Reception of PLU stock Report Data(X)	212
12	Reception of Menu Report Data(X/Z)	213
12	Reception of PTD menu Report Data(X/Z)	214
14	Reception of DAILY menu PLU Data(X)	215
15	Reception of PTD menu PLU Data(X)	216
16	Reception of second daily Z report(X)	217
17	Reception of Bundle Report Data(X/Z)	218
18	Reception of PTD Bundle Data(X/Z)	219
19	Reception of Daily Dept Group Data(X)	220
20	Reception of PTD Dept Group Data(X)	221

Report(IRC-HOST)

1	Reception of Report Data(X/Z)(financial)	251
2	Reception of Report Data(X/Z) (Periodic)	252
3	Reception of PLU Report Data(X/Z)(financial)	253
4	Reception of Clerk Report Data(X/Z)	255
5	Reception of PTD Clerk Report Data(X/Z)	256
6	Reception of Hourly Report Data(X/Z)	257
7	Reception of Table Report Data(X/Z)	259
8	Reception of Menu Report Data(X)	263
9	Reception of PTD menu Report Data(X)	264
10	Reception of DAILY menu PLU Data(X)	265
11	Reception of PTD menu PLU Data(X)	266
12	Reception of Bundle Report Data(X/Z)	268
12	Reception of PTD Bundle Data(X/Z)	269
14	Reception of Daily Dept Group Data(X)	270
15	Reception of PTD Dept Group Data(X)	271

Clear Report Command

1	Clear Daily Report Data(financial)(Z)	301
2	Clear PTD Report Data (Periodic)(Z)	302
3	Clear PLU Report Data(financial)(Z)	303
4	Clear Clerk Report Data(financial)(Z)	305
5	Clear Clerk Report Data(Periodic)(Z)	306
6	Clear Hourly Report Data(Z)	307
7	Clear CLERK LOG Report Data(Z)	308
8	Clear Table Report Data(Z)	309
9	Clear MENU Report Data(financial)(Z)	310
10	Clear MENU Report Data(Periodic)(Z)	311
11	Clear Bundle Report Data(financial)(Z)	313
12	Clear Bundle Report Data (Periodic)(Z)	314

Clear Report Command(IRC-HOST)

1	Clear Daily Report Data(financial)(Z)	351
2	Clear PTD Report Data (Periodic)(Z)	352
3	Clear PLU Report Data(financial)(Z)	353
4	Clear Clerk Report Data(financial)(Z)	355
5	Clear Clerk Report Data(Periodic)(Z)	356
6	Clear Hourly Report Data(Z)	357
7	Clear Table Report Data(Z)	359
8	Clear MENU Report Data(financial)(Z)	360
9	Clear MENU Report Data(Periodic)(Z)	361
10	Clear Bundle Report Data(financial)(Z)	363
11	Clear Bundle Report Data (Periodic)(Z)	364

2. COMMUNICATION CONFIGURATION

a) Data format ASCII(except the PLU preset data)
b) Interface type 1>USB interface

Baud Rate : 9600bps
Character Length : 8 bit

Parity : None
Stop Bit : 1 stop bit

2>Ethernet

3. COMMUNICATION PROCEDURE

As a response to a command from PC, ECR sends " ACK + 00" for received command. Command and response do not include BCC (Block Check Code) nor CRC data.
The Frame data includes a CS(Check Sum) data area before 'CR'. And the CS area is separated by ',', which is also calculated in the CS. The max CS area is 2 bytes.
Eg. CS = 0x1c = 28, then store as 0x32, 0x38.
If CS >= 100, just get the last 2 digit in decimalist.
Eg. CS = 0xCB = 203, then store as 0x30, 0x33 or just 0x33.
If the CS is error, the whole frame data will be illegal.

Communication-line error should be detected by using time-out control and data illegal control.
Send " NAK + STATUS CODE " for error.
Time-out period are shown on communication sequences.
Time-out period for data interval (1 byte bases) of a frame should be 20 ms or longer.

If communication-line error, there will be max 3 times to retry.

3.1 PC reception data from ECR

1) PC Reception all parameters

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
Command package	→		10 sec. (Max)
	←	ACK	
			10 sec. (Max)
	←	Data area package	
ACK	→		
			10 sec. (Max)
	←	Data area package	
ACK	→		10 sec. (Max)

In Case of data send/receive error, need resend it. (maximum 3 times for retry)

	←	Data area package	10 sec. (Max)
Error status package			
	←	Data area package (Resend)	10 sec. (Max)
ACK	→		
		Repeat	
	←	Data area package	10 sec. (Max)
ACK	→		
	←	"EOF"	10 sec. (Max)

2) PC Reception single parameter

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
Command package	→		10 sec. (Max)
	←	ACK	
Parameter index package	→		10 sec. (Max)
	←	Data area package	
ACK	→		10 sec. (Max)
	←	"EOF"	10 sec. (Max)

3) field analysis

1.Command package
STX +CMD + ID + password+ PCCPV + CS +ETX

Name	含义	数值
STX	Start Of Text	0x02
CMD	Command	命令字（ASCII）
ID	访问收款机的ID号码	ECR测有三组ID和密码
Password	访问收款机的密码	
PCCPV	版本控制信息	ECR上有与其同步的版本号
ETX	End Of Text	0x03

2. Data area package
PRESET DATA + CS + “CR”

Name	含义	数值
PRESET DATA	参数信息	根据数据定义获取参数结构
CS	校验和	---
“CR”	数据包结束标志	0X0D

3.Error status package
NAK+STATUS CODE

Name	含义	数值
NAK	返回错误信息标志	0x15
STATUS CODE	错误代码	查看错误代码表

4. Parameter index package
Parameter index + CS + “CR”

Name	含义	数值
Parameter index	参数下标值	不用参数对应的下标不同
CS	校验和	---
“CR”	数据包结束标志	0X0D

5. other

Name	含义	数值
ACK	应答命令字	0x06

CS calculation:
For example:
STX +"1"+ ID + password+ PCCPV + CS +ETX
STX :0X02
CMD : 1
ID : A
Password : 1234
PCCPV : 1

Send data：
STX 31 2C 22 41 22 2C 31 32 33 34 2C 31 2C 39 39 EXT

CS = 0x31+0x2C+0x22+0x41+0x22+0x2C+0x31+0x32+0x33+0x34+0x2C+0x31+0x2C = 0x61 = 99

Note：each field is separated by ‘,’, and CS is the sum from STX(exclude STX) to the separated sign before the CS(include the separated sign).

3.2. Overwrite Preset Data of ECR

1）Overwrite all Preset Data of ECR

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
Command package	→		10 sec. (Max)
	←	ACK	
Data area package	→		10 sec. (Max)
	←	ACK	
Data area package	→		10 sec. (Max)
	←	ACK	

In Case of data send/receive error, need resend it. (maximum 3 times for retry)

Data area package(Resend)	→		10 sec. (Max)
	←	ACK	
Data area package	→		10 sec. (Max)
	←	ACK	
"EOF"	→		10 sec. (Max)

*1 : When illegal data exists in received Frame data, or time-out to receive, ECR returns "NAK + STATUS CODE" and retry again. The max retry times is 3. If more than 3 times, terminate this command.

