

MTScaleKey

Interface Development Document

**Mettler Toledo (Changzhou) Measurement Technology Co., Ltd.**

<http://www.mt.com>

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1. **Introduction of Document**

**1.1 Purpose and Scope of Document**

This document shall include the description of the interface for MTScaleKey which is taken as data transmission service of commercial electronic scale of Mettler Toledo so far; and the user can implement communication with the MTScaleKey during development in order to complete assignment and recycling of the data of the electronic scale as long as he complies with the description of the interface.

**1.2 Requirements to system**

Operating requirements of MTScaleKey:

Under Windows system: Windows2000 and above, and the Microsoft Visual C++2010 Runntime is required.

Under Linux: C++ library is required.

1. **Calling Method and Parameter Description**

**2.1 Brief Description of Calling Method**

MTScaleKey shall be compatible with calling by using DLL API method, and the character string or the document of Xml structure shall be taken as the data parameter for interaction of interface.

Calling of the interface shall include following steps mainly:

* Generate task information including the type of the task, the time of assigning the task and the number of the electronic scale list executing the task. See ***3.1 Structure of Task Information*** for structure of specific task information.
* Generate the information of the electronic scale list, including the electronic scale information executing the task, and see ***3.2 Structure of Electronic Scale Information*** for structure of specific information of the electronic scale; generate the information of parameter list if the information is formed according to the setting of the parameters, and see ***3.6 Structure of Parameter Setting Information*** for the structure of specific parameter information; and skip the following steps.
* Generate the command word information in allusion to each scale, including the command for communication of this scale, and see ***3.3* *Structure of Command Word Information*** for the structure of specific command word.
* Generate the data content for communication in allusion to each command word, for example, generate the data list of the item if the data of the item is required to assign to allow the MTScaleKey to read; and see the content in the ***3.5 Structure of Data Content Information*** for the format of specific data content.

**2.2 Method, Event and Parameter Description**

Corresponding sample programs shall be available for the method, event and parameter description of the following interface, and the versions of multiple languages shall be offered; and the calling shall be implemented by referring to the format.

**2.2.1 DLL API method**

DLL shall be the one compiled by using VC++ and applicable for calling MTScaleAPI.dll.

* **ExecuteTaskInFile, ExecuteTaskInFileW:** The task shall be implemented by importing the parameters in the way of document, and the document must be saved in the format of UTF-8.

**Parameters imported:**

szTaskID: String type, the number (unique) of the task imported

szInputFile: String type, the document name of the task information imported (full path)

szOutputFile: String type, the document name of the task result information generated (full path)

synch: bool type, execution method, True is synchronous execution, that is, return upon completion of transmission; False refers to asynchronous execution, that is, return upon verification of accuracy of parameters input.

**Return value:** Bool type, judge whether the return calling is successful.

* **ExecuteTaskInString, ExecuteTaskInStringW:** Execute the task by importing the parameters by means of Xml character string.

**Parameters imported:**

szTaskID: String type, the number (unique) of the task imported

szInput: String type, the Xml information character string imported; and see *3 Explanation of Transmission Structure* for Xml structure.

synch: Bool type, execution method, True is synchronous execution, that is, return upon completion of transmission; False refers to asynchronous execution, that is, return upon verification of accuracy of parameters input.

**Return value:** String type, the result after returning to calling transmission shall be embodied in form of Xml.

* **QueryTask, QueryTaskW:** Import the parameters by virtue of Xml character string after inquiring the status of the task specified.

**Parameters imported:**

szInput: String type the Xml information character string imported, and see *3 Explanation of Transmission Structure* for Xml structure.

**Return value:** String type refers to returning to the status of the task specified and will be embodied in form of Xml; the status of the existing task shall return only if multiple tasks are required to inquire in batches.

* **CancelTask, CancelTaskW:** Import the parameters by virtue of character string after cancelling the task specified.

**Parameters imported:**

szInput: String type, the number of the task imported

**Return value:** Bool type, judge whether the return calling is successful.

* **QueryStatus, QueryStatusW:** Import the parameters by virtue of character string after inquiring the configuration parameters of the component specified of the middleware.

**Parameters imported:**

szInput: String type, the Xml information character string imported, and see *3 Explanation of Transmission Structure* for Xml structure.

**Return value:** String type, return to the configuration parameters or electronic scale list of the component specified and embody it in form of Xml.