2) Overwrite single Preset Data of ECR

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
Command package	→		10 sec. (Max)
	←	ACK	
Data area package	→		10 sec. (Max)
	←	ACK	
"EOF"	→		10 sec. (Max)

4. COMMUNICATION SEQUENCES

4.1 ECR->PC

1) Reception of all PLU Preset Data

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
STX +"2"+ ID + password+ PCCPV + CS +ETX	-->		10 sec. (Max)
	<--	ACK	
			10 sec. (Max)
	<--	PLU PRESET DATA + CS + “CR”	10 sec. (Max)
ACK	-->		
			10 sec. (Max)
	<--	PLU PRESET DATA + CS + “CR”	10 sec. (Max)
ACK	-->		

In Case of data send/receive error, need resend it. (maximum 3 times for retry)

	<--	PLU PRESET DATA + CS + “CR”	10 sec. (Max)
NAK+STATUS CODE*1	-->		
	<--	PLU PRESET DATA + CS + “CR” (Resend)	
ACK	-->		
		Repeat	
	<--	PLU PRESET DATA + CS + “CR”	10 sec. (Max)
ACK	-->		
			10 sec. (Max)
	<--	"EOF"	

*1. If PC receives the Frame data time-Out, or check CS error, PC will send ‘NAK + STATUS CODE’ out an

d prepare to re-receive the Frame data again. If retrying to 3 times, terminate the Command.

2) Reception of single PLU Preset Data

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
STX +"5"+ ID + password+ PCCPV + CS +ETX	-->		10 sec. (Max)
	<--	ACK	
PLU barcode + CS + "CR"	-- >		10 sec. (Max)
	<--	PLU PRESET DATA + CS + "CR"	10 sec. (Max)
ACK	-->		
	<--	"EOF"	10 sec. (Max)

Parameter index : PLU barcode, if the ECR hasn't this PLU, it will send error code to the PC.

3) Reception of all Department Preset Data – the same with all PLU reception
4) Reception of single Department Preset Data
Parameter index : Dept No., start from 1,Max 200
5) Reception of all Clerk Preset Data– the same with all PLU reception
6) Reception of single Clerk Preset Data
Parameter index : Clerk No., start from 1,Max 50
7) Reception of all Store header Data – the same with all PLU reception
8) Reception of all Footer logo Preset Data – the same with all PLU reception
9) Reception of all system status Preset Data – the same with all PLU reception
10) Reception of all Cooking Message Preset Data – the same with all PLU reception
11) Reception of Single cooking message Preset Data – the same with all PLU reception
Parameter index : C.M. No., start from 1,Max 200
12) Reception of all persentage Preset Data – the same with all PLU reception
13) Reception of all FCE Preset Data – the same with all PLU reception
14) Reception of all coupon Preset Data – the same with all PLU reception
15) Reception of all payment Preset Data – the same with all PLU reception
16) Reception of all DPLU Preset Data – the same with all PLU reception
17) Reception of all VAT Preset Data – the same with all PLU reception
18) Reception of all Menu Preset Data – the same with all PLU reception
19) Reception of single Menu Preset Data
Parameter index : Menu No., start from 1,Max 25
20) Reception of Screen layout Data
21) Reception of all Refund Preset Data – the same with all PLU reception
22) Reception of port Preset Data – the same with all PLU reception
23) Reception of KP Preset Data – the same with all PLU reception
24) Reception of Gift certificate Preset Data – the same with all PLU reception
25) Reception of RP Preset Data – the same with all PLU reception
26) Reception of key descriptor Data – the same with all PLU reception
27) Reception of Bundle PLU Data – the same with all PLU reception
28) Reception of Bundle PLU Data
Parameter index : Bundle No., start from 1,Max 80
29) Reception of Bundle saving text Data – the same with all PLU reception

4.2 PC->ECR

1) Overwrite all PLU Preset Data of ECR

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
STX +"102"+ ID + password+ PCCPV + CS +ETX	-->		10 sec. (Max)
	<--	ACK	
			10 sec. (Max)
PLU PRESET DATA + CS*2 + “CR”	-->		10 sec. (Max)
	<--	ACK *1	
			10 sec. (Max)
PLU PRESET DATA + CS + “CR”	-->		10 sec. (Max)
	<--	ACK *1	
		Repeat*2	
PLU PRESET DATA + CS + “CR”	-->		10 sec. (Max)
	<--	ACK *1	
			10 sec. (Max)
"EOF"	-->		

*1 : When illegal data exists in received Frame data, or time-out to receive, ECR returns "NAK" and retry again. The max retry times is 3. If more than 3 times, terminate this command.

*2 : When the PLU in ECR is full, ECR returns "NAK" and terminate this command. ("EOF" is not needed)

2) Overwrite single PLU Preset Data of ECR

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
STX +"105"+ ID + password+ PCCPV + CS +ETX	-->		10 sec. (Max)
	<--	ACK	
			10 sec. (Max)
PLU PRESET DATA + CS*2 + “CR”	-->		10 sec. (Max)
	<--	ACK *1	
"EOF"	-->		

*1 : When illegal data exists in received Frame data, or time-out to receive, ECR returns "NAK" and retry again. The max retry times is 3. If more than 3 times, terminate this command.

*2 : When the PLU in ECR is full, ECR returns "NAK" and terminate this command. ("EOF" is not needed)

3) Overwrite all Department Preset Data of ECR—the same with Overwrite all PLU
4) Overwrite Single Department Preset Data—the same with Overwrite single PLU
5) Overwrite all Clerk Preset Data—the same with Overwrite all PLU
6) Overwrite Single Clerk Preset Data—the same with Overwrite single PLU
7) Overwrite all Store header Preset Data of ECR—the same with Overwrite all PLU
8) Overwrite all Footer logo Preset Data of ECR—the same with Overwrite all PLU
9) Overwrite all system status Preset Data —the same with Overwrite all PLU
10) Overwrite all cooking message Preset Data—the same with Overwrite all PLU
11) Overwrite Single cooking message Preset Data—the same with Overwrite single PLU
12) Overwrite all percentage Preset Data—the same with Overwrite all PLU
13) Overwrite all FCE Preset Data —the same with Overwrite all PLU
14) Overwrite all coupon Preset Data—the same with Overwrite all PLU
15) Overwrite all payment Preset Data—the same with Overwrite all PLU
16) Overwrite all DPLU Preset Data—the same with Overwrite all PLU
17) Overwrite VAT Preset Data—the same with Overwrite all PLU
18) Overwrite Menu Preset Data—the same with Overwrite all PLU
19) Overwrite Single Menu Preset Data——the same with Overwrite single PLU
20) Overwrite Screen Layout Preset Data—the same with Overwrite all PLU
21) Overwrite all refund Preset Data—the same with Overwrite all PLU
22) Overwrite Port Preset Data—the same with Overwrite all PLU
23) Overwrite KP Preset Data—the same with Overwrite all PLU
24) Overwrite Gift certificate Preset Data—the same with Overwrite all PLU
25) Overwrite RP Preset Data—the same with Overwrite all PLU
26) Overwrite key descriptor Preset Data—the same with Overwrite all PLU
27) Overwrite Bundle PLU Preset Data—the same with Overwrite all PLU
28) Overwrite Single Bundle PLU Preset Data—the same with Overwrite single PLU
29) Overwrite Bundle saving text Preset Data—the same with Overwrite all PLU

4.3 reception of Report
-- the procedure is the same as PC Reception all parameters.
4.4 Clear Report

PC SIDE	DIRECTION	ECR SIDE	TIME-OUT PERIOD
Command package	→		10 sec. (Max)
	←	ACK	
	←	"EOF"	10 sec. (Max)

5. DATA SPECIFICATION

Control code described at "4.Communication Sequences" are specified as below.
(In accordance with ASCII code)

STX	02H,	ETX	03H
ACK	06H,	CR	0DH
NAK	15H,	EOF	1AH

Data frame is consisted of ASCII code. Each data is separated by [,] character and ASCII code, 2CH, is used.
When data frame is numeric data, ASCII code 30H-39H and 2DH for [-], negative sign, 0x2E for [.], decimal dot, can be used.
When data frame is character data, it must be surrounded by quotation mark ["] (ASCII code=22H).

ID: Operator Identifier Character data (12 bytes max.)
Password: Operator password opposite ID Numeric data(6 bytes max,1-999999)
PCCPV: PC Communication Protocal Version Numeric data(2 bytes max ,1-99)
Original 1-Ver G, when protocal upgrade increase the number

Example：
CMD: Reception of PLU Stock Report Data 219
ID：001
Password：1234
PCCPV:1

Data 219, ”001”, 1234, 1
In hexadecimal code 323139 2C 223122 2C 31323334 2C 31

1) System configuration data

Index	Name	Type	Length (Bytes)	Notes	
1	Work mode	Numeric	3	0x55： retail 0xAA: hospitality	in retail mode, TABLE, C.M.,MENU can’t be accessed.
2	Department number	Numeric	3	0~200	The ECR and PC must be the same number
3	Clerk number	Numeric	2	0~50	The PC must be more than the ECRs
4	Main Table number	Numeric	2	0-50	The ECR and PC must be the same number
5	Split Number	Numeric	1	0~5	
6	Modifier number	Numeric	4	0~7000	The ECR and PC must be the same number
7	PLU number	Numeric	5	0-30000	The PC must be more than the ECR
8	System dots	Numeric	1	0:0 1:0.0 2:0.00 3:0.000	The ECR and PC must be the same
9	Tax system	Numeric	1	0:ADD-ON TAX 1:VAT 2:GST-PST	The ECR and PC must be the same number

注意：
其中 部门数目，Modifier数目，台数目，系统小数点，税系统 收款机和PC上必须保持一致.
工作模式不同，只导致一些参数不能通讯.在零售模式，口味，套餐，台编程是不能通讯的.
收银员数目，PLU数目，PC上可多于收款机上的数目，但通讯的时候需要提示用户’PC和收款机不同步，会造成数据丢失’,同时需要将未通讯信息保存在错误日志中.

2) PLU stock data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Barcode [7]	byte	7	☒	☒	
2	Safety stock	long	4	☒	☑	系统小数点
3	Stock	long	4	☒	☑	0-9999.999(fixed 3 dots)

Note: data format is Binary.
For all PLU stock, it will have 50 PLU each package.

3) PLU Preset data(ALL PLU communication)

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Barcode[7]	byte	7	☒		
2	Price1	long	4	☒	☑	系统小数点
3	Price2	long	4	☒	☑	系统小数点
4**	Price3	long	4	☒	☑	系统小数点
5	Deptparment No.	word	2	☒	☒	1~最大部门号
6	Name[18]	Char string	18	☒	☒	
7	Name2[18]	Char string	18	☒	☒	
8	a) PRICE FORMAT b) menu ** c) stock active d) IsCondiment** e) Exempt Service Tax** f) FS Tenderable	byte	1	☒	☒	a: PRICE FORMAT 0:OPEN(def) /1: PRESET PRICE b: menu 0:N(def)o/1: Yes c: stock active: 0:No(def)/1: Yes d: IsCondiment: 0:No(def)/1: Yes e: Exempt Service Tax:0:No(def)/1: Yes f: FS Tenderable 0:No(def)/1: Yes
9**	Number of modifiers	byte	1	☒	☒	0~5
10**	Modifiers member[5] { bool IsUsed; byte Desc[18+1]; long qty; long price; } 28 bytes	------	28X5	☒	☒	
11**	Number of condiments	byte	1	☒	☒	0~12
12**	Selection No. of condiments	byte	1	☒	☒	0~12,这个字段的值必须小于等于字段11的值
13**	Condiments member[12] { Word PluIdx; word Qty; }4bytes	----	4X12	☒	☒	Codiments从属性是 IsCondiment的PLU中选择.
14**	CmNum	byte	1	☒	☒	0~6
15**	CmIdx[5][6]	byte	1X6X5	☒	☒	0~最大口味数，0表示没有，下标从1开始
16	Safety stock	long	4	☒	☑	固定三个小数点
17	Stock	long	4	☒	☑	固定三个小数点

注意：当前PLU最大可达到30000条，零售模式带**在界面上不显示
由于当前PLU结构很大，PLU采用二进制传送格式.需要将当前一包数据的通讯长度由256byes 扩展到1K.
在全部PLU发送和接收时，每包可有三个PLU。
当PLU全部发送到收款机时，请先发送PLU属性为condiments 的条码

4) PLU delete data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Barcode [7]	byte	7	☒	☒	

Note: data format is Binary.

5) PLU Preset data(Single PLU communication)

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Barcode	Numeric string	13	☒		
2	Price	Numeric	7	☒	☑	0-999999 系统小数点
3	Price2	Numeric	7	☒	☑	0-999999系统小数点
4	Price3	Numeric	7	☒	☑	0-999999系统小数点
5	Deptparment No.	Numeric	3	☒	☒	1~最大部门号
6	Name	Char string	18	☒	☒	
7	Name2	Char string	18	☒	☒	
8	a) PRICE FORMAT b) menu ** c) stock active d) IsCondiment** e) Exempt Service Tax** f) FS Tenderable	Numeric	6	☒	☒	a: PRICE FORMAT 0:OPEN (def) /1:PRESET PRICE b: menu 0:N(def)o/1: Yes c: stock active: 0:No(def)/1: Yes d: IsCondiment: 0:No(def)/1: Yes e: Exempt Service Tax:0:No(def)/1: Yes f: FS Tenderable 0:No(def)/1: Yes
9	Number of modifiers	Numeric	1	☒	☒	0~5
10	PLU Modifiers 1 Price	Numeric	7	☒	☑	0-999999 系统小数点
11	PLU Modifiers 1 quantity	Numeric	8	☒	☑	0-9999.999(fixed 3 dots)
12	PLU Modifiers 1 Name	Char string	18	☒	☒	
13	PLU Modifiers 2 Price	Numeric	7	☒	☑	0-999999 系统小数点
14	PLU Modifiers 2 quantity	Numeric	8	☒	☑	0-9999.999(fixed 3 dots)
15	PLU Modifiers 2 Name	Char string	18	☒	☒	
	……..	……..	…...	..	..	……..
22	PLU Modifiers 5 Price	Numeric	7	☒	☑	0-999999 系统小数点
23	PLU Modifiers 5 quantity	Numeric	8	☒	☑	0-9999.999(fixed 3 dots)
24	PLU Modifiers 5 Name	Char string	18	☒	☒	
25	Number of condiments	Numeric	1	☒	☒	0~12
26	Selection No. of condiments	Numeric	1	☒	☒	0~12,这个字段的值必须小于等于字段13的值
27	Condiments Member1 Barcode	Numeric string	13	☒		
28	Condiments Member1 quantity	Numeric	1			1-9
29	Condiments Member2 Barcode	Numeric string	13	☒		
30	Condiments Member2 quantity	Numeric	1			1-9
..	……..					
39	Condiments Member12 Barcode	Numeric string	13	☒		
40	Condiments Member2 quantity		1			1-9
41	CmNum	Numeric	1	☒	☒	0~6
42	CmIdx1	Numeric	3	☒	☒	0-最大口味
	…….	……	...…	…	…	
71	CmIdx30	Numeric	3	☒	☒	0-最大口味
72	Safety stock	Numeric	9	☒	☑	0-99999.999 固定三个小数点
73	Stock	Numeric	9	☒	☑	0-99999.999 固定三个小数点