* **CloseProcess: Stop** MTScaleKey.

**Imported parameters unavailable:**

**Return value:** Bool type, judge whether the return calling is successful.

* **SetParamsInString, SetParamsInStringW:** Import the parameters by virtue of character string after setting the configuration parameters of the MTScaleKey or the list of the electronic scale.

**Parameters imported:**

szInput: String type, the Xml information character string imported, and see *3 Explanation of Transmission Structure* for Xml structure.

**Return value:** Bool type, return to the execution result of the task and embody it in form of Xml.

* **SetParamsInFile, SetParamsInFileW:** Import the parameters by virtue of the document after setting the configuration parameters of the MTScaleKey or the list of the electronic scale.

**Parameters imported:**

szTaskID: String type, the number (unique) of the task imported

szInputFile: String type, the document name of the task information imported (full path)

szOutputFile: String type, the document name of the task result information generated (full path)

**Return value:** Bool type, judge whether the return calling is successful.

* **Release:** Release the resource of the dynamic library, and this method must be called before unloading the dynamic library when calling the dynamic library dynamically; or the direct unloading of the dynamic library may lead to error.

**Imported parameters unavailable:**

**Return value unavailable:**

See subdirectory of MTScaleAPI in the installation directory for the header definition document of the function and relevant library document.

1. **Specification of Data Transmission Structure**

**3.1 Structure of Task Information**

The structure of the task information shall include the task information to be executed, and the structure of the task information is as follows: (the red part in the attribute name shall be the information required; the blue part shall be the information required in the select circumstance; and the rest shall not be required to fill in; similarly hereinafter)

Xml node name: MTTask

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Version | Attribute | String | Version No. of Xml format |
| TaskID | Subnode | String | Task No. and unique mark cannot be repeated under any condition. |
| TaskTime | Subnode | String | Generation time of task with format of YYYY-MM-DDTHH:mm:ss, such as 2014-06-09T09:12:12; and the time of any other dates shall be identical. |
| TaskType | Subnode | int | Type of task  0: Assign data  1: Recycle assembly line  3. Check online status  4: Automatic finding equipment  87: Inquire the status of the component of the membership card.  89: Inquire the status of the component of the automatic finding equipment.  90: Inquire the status of component of the WANService.  91: Inquire the status of component of the RetrieveData.  92: Inquire the status of the component of the TransferData.  93: Inquire the status of the component of the ReceiveTrade.  94: Inquire the status of the component of the CheckOnline.  95: Inquire the list of the electronic scales.  96: Inquire the status of the MTScaleKey.  97: Inquire the statuses of multiple tasks.  98: Inquire the status of single task.  99: Setting the parameters  100: Stop the procedure. |
| DataFile | Subnode | String | The document name of corresponding electronic scale list or the document name of the parameters set when calling in the way of document. |
| OutputFile | Subnode | String | The document name for task result output, wherein this field can be applied to specification of the output directory when calling in the way of character string. |
| Scales | Subnode |  | Store the electronic scale list when calling in the way of the character string; and multiple Scale subnodes can be included. |
| Settings | Subnode |  | Store the list of the parameters set when calling in the way of the character string; and multiple MTSetting subnodes can be included. |
| AdditionalConfig | Subnode | String | The additional configuration information; and the structure of single configuration information is Name:Value; specifically, multiple configuration information shall be separated by using the comma; the transferred meaning shall be taken if the character conflicts with the key word prescribed, for example: UseDept:True,ETLinkPLU:False refers to the management of using department.; and ET is different from the PLU. |

Setting structure:

Xml node name: Setting

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Name | Subnode | String | Parameter name |
| Value | Subnode | String | Parameter values |
| Scales | Subnode |  | Store the electronic scale list when calling in the way of character string, and the subnodes of multiple Scales shall be included. |