单条PLU通讯采用ASCII格式，在单条PLU通讯前，如果当前PLU设置了condiments,请先发送condiments PLU数据到收款机，避免上下不一致

6) Dept. Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Dept No.	Numeric	3	☒	☒	1~200
2	Price	Numeric	8	☒	☑	系统小数点
3	a):mode b):type c):halo d):age ef):Tax g): FS Tenderable	Numeric	6	☒	☒	a):mode 0:Standard/1:Gallon/2:Negative b):type 0:Normal/1:Single c):halo 1-7 d):age 0:Non/ 1:Age 1/ 2:Age 2 ef):VAT： 0-5 TAX:0~15 GST-PST:0~15 g):1:YES/ 0:NO(def)
4	Name	Char string	18	☒	☒	
5	a:group bc:KP de:KP2 f:PRICE FORMAT g:Kp format h:Tax Type	Numeric	8	☒	☒	a:0-9 bc:KP :0~14 de:KP2 :0~14 f: PRICE FORMAT 0:OPEN 1:PRESET PRICE g:Kp format: 0: Single item 1: Multiple items h:0:Fixed; 1:Variable

Tax Type: when the system tax is vat type, and system falg 'select vat type for dept' is YES, then this flag can modify, or it is 1:variable for defatul.

Fox example:

Dept No.	1
Price	1.23
mode	0:Standard
type	0:Normal
halo	7
age	0:None
Tax	00
FS Tenderable	0
Name	"DEPT01"
Group	0
KP	01
KP2	00
PRICE FORMAT	0 :OPEN
Kp format	1: Multiple items
Tax Type	1:Variable

Data area: 1,1.23,70000, "DEPT01",100011,

Hex : 31 2c 31 2e 32 33 2c 37 30 30 30 30 2c 22 44 45 50 54 30 31 22 2c 31 30 30 30 31 31

Note: we will get the data from the first un-zero.

If the data as following:

Group	0
KP	00

KP2	00
PRICE FORMAT	0 :OPEN
Kp format	0: Single item
Tax Type	0: Fixed

Then data area will be: 1,1.23,70000, “DEPT01”, ,

7) Clerk Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Clerk number	Numeric	2	☒	☒	1~50
2	pass code	Numeric	4	☒	☒	0~9999
3	Interrupt No.	Numeric	2	☒	☒	0~99
4	Name	Char string	12	☒	☒	
5	1) void 2) Discount 3) R.M. 4) RA/PO 5) PLU price list 6) Not Found 7) X report 8) Z report	Numeric	8	☒	☒	Limitation: 1:allow 0: not allow
6	1) Programming 2) Refund 3) coupon 4) Rcpt On/Off 5) EJ 6) Access TABLE 7) #NS 8) Voucher/Credit	Numeric	8	☒	☒	Limitation: 1:allow 0: not allow
7	1) Change payment 2) Comp 3) FOC 4) Payment	Numeric	4	☒	☒	Limitation: 1:allow 0: not allow

8) Store header Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Store header number	Numeric	1	☒	☒	1~5
2	Store header font	Numeric	1	☒	☒	1:normal 2:double width 3:double height 4:Quadruple
3	Store header message	Char string	42	☒	☒	

9) Footer logo Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Footer logo number	Numeric	1	☒	☒	1~5
2	Footer logo font	Numeric	1	☒	☒	1:normal 2:double width 3:double height 4:Quadruple
3	Footer logo message	Char string	42	☒	☒	

10) system status Preset Data

Status1	ABCDEFGH	
A	Print date on receipt	YES: 1(def) / NO: 0
B	Print time on receipt	YES: 1(def) / NO: 0
C	Print clerk on receipt	YES: 1(def) / NO: 0
D	Print Header on receipt	YES: 1(def) / NO: 0
E	Print Footer on receipt	YES: 1(def) / NO: 0
F	Print Blank line on receipt	YES: 1 / NO: 0(def)
~~G~~	~~Print Subtotal Amount on receipt~~	~~YES: 1(def) / NO: 0~~
H	Print Machine No. on receipt	YES: 1(def) / NO: 0

Status2	ABCDEFGH	
A	Print Receipt No. on receipt	YES: 1(def) / NO: 0
B	Print Tax amount on receipt	YES: 1(def) / NO: 0
C	Print Tax total on receipt	YES: 1(def) / NO: 0
D	Print item Tax code on receipt	YES: 1(def) / NO: 0
E	Print Vat analysis on receipt	YES: 1(def) / NO: 0
F	Print Vat No. on receipt	YES: 1(def) / NO: 0
G	Print Total Quantity on receipt	YES: 1(def) / NO: 0
H	Print Dept No. on receipt	YES: 1 / NO: 0(def)

Status3	ABCDEFGH	
A	Print Local Currency symbol	YES: 1 / NO: 0(def)
B	Print barcode when PLU sale	YES: 1 / NO: 0(def)
C	Picture LOGO print	YES: 1(def) / NO: 0
D	Print cover on receipt	YES: 1(def) / NO: 0
E	Print slip header	YES: 1 / NO: 0(def)
F	Print sign line	YES: 1 / NO: 0(def)
G	Print food stamp mark	YES: 1 / NO: 0(def)
H	Print average amount on receipt	YES: 1(def) / NO: 0

Status4	ABCDEFGH	
A	Print #/NS information	YES: 1(def) / NO: 0
B	(print the sale receipt)Receipt ON/OFF	0: OFF / 1:ON (def)
C	Consolidation same item RP	YES: 1 / **NO: 0**(def)
D	KP print R.M. item	**YES: 1**(def) / NO: 0
E	Reprint receipt for R.M	YES: 1 / **NO: 0**(def)
F	KP print Comp item	YES: 1 / **NO: 0**(def)
G	Duplicate receipts allowed	**YES: 1**(def) / NO: 0

H	Print bill after transaction void	**YES: 1**(def) / NO: 0

Status5	ABCDEFGH	
A	Print bill after transfer table/combine table	YES: 1 / **NO: 0**(def)
B	Print CM on receipt	YES: 1 / **NO: 0**(def)
C	Position of receipt# print	0:Foot /1:Head (def)
D	Position of logo print:	0:Foot /1:Head (def)
E	Print items when close table	0:No(def)/1:All/2:Last List
F	Item descriptor at RP	0: English(def) 1: Chinese 2: Both
GH	reserve	0

Status6	ABCDEFGH	
A	Inventory function active	YES: 1 / NO: 0(def)
B	Zero price for Dept/PLU sale	YES: 1(def) / NO: 0
C	EJ features active	YES: 1(def) / NO: 0
D	Compulsory Declaration	YES: 1 / NO: 0(def)
E	Reset Grand Total after Z Report	YES: 1 / NO: 0(def)
F	Clerk System active	YES: 1 / NO: 0(def)
G	Clerk Logging in P mode	YES: 1 / NO: 0(def)
H	IButton Logon Active	YES: 1 / NO: 0(def)

Status7	ABCDEFGH	
A	Currency Symbol choice	YES: 1 / NO: 0(def)
B	Enable key tone	YES: 1(def) / NO: 0
C	Compulsory Clerk Declaration	YES: 1 / NO: 0(def)
D	Second Z Sales Report Active	YES: 1(def) / NO: 0
E	Used Gift delete when full	YES: 1 / NO: 0(def)
F	Select Vat Type for Dept	YES: 1 / NO: 0(def)
G	Label print automatically	YES: 1 / NO: 0(def)
H	Send data to CCTV	YES: 1 / NO: 0(def)

Status8	ABCDEFGH	
A	Not Found active	YES: 1 / NO: 0(def)
B	Not Found Prompt choice	YES: 1(def) / NO: 0
C	Consolidate the items on the KP	YES: 1 / NO: 0(def)
D	Cover function active	YES: 1(def) / NO: 0
E	Allow to trans void	YES: 1(def) / NO: 0
F	Allow to TSVD before suspend	YES: 1(def) / NO: 0
G	Allow to E.C. item before suspend	YES: 1(def) / NO: 0
H	Mark item more than 1 on kp	YES: 1 / NO: 0(def)

Status9	ABCDEFGH	
A	Clerk Pass code digits	0:3digits(def) 1:4digits
B	Rounding method	0:4/5(def)/1: up /2:down 3:special
C	Gift Voucher change	0:No return

		1:Local currency(def) 2:Payment Media
DE	Line Feed Count	06(max -15)
F	VAT rate for Take-Away	0:Vat1/1:Vat2/2:Vat3/ 3:Vat4/4:Dept Vat(def)
G	VAT rate for In-House	0:Vat1/1:Vat2/2:Vat3/ 3:Vat4/4:Dept Vat(def)
H	VAT rate for Out-Of-House	0:Vat1/1:Vat2/2:Vat3/ 3:Vat4/4:Dept Vat(def)

Status10	ABCDEFGH	
A	PLU price for Take Away	0:None/1: Price1/ 2: Price2/3: Price3
B	KP Print Setting	0:Single items 1:Multiple items(def)
C	Enable key description refresh	YES: 1(def) / NO: 0
D	Change to tips need confirm	YES: 1 / NO: 0(def)
E	Food Stamp Rule	0: New Jersey(def) 1: illinois
F	Food Stamp Exempt Tax	YES: 1 / NO: 0(def)
G	PLU FS attribute active	YES: 1 / NO: 0(def)
H	Disc Calc Tax on Gross	YES: 1 / NO: 0(def)

Status11	ABCDEFGH	
A	Special RM active	YES: 1 / NO: 0(def)
B	%&refund with Service tax	YES: 1(def) / NO: 0
C	Report export device	0: UDisk(def) 1: SDCard
D	Duplicate receipt counter	0-9
E	Other Rounding Factor	0：None（def） 1: Europe 2: Malaysia
F	Tax system	0: ADD-ON TAX (def) 1:VAT; 2:GST-PST
GH	RESERV	0

Status12	ABCDEFGH	
A	RM/NS data add to report	YES: 1(def) / NO: 0
B	VD/TSVD data add to report	YES: 1(def) / NO: 0
C	Clerk Rpt detail analysis	YES: 1 / NO: 0(def)
D	Allow Z Rpt When open Table	YES: 1 / NO: 0(def)
E	Print Machine# on report	YES: 1(def) / NO: 0
F	Print PLU barcode on report	YES: 1(def) / NO: 0
G	Print header on reports	YES: 1(def) / NO: 0
H	Print VAT No. on reports	YES: 1(def) / NO: 0

Status13	ABCDEFGH	
A	Cover data add to report	YES: 1(def) / NO: 0
B	Zero item skip for report	YES: 1(def) / NO: 0
C	Print the zero inventory	YES: 1(def) / NO: 0
D	Print the Z counter	YES: 1(def) / NO: 0
E	Print Total Transactions	YES: 1(def) / NO: 0
F	Compulsory PM Declaration	YES: 1 / NO: 0(def)
G	Comp report print Qty/Counter	0: Counter 1: Quantity(def)
H	RESERV	0

Status14	ABCDEFGH	
AB	Payment information display time	10(max 60s)
CD	Change info display time	10(max 60s)
EFG	Table color change time	255(max 255M)
H	Take out print tickets	2 (max 3)

Status15	ABCDE	
ABC	Maximum tips amount	0 (max 500)
DE	Logo select	0-11

Status16	ABCDEF	
ABCDEF	Training mode pass code	0-999999(**123456**)

Status17	ABCDEFGH	
ABCDEFGH	HALO	0-**999999.99**

Status18	ABCDEFGH	
ABCDEFGH	Total in drawer limit	0-**999999.99**

Status19	ABCDEFGH	
ABCD	Daily Z counter preset	**0000**-9999
EFGH	Periodic Z counter preset	**0000**-9999

Status20	ABCDEFGH	
ABCD	Receipt No. preset	**0001**-9999
EFGH	Machine No. preset	**0001**-9999

Status21	ABCD	
AB	Age limit1	16（1-99）
CD	Age limit2	19（1-99）

Status22	ABCDEFGH	
ABCD	happy hour Price2 start time	HHMM
EFGH	happy hour Price2 end time	HHMM

Status23	ABCDEFGH

ABCD	happy hour Price3 start time	HHMM
EFGH	happy hour Price3 end time	HHMM

Status24	ABCDEFG(happy hour days)	
A	Sunday	YES: 1 / NO: 0(def)
B	Monday	YES: 1 / NO: 0(def)
C	Tuesday	YES: 1 / NO: 0(def)
D	Wendnesday	YES: 1 / NO: 0(def)
E	Thursday	YES: 1 / NO: 0(def)
F	Friday	YES: 1 / NO: 0(def)
G	Saturday	YES: 1 / NO: 0(def)

Staus25	ABCDEFGH - Table barcode	
A	Table barcode operate type	0: Don't Surport; 1: Tender; 2: Open
B	Table bar prn after print list	0: NO; 1: YES
C	Table bar prn after suspend	0: NO; 1: YES
D	Table bar prn after Transfer	0: NO; 1: YES
E	Scale unit	0:lb 1: oz
F	Tare type	0:automatic 1:manual
GH	reserve	0

Status26: Scale Depatrment 01(numeric,0-200)
Status27: Scale Depatrment 02 numeric,0-200)
Status28: Scale Depatrment 03(numeric,0-200)
Status29: Scale Depatrment 04(numeric,0-200)
Status30: Scale Depatrment 05(numeric,0-200)
Status31: Scale tare1 (numeric, 0- 599800)
Status32: Scale tare2 (numeric, 0- 599800)
.
.
.
.
Status40: Scale tare10 (numeric, 0- 599800)
Staus41: Vat No (character,Max 15 bytes)
Status42:FTP mailer Name: (character,Max 14 bytes)
Status43:FTP mailer code: (character,Max 14 bytes)
Status44:FTP tenant code: (character,Max 14 bytes)
Status45:FTP IP: (character,Max 15 bytes)
Status46:FTP User Name:(character,Max 12 bytes)
Status47:FTP password: (character,Max 12 bytes)

11) Weighing PLU

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Weighing PLU No.	Numeric	2	☒	☒	1~11
2	Type	Numeric	1	☒	☒	0: Normal PLU; 1: Weighing PLU
3	Barcode length	Numeric	1	☒	☒	1-9
4	Weight/Amount	Numeric	1	☒	☒	0: Amount; 1: weight
5	Weight/Amount with check digit:	Numeric	1	☒	☒	0: No; 1: Yes
6	Decimal dots:	Numeric	1	☒	☒	0:0; 1:0.0; 2:0.00; 3: 0.000
7	ID	Numeric	2	☒	☒	0-99

12) Cooking Message Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	C.M. number	Numeric	3	☒	☒	1~200
2	price	Numeric	7	☒	☑	0~999999
3	Cooking Message	Char string	24	☒	☒	