The additional configuration information shall include following information:

|  |  |  |
| --- | --- | --- |
| Name of configuration | Explanation of configuration | Range of value |
| UseDept | That whether to start up the department management shall refer to separation of the department number in one part of the protocol and be unavailable to bMobile/bDrive and bPlus. | True  False  True  False  The default is True which is case-insensitive. |
| Password | The communication code of the scale shall be available only to bCom/bPro, bMobile/bDrive and bPlus. | Communication code of the scale |
| ETLinkPLU | Whether the Plu and the ET are set with identical number | True  False  The default is False which is case-insensitive |
| ETMethod | ET handling method (compatible with bCom/bPro only): | 0: Don't fragment  1: Fragmentation  Default: 0 |
| TraceIndexType | Traceability index format (compatible with bCom/bPro and RL00 only) | 0: Character string  1: Number  Default: 0 |
| FixWeightUsage | Use of the fixed weight field in the scale (compatible with bCom/bPro and RL00 only) | 0: Fixed weight  1: Unit of commodities to be counted.  Default: 0 |
| UpdateItemTID | Whether to update the TraceInfoID in the information of the item when assigning the Private Trace Code. | True  False  The default is True which is case-insensitive |
| AutoFitScaleType | Type of automatic adaptive scale  Data assignment | True  False  The default is True which is case-insensitive  Not compatible with i15, bTwin and bHigh |
| TraceIndexFormat | Format of trace code mnemonic symbol | Format of character string with default of PPPPPPPPPT. |
| CheckOnlineMethod | Selection of online detection method | 0: Tests for Ping and connecting port.  1: Test for Ping only  The default is 0. |
| AutoEnterBoot | Enter into the refurbishing mode automatically when refurbishing the scale | True  False  The default is True which is case-insensitive  Compatible with bCom and bPro only. |
| TraceTextLength | Length of trace code | Number which expresses the length of the trace code text  The default is 20 and is available when the Private Trace Code index is the number in the RL00. |
| TraceDescLength | The description length of the trace code | Number which expresses the length of the trace code text  The default is 4 and is available when the Private Trace Code index is the number in the RL00. |
| CheckOnlineTimeout | Timeout during online detection | The timeout of Ping takes the millisecond as the unit, and the default is 500ms. |
| CheckOnlineRetryTimes | 在线检测重试次数  Number of retries during online detection | Ping的重试次数, 默认3  The default of retry number of Ping is 3. |
| CheckOnlineMaxThreads | Detect the number of the scales during online detection | The default is 20. |

See *Appendix 1* for the field names of the configuration parameters involved in setting.

Sample of Xml text: Method of documentation: 

Method of character string (taking the data of the items distributed): 

**3.2 Structure of Electronic Scale Information**

The structure of the electronic scale list shall include the electronic scale list to be subjected to data transmission, wherein the structure of the electronic scale information is as follows:

Xml node name: Scale

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| DeviceID | Subnode | String | Equipment No. and unique mark which is equal to the number of the scale when the scale number is set as the index in MTScaleKey and equal to IP address when IP is set as the index. |
| ConnectType | Subnode | String | Type of communication:  Network: LAN  Internet: WAN |
| ScaleNo |  | int | Scale No. |
| ScaleName | Subnode | String | Name of the scale |
| ConnectParams | Subnode |  | Include the connecting parameters of two subnodes of the NetworkParams (LAN parameters) and InternetParams (WAN parameters)and used for setting the electronic scale; and one of the two methods must be filled in. |
| ScaleType | Subnode | String | Type of scale:  8442: 8442 type scale  BlackEagle: BlackEagle type scale  bCom: bCom type scale  bPro: bPro type scale  bTwin: bTwin type scale  bHigh: bHigh type scale  i15: i15 type scale  RL00: RL00/RL00+ type scale  bMobile: bMobile type scale  bDrive: bDrive type scale  Skipper 5000: Skipper 5000 type and the same as the bMobile type.  Skipper 7000: Skipper 7000 type and the same as the bDrive type  bPlus: bPlus type scale  FreshBase: FreshBase type scale  Unknown: Unknown scale type and applied to the circumstance that the type of the scale cannot be determined when the scale is found automatically.  All of other ScaleType nodes are identical with subnode. |
| CODName | Subnode | String | COD No. which is not required to fill in under the standard version. |
| DecimalDigits | Subnode | int | Decimal digits which are in line with the one set in the scale, used for calculating the amount, and set as 2 generally in China. |
| DataFile | Subnode | String | Save the name of the command word file when calling in the way of file |
| Commands | Subnode |  | Save the information of the command word when calling in the way of character string, and include multiple Command subnodes |
| AdditionalConfig | Subnode | String | Additional configuration information which is identical with the structure in the task information; the additional configuration information in the electronic scale information shall prevail if the configuration information defined is repeated in the task information. |

NetworkParams structure (connecting parameters of LAN, optional):

Xml node name: NetworkParams

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Address | Attribute | String | IP address |
| Port | Attribute | Int | Network port No. with default of 3001. |

InternetParams structure (connecting parameters of WAN, optional):

Xml node name: InternetParams

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Address | Attribute | String | IP address |
| Port | Attribute | int | Network port No. with default of 8001. |

Sample of Xml text: 

Note: The root node of ScaleList is Devices in the way of file.