13) Percentage Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	percentage number	Numeric	1	☒	☒	1~8
2	Rate	Numeric	6	☒	☑	0~99.999 (fixed 3 dots)
3	a: Attribute b: +/- Selection	Numeric	2	☒	☒	a: Attribute 0:After Item&Subttl/ 1:After Subttl/2:After Item/ 3:Locked b: +/- Selection 0:+% (def)/1:-%
4	Name	Char string	12	☒	☒	

14) Refund

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Refund number	Numeric	1	☒	☒	1~8
2	price	Numeric	8	☒	☑	0-9999999(system dots)
3	HALO	Numeric	8	☒	☑	0-9999999(system dots)
4	Name	Char string	12	☒	☒	

15) Coupon program Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	price	Numeric	8	☒	☑	0-9999999(system dots)
2	HALO	Numeric	8	☒	☑	0-9999999(system dots)

16) FCE program Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	FCE number	Numeric	1	☒	☒	1~4
2	a: Decimal b: symbol	Numeric	2	☒	☒	a: Decimal 0-3 b: symbol 1-7
3	Local	Numeric	6	☒	☑	0-99999(system dots)
4	FC	Numeric	6	☒	☑	0-99999(fc dots)
5	Name	Char string	12	☒	☒	

17) Payment Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Payment number	Numeric	1	☒	☒	1~10
2	Change return	Numeric	1	☒	☒	0:No Return 1:Local currency 2:Payment Media
3	Duplicate number	Numeric	1	☒	☒	0-9
4	Changes to tips	Numeric	1	☒	☒	0:No; 1: Yes
5	Type	Numeric	1	☒	☒	0:Noraml 1:Credit 2: Debit 3:EBT
6	Name	Char string	18	☒	☒	

18) PCASH preset data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Pcash number	Numeric	1	☒	☒	1~10
2	Price	Numeric	8	☒	☑	0-9999999(system dots)
3	Type	Numeric	1	☒	☒	0-9 0: payment1/1: payment2/ 2:payment3/3:payment4/ 4:payment5/5:payment6/ 7:payment8/8:payment9/ 9:payment10
4	Name	Char string	12	☒	☒	

19) Service Tax

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Service Tax number	Numeric	1	☒	☒	1
2	Name	Char string	12	☒	☒	
3	type	Numeric	1	☒	☒	0: fix 1:percantage
4	rate	Numeric	5	☒	☑	0: fix 0-99999(system dots) 1:percentage:0-99.999
5	Start time#1	Numeric	4	☒	☒	HHMM
6	End time#1	Numeric	4	☒	☒	HHMM
7	Start time#2	Numeric	4	☒	☒	HHMM
8	End time#2	Numeric	4	☒	☒	HHMM
9	Sunday: Monday: Tuesday: Wendnesday: Thursday: Friday: Saturday:	Numeric	7	☒	☒	0:No; 1 : yes

20) TAX Preset Data

VAT:

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	VAT number	Numeric	1	☒	☒	1~4
2	RATE	Numeric	6	☒	☑	0~99.999%

GST-PTS:

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	TAX number	Numeric	1	☒	☒	1~4
2	GST_RATE	Numeric	6	☒	☑	0~99.999%
3	GST_LIMIT	Numeric	7	☒	☑	0~999999
4	PST1_RATE	Numeric	6	☒	☑	0~99.999%
5	PST1_LIMIT	Numeric	7	☒	☑	0~999999
6	PST2_RATE	Numeric	6	☒	☑	0~99.999%
7	PST2_LIMIT	Numeric	7	☒	☑	0~999999(system dots)
8	PST3_RATE	Numeric	6	☒	☑	0~99.999%
9	PST3_LIMIT	Numeric	7	☒	☑	0~999999
10	TAX limit	Numeric	1	☒	☒	0: non gst , 1:Gst
11	No tax-on-tax	Numeric	1	☒	☒	0: no tax-on-tax 1:tax-on-tax 2:tax-on-tax-on-tax

TAX:

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	TAX number	Numeric	1	☒	☒	1~4
2	type	Numeric	1	☒	☒	0: straight 1: tax table
3	ircnt	Numeric	2	☒	☒	0~63
4	rgcnt	Numeric	2	☒	☒	0~63
5	Breaks[1]	Numeric	5	☒	☑	0-9999(system dots)
…..	…….	Numeric	5	☒	☑	0-9999(system dots)
67	Breaks[63]	Numeric	5	☒	☑	0-9999(system dots)
68	Tax value[1]	Numeric	5	☒	☑	0-9999(system dots)
…..	…….	Numeric	5	☒	☑	0-9999(system dots)
130	Tax value[63]	Numeric	5	☒	☑	0-9999(system dots)

21) Menu Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Menu number	Numeric	1	☒	☒	1~25
2	Price	Numeric	7	☒	☑	0-999999(system dots)
3	Mode	Numeric	1	☒	☒	0:fixed 1:selectable
4	Vat	Numeric	2	☒	☒	0-4/0-15
5	child menu desc1	Char string	12	☒	☒	
6	child menu desc2	Char string	12	☒	☒	
……	……	….	…	..	..	
16	child menu desc12	Char string	12	☒	☒	
17	Plu filed	Numeric string		☒	☒	mode: fixed max is 13*24 mode: selectabe max is 13 *12*18
..	…….	……..	……	☒	☒	
..	…..	Numeric string	……	☒	☒	

子套餐由原来的10个增加到12个，子套餐中的PLU数目有20个减少到18个. 固定模式中PLU数目由50个减少到24个

Note:

If mode is fixed,menu PLU max is 48. if mode is selectable ,it include 12 child menu,each child menu has 1 description and 18 PLUs.

Because data is too big ,so we must sent it with sever packages. The data include two parts.

One:Index + Step(0) + mode+vat + Desc + Price + Desc1+... +Desc12

Other:Index +Step(1-12) + Menu Mode + PLU * 18(each package has 18 PLU barcode,Package max number is 10)

Index is menu No. (1-25)

Step(0-12),0 means send menu's attribute,1-12 means child menu No. if mode is selectable. When mode is fixed it means nothing.

Mode means menu mode ,0:fixed 1:selectable

Example:

(1) when mode is fixed.

Number: 1
Description: "Menu 1"
Price 1
Mode Fixed
Vat 2
PLU: 1,2,3,4,5
Child description : None

Data transmitted: Package 1: 1,0,0,2,"Menu 1",1,,,,,,,,,
Package 2: 1,1,0,1,2,3,4,5,,,,,,,,,,,,,,,
Package 3: 1,2,0,,,,,,,,,,,,,,,,,,,,
Package 4: 1,3,0,,,,,,,,,,,,,,,,,,,,

(2)when mode is selectable

Number: 1
Description: "Menu 1"
Price 1
Mode selsectable
Child menu 1: description :"Selection 1"
PLU: 1,2,3,4,5
Child menu 2: description :"Selection 2"
PLU: None
Child menu 3: description :"Selection 3"
PLU: None
Child menu 4: description :"Selection 4"
PLU: None
Child menu 5: description :"Selection 5"
PLU: None
Child menu 6: description :"Selection 6"
PLU: None
Child menu 7: description :"Selection 7"
PLU: None
Child menu 8: description :"Selection 8"
PLU: None
Child menu 9: description :"Selection 9"
PLU: None
Child menu 10: description :"Selection 10"
PLU : 3,4,5,6,7,8
Child menu 11: description :"Selection 11"
PLU: None
Child menu 12: description :"Selection 12"
PLU: None

Data transmitted: Package 1: 1,0,1,"Menu 1",1, "Selection 1", "Selection 2", "Selection 3", "Selection 4", "Selection 5", "Selection 6", "Selection 7", "Selection 8", "Selection 9", "Selection 10","Selection 11","Selection 12"
Package 2: 1,1,1,1,2,3,4,5,,,,,,,,,,,,,,,
Package 3: 1,2,1,,,,,,,,,,,,,,,,,,,,
Package 4: 1,3,1,,,,,,,,,,,,,,,,,,,,
Package 5: 1,4,1,,,,,,,,,,,,,,,,,,,,

Package 6: 1,5,1,,,,,,,,,,,,,,,,,,,,
Package 7: 1,6,1,,,,,,,,,,,,,,,,,,,,
Package 8: 1,7,1,,,,,,,,,,,,,,,,,,,,
Package 9: 1,8,1,,,,,,,,,,,,,,,,,,,,
Package 10: 1,9,1,,,,,,,,,,,,,,,,,,,,
Package 11: 1,10,1,3,4,5,6,7,8,,,,,,,,,,,,,,
Package 12: 1,11,1,,,,,,,,,,,,,,,,,,,,
Package 13: 1,12,1,,,,,,,,,,,,,,,,,,,,

22) Port Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Port No.	Numeric	1	☒	☒	1~5
2	Device Type	Numeric	8	☒		0：None (无) 1：scanner (条码枪) 2：KP (厨房打印机) 3：CCTV 4：Scale (电子称) 5:PAX 7：RP(只有端口5可选择)
3	Baud Rate	Numeric	1	☒	☒	0：4800 1：9600 2：19200 3：38400 4：57600 5：115200

23) KP preset data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Kp No.	Numeric	1	☒	☒	1~13
2	KP type	Numeric	1	☒		0-TM-88III(EPSON), 1-SRP-245(SAMSUNG), 2-TM-U220 (EPSON)
3	Head feed	Numeric	2	☒	☒	0-20
4	Foot feed	Numeric	2	☒	☒	0-20
5	Cut paper	Numeric	1	☒	☒	0: No ; 1:Yes
6	IP address seg1	Numeric	3	☒	☒	0-255
7	IP address seg2	Numeric	3	☒	☒	0-255
8	IP address seg3	Numeric	3	☒	☒	0-255
9	IP address seg4	Numeric	3	☒	☒	0-255
10	Port setting	Numeric	4	☒	☒	0-9999

24) Gift Certificate

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Gift No.	Numeric	1	☒	☒	1~500
2	Amount	Numeric	8	☒	☑	0-9999999(system dots)
3	Code	Character st ting	7	☒	☒	
4	Status	Numeric	2	☒	☒	a) Useflag (1byte,0:No/1:Yes) b) Active (1byte,0:No/1:Yes)
5	Valid until	Numeric	8	☒	☒	YYYYMMDD

Note: Receive all information form ECR,PC send useflag=0 to ECR

25) RP preset data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	RP type	Numeric	1	☒		0: TM-88III;1 : TM-U220; 2:58mm printer;3:80 mm printer

26) Key descriptor

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Key code	Numeric	5	☒	☒	
2	Description	Char String	18	☒	☒	

按键列表：

Key descriptor setting					
键代码	英文	中文	键代码	英文	中文
21	clear	清除	152	With	添加
22	Staff	收银员	153	Without	去除
23	X	X	87	bill print	打印台详单
25	Dept	部门	88	Active Tables	活动台
26	Dept Sale	部门销售	89	Floor Plan	图形台
27	PLU	PLU	91	Tabs	台
79	Detail	详单	92	Transfer to Tabs	转台
111	Confirm	确定	116	RA TABLE	预付款
112	Back	返回	117	COVER	人数
113	Dept List	部门列表	124	PLU price1	第一单价
114	Next	继续	125	PLU price2	第二单价
79	New Transaction	新的销售	126	PLU price3	第三单价
39	subtotal	小计	127	PR.Lock	价格锁定
133	Payment	支付方式	75	KP Reprint	厨打复打
41	Rcpt on/off	收据开关	76	Firing	Firing
43	Feed	走纸	77	Split Bill	分单
44	RA	入账	90	Split table	分台
45	PO	出账	128	Price	价格
50	RA/PO	入账/出账	129	Price Look Up	价格查询
46	Text	文本	100	MENU	套餐
48	Hold/Recall	挂单/调单	192	2X	2X
49	recall	调单	193	3X	3X
59	VOID	取消	194	4X	4X
60	R.M.	退货	195	5X	5X
61	E.C.	改错	196	6X	6X
62	Coupon	Coupon	197	7X	7X
63	Comp	Comp	198	8X	8X
64	Trans void	整笔取消	199	9X	9X
154	Tax1	税1	200	10X	10X
155	Tax2	税2	145	Voucher/Credit	礼券/购物券
156	Tax3	税3	78	Take Away	外卖
157	Tax4	税4	147	Entertainment	发票
158	non tax	免税	148	In House	室内
115	Not Found	添加PLU	149	Out of House	室外
130	DIGIT	数字输入	150	Credit Note	购物券
131	Receipt ReView	浏览收据	151	Gift Voucher	礼券
132	#NS	开钱箱	1817	Page Left	左翻
70	FCE	外币	1818	Page Right	右翻
81	Open Table	开图形台	190	Service Exempt(S)	免服务费(单项)
82	Store	挂台	191	Service Exempt	免服务费
83	Transfer to Table	转图形台	189	Change Payment	转款
84	Open Tabs	开台	93	SLIP	上菜纸
85	Combine	合台	94	TABLE LISTING	埋单
86	C.M.	口味	95	LAST TRANS	最后台交易
96	Not Send KP	不送厨打	69	FOC	免费
40	%	%	118	Payment Return	退款
201	HOME	首页	123	Credit Tips	小费
68	Tare	皮重			

27) Bundle PLU

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Bundle PLU number	Numeric	1	☒	☒	1~80
2	Description	Char string	18	☒	☒	
3	type	Numeric	1	☒	☒	0-4
4	condition	Numeric	2	☒	☑	0: amount /1:qty
5	qty/amt	Numeric	8	☒	☑	Qty:99 Amount:9999999
6	discount	Numeric	6	☒	☑	(qty/amt/rate,99/99999/99.999
7	SamePluFlag	Numeric	1	☒	☒	0~1,1:some of Free PLU is same as PLUs
8	Active Numeric	Numeric	1	☒	☒	0~1,1:All the parameter are setting
9	Free_PLU(1)	Numeric string	13	☒	☒	
10	Free_PLU(2)	Numeric string	13	☒	☒	
11	Free_PLU(3)	Numeric string	13	☒	☒	
12	Membet PLUs (1)	Numeric string	13	☒	☒	
13	Membet PLUs (2)	Numeric string	13	☒	☒	
14	Membet PLUs (3)	Numeric string	13	☒	☒	
15	Membet PLUs (4)	Numeric string	13	☒	☒	
16	Membet PLUs (5)	Numeric string	13	☒	☒	
1217	Membet PLUs (6)	Numeric string	13	☒	☒	
18	Membet PLUs (7)	Numeric string	13	☒	☒	
19	Membet PLUs (8)	Numeric string	13	☒	☒	
20	Membet PLUs (9)	Numeric string	13	☒	☒	
21	Membet PLUs (10)	Numeric string	13	☒	☒	
22	Membet PLUs (11)	Numeric string	13	☒	☒	
23	Membet PLUs (12)	Numeric string	13	☒	☒	

28) Bundle saving text

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Description	Char String	24	☒	☒	

29) Flash report

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Flash report No.	Numeric	1	☒	☒	1--5
2	Description	Char String	18	☒	☒	
3	Report1	Numeric	3	☒	☒	
4	Report2	Numeric	3	☒	☒	
5	Report3	Numeric	3	☒	☒	
6	Report4	Numeric	3	☒	☒	
7	Report5	Numeric	3	☒	☒	
8	Report6	Numeric	3	☒	☒	
9	Report7	Numeric	3	☒	☒	
10	Report8	Numeric	3	☒	☒	
11	Report9	Numeric	3	☒	☒	
12	Report10	Numeric	3	☒	☒	

30) Register Descriptor

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	String number	Numeric	3	☒	☒	
2	Description	Char String	24	☒	☒	

31) Supplier preset data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Supplier number	Numeric	2	☒	☒	1~20
2	Supplier Name	Char string	30	☒	☒	

32) dept group Desc

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Dept Group number	Numeric	1	☒	☒	1~9
2	Dept Group Desc	Char string	12	☒	☒	

33) Table Group

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Table Group number	Numeric	2	☒	☒	1~10
2	Table Group Name	Char string	18	☒	☒	
3	Table Group Member01	Numeric	3	☒	☒	0~100
4	Table Group Member02	Numeric	3	☒	☒	0~100
…	…	…	…	…	…	…
…	…	..	…	…	…	…
21	Table Group Member19	Numeric	3	☒	☒	0~100
22	Table Group Member20	Numeric	3	☒	☒	0~100

34) Table Parameters

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Table number	Numeric	3	☒	☒	1~100
2	Table Desc	Char string	12	☒	☒	
3	Table key font color	Numeric	3	☒	☒	0~255
4	Table key fill color	Numeric	3	☒	☒	0~255
5	Price Level	Numeric	1	☒	☒	0: None(def) 1:price1 2:price2 3:price3
6	KP with red	Numeric	1	☒	☒	0:No(Def) 1:Yes
7	Exempt Service Tax	Numeric	1	☒	☒	0:No(Def) 1:Yes

35) Floor Plan Layout

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Floor Plan Layout number	Numeric	1	☒	☒	1~3,最多三层FLOOR PLAN布局
2	Floor plan table number	Numeric	3	☒	☒	1~100
3	First Key code	Numeric	4	☒	☒	901~1000，0
4	First Key font color	Numeric	3	☒	☒	0~255
5	First Key fill color	Numeric	3	☒	☒	0~255
6	First Key size	Numeric	2	☒	☒	0x00/0x01/0x10/0x11/ 0x12/0x21/0x22/0x31/ 0x13
…	……	……	……..	……	……..	……
	36th Key code					901~1000
	36th Key font color					0~255
	36th Key fill color					0~255
	36th Key size					0x00/0x01/0x10/0x11/ 0x12/0x21/0x22/0x31/ 0x13

Note:
For the TS248, one floor plan layout have 36 keys, and TS3600 one floor plan has 66 keys.
Ts248 and TS3600 the floor plan has three layouts.
When the Floor plan table number is zero, then the other data can be zero. And it only need send once.

36) Screen Layout preset data

37) DPLU Preset Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	DPLU number	Numeric	1	☒	☒	1~1000
2	Plu code	Char string	13	☒	☒	

这个和键盘布局通讯是绑定在一起的.没有单独的设置DPLU的页面.
当键盘上定义了PLU时，需要将此PLU放到一条空闲的DPLU上.

Report Data

1. Daily full report(reserve the current mode,text data)

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Description	Char String	50	☒	☒	
2	amount	Numeric	12	☑	☑	
3	Quantity&Couner	Numeric	11			Quantity :11 bytes max, Contains Negative sign and decimal dot. Counter : 5 bytes max, donot contain Negative sign or decimal dot.

2. PLU report

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	PLU number	Numeric	13	☒	☒	
3	amount	Numeric	12	☑	☑	System dots
4	Quantity	Numeric	11	☑	☑	Fixed three dots

The following report have the similar data type:
Menu PLU report

3.Dept report

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Dept number	Numeric	3	☒	☒	1-200
3	amount	Numeric	12	☑	☑	System dots
4	Quantity	Numeric	11	☑	☑	Fixed three dots

4.clerk report

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	clerk number	Numeric	3	☒	☒	1-50
3	amount	Numeric	12	☑	☑	System dots
4	counter	Numeric	11	☒	☒	0-99999(no dots)

The following report have the similar data type:
Bundle report
Table report
Active table report
Menu report

5.hourly report

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Description	Char String	50	☒	☒	Description
3	amount	Numeric	12	☑	☑	System dots
4	counter	Numeric	11	☒	☒	0-99999(no dots)

6.clerk logon report

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	Description	Char String	50	☒	☒	Description
3	Log in time	Char String	8	☒	☒	HH:MM
4	Lon out time	Char String	8	☒	☒	HH:MM

7. EJ Data

Index	Name	Type	Length (Bytes)	Negative	Dots	Notes
1	EJ data	byte	27			

Binary data,each pachage 27 EJ data.

```
Struct{
        Byte                    LineType: 0 EJ head data; 1: EJ item data
        struct{
                word        EJ_Type;
                DATE          date;     YYMMDD
                TIME          time;     HHMMSS
                long        Rcpt_No;    /*收据号*/
                byte          ClkNo;      /*收银员*/
                WORD          TblNo;      /*台号*/
                byte          Cover;      /*人数*/
                byte      IsTakeAway;   /*是否是外送操作 */
                byte        IsClkIntrpt; /*是否是CLERK INTERRUPT 开台*/
                long          TtlAmt;
                WORD        RcptLen;    /*存根大小*/
                WORD        Reserv;
        }EJ_HEAD; 26 bytes
        Strcut{
                byte        ID;                     /* Indicate the operation,*/
                WORD        nth;                    /* The transaction index number */
                long        price;              /* The transaction item price */
                long        Qty;                    /* The transaction quantity */
                long        Amt;              /* The transaction item total amount */
                byte        TaxNo;            /* The transaction item tax No */
                byte        PerIdx;           /* The Percentage idx */
                TRANSFLAG flag;
                char      Reserv;
                char      BarCode[BAR_BUFF_LEN];
        }EJ_ITEM; 26 bytes
};
```

```
typedef  struct{
        byte  IsEC:  1;
        byte  IsSerTax:1;
        byte  IsEmpSerTax:1;  /*当前系统是否在免服务费状态  */
        byte  Reserve:5;
}  TRANSFLAG;
```

6.The error detection on the PC

1. No response from ECR for 10 seconds.
2. The response from ECR is 'NAK + STATUS CODE'.
3. The format of the data from ECR is illegal. (If you regard the data-format check as necessary.)
   Status Code List(00-99)

Code	Contents
0	Normal
1	Password Error
2	ECR unconventionality
3	Time Over
4	Command Error
5	Data Error
6	Check Sum Error
7	PLU total quantity & quantity not blank
8	Not all the reports data is void
9	Work mode error
10	Department total quantity & quantity not blank
11	Same PLU index
12	The hard control lock scan not exists
13	Not in the VAT mode
14	Not in the Tax mode
15	PLU Attribute Error
16	Can't handshake,server is busy now
17	Can't communicate,server is busy now
18	PLU is not normal!
19	PLU is normal!
20	PLU is not exist!
21	The sale no end!
22	It is paying!
23	The report is clearing!
24	ECR and PC version is not match!