**3.3 Structure of Command Word Information**

The structure of command word list shall include the command set of data transmission required by corresponding electronic scale, wherein the structure of the command word information is as follows:

Xml node name: Command

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| CommandID | Subnode | String | Command word No. which must be unique in the command list of each scale. |
| CommandText | Subnode | String | Command word, such as Item. |
| Control | Subnode | String | Command control word:  Update: Update the data.  Delete: Delete the data specified.  DeleteAll: Delete all data.  Read: Read current data  ReadAll: Read all data.  ~~DeleteRange: Range deletion data taking the first data in the data list as the starting value, and the second data as the ending value.~~  All of other Control nodes are identical with this subnode. |
| ClearData | Subnode | bool | Whether to clear up the data before issuing the mark, that is, whether to issue after clearing up corresponding data in the scale; and valid when the command control word is Write or Update only. |
| DataFile | Subnode | String | Save the name of the command word data when calling in the way of file |
| Data | Subnode |  | Save the data contents when calling in the way of character string, and include multiple data nodes |
| AdditionalConfig | Subnode | String | Additional configuration information which is identical with the structure in the task information; the additional configuration information in the command word information shall prevail if the configuration information defined is repeated in the task information or the electronic scale information. |

Sample of Xml text: 

**3.4 Information about Task Execution Result**

The information about task execution result shall include the status or the result information about task execution:

Xml节点名: MTTaskResult

Xml node name: MTTaskResult

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| TaskID | Subnode | String | Task No. |
| TaskType | Subnode | Int | Type of task |
| StartTime | Subnode | String | Starting time of task |
| EndTime | Subnode | String | Ending time of task |
| ProcessPercent | Subnode | Int | Task progress percentage |
| ReturnCode | Subnode | String | Return code about task execution:  OK: No error  ProgramError: Program error  DataFileError: Data file error  TaskTypeError: Task type error  TaskRepeatError: Task repeat error  TasnodeExistedError: Inexistence of task  TransferError: Transfer error  ScaleDataError: Data error of electronic scale  DataNotFoundError: No error is found in the data  ConnectError: Connecting error of the electronic scale  ServiceError: error of disconnection of service  UnexpectedStopError: Unexpected stop error  DataNotSupportedError: Not compatible with the operations of the data transmitted  Cancelled: Task cancelled  ReadFileError: read file error  NeedRestart: MTScaleKey is required to restart  ScaleNotSupportedDataError: Not compatible with the electronic scale  PasswordError: Password error  ScaleSpaceFullError: Insufficient space of the electronic scale  ScaleTypeError: Error of scale type  DataRepeatedError: Data repeated error  SaveFileError: Error in file saved in the electronic scale  All of other ReturnCode nodes are identical with this subnode, and will be increased according to need in the future. |
| TaskStatus | Subnode | String | Status:  Waiting: Wait to execute.  Executing: In executing.  Output: Data is being output.  Complete: Execution completed.  Error: Execution error  Prepare: Prepare to execute |
| ErrorMessage | Subnode | String | Error information |
| OtherMessage | Subnode | String | Other information |
| OutputFile | Subnode | String | Name of file of task result output |
| SettingResults | Subnode |  | Save the result of inquiry status or the parameters set, can include multiple SettingResult subnodes, and corresponding to each setting items one to one. |
| ScaleResults | Subnode |  | Save the result of the task of the electronic scale, can include multiple ScaleResult subnode, and corresponding to the task of each scale one to one. |
| Scales | Subnode |  | Return to the electronic scale list of automatic finding when executing the automatic finding task, and can include multiple Scale subnodes. |

Sample of Xml text: 

Structure of ScaleResult:

Xml node name: ScaleResult

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| DeviceID | Subnode | String | Device No. |
| ScaleNo | Subnode | Int | Scale No. |
| ScaleType | Subnode | String | Type of scale |
| StartTime | Subnode | String | Starting time of the task of the electronic scale |
| EndTime | Subnode | String | Ending time of the task of the electronic scale |
| ReturnCode | Subnode | String | Return code about task execution |
| ErrorMessage | Subnode | String | Error information |
| CommandResults | Subnode |  | The information of the command word result, can include multiple CommandResult subnode and corresponding to the command word information one to one |
| OtherMessage | Subnode | String | Other information |
| ProcessPercent | Subnode | Int | Percentage of the task execution of the electronic scale |
| TaskStatus | Subnode | String | Task status:  Waiting: Wait to execute  Executing: In executing  Output: Data is being output.  Complete: Execution completed  Error: Execution error  Prepare: Prepare to execute |

Structure of CommandResult:

Xml node name: CommandResult

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| CommandID | Subnode | String | Command word No. |
| CommandText | Subnode | String | Command word |
| Control | Subnode | String | Control word |
| StartTime | Subnode | String | Starting time of the command word task |
| EndTime | Subnode | String | Ending time of the command word task |
| ReturnCode | Subnode | String | Return code about the task execution |
| ErrorMessage | Subnode | String | Error message |
| Succeeded | Subnode | Int | Number of subnodes succeeded |
| Failed | Subnode | Int | Number of subnodes failed |
| Total | Subnode | Int | Total number |
| DataFile | Subnode | String | Save the name of the data file when calling in the way of file |
| Data | Subnode |  | Save the contents of the data when calling in the way of character string, and can include multiple data subnodes |
| OtherMessage | Subnode | String | Other information |
| ProcessPercent | Subnode | Int | The percentage during communication of the command word, wherein the specific progress can be known by using this field when issuing the file and the information of the firmware. |
| TaskStatus | Subnode | String | Task status:  Waiting: Wait to execute  Executing: In executing  Output: Data is being output.  Complete: Execution completed  Error: Execution error  Prepare: Prepare to execute |

Structure of SettingResult:

Xml node name: SettingResult

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Name | Subnode | String | Name of item set |
| Value | Subnode | String | Value of the item set |
| ReturnCode | Subnode | String | Return code about the task execution |
| ErrorMessage | Subnode | String | Error message |
| Succeeded | Subnode | Int | Number of subnodes succeeded |
| Failed | Subnode | Int | Number of subnodes failed |
| Total | Subnode | Int | Total number |
| Scales | Subnode |  | Save the electronic scale list read, and can include the subnodes of multiple scales. |

Sample of Xml text: File method: 

In the way of character string (for example, reading online status): 

**3.5 Structure of Data Content Information**

The data content information shall include the data of data transmission required by corresponding command set, and all scales shall not be compatible with the following command set completely. Moreover, the type of the scale is not compatible with this command set if the data cannot be transmitted during the actual operations.

**3.5.1 Item Data**

Command No.: Item

Control word compatible:

* + Update: All types of the scales
  + Delete: All types of the scales
  + DeleteAll: All scales except bTwin and bHigh
  + Read: All types of the scales
  + ReadAll All types of the scales

Xml node name: Item

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| PLU | Subnode | Int | Item No. |
| DepartmentID | Subnode | Int | Department No., required in bMobile/bDrive and bPlus, or default to 0 |
| AlternativeItemIDs | Subnode |  | List of item No., can include multiple AlternativeItemID subnodes and save the item No. |
| StoreID | Subnode | Int | Store No. |
| Descriptions | Subnode |  | List of item description, can include multiple Description subnodes, save the names of the commodities, the additional text information, etc. |
| Dates | Subnode |  | Date sign, can include multiple date subnodes and save the date information printed of the item. |
| ItemGroupID | Subnode | Int | Item Group No, and valid to bMobile/bDrive and bPlus only. |
| CategoryIDs | Subnode |  | List about classification of the item, can include multiple CategoryID subnodes, save the classification numbers of the item, and valid to bMobile, bDrive and bPlus only. |
| Tares | Subnode |  | List of the numbers of the item tares, can include multiple TareID subnodes ~~and the TareWeight subnodes,~~ and save the tare No ~~and the tare data~~ of the item. |
| ItemPrices | Subnode |  | List of the item price, can include multiple ItemPrice subnodes, and save the price information of the items. |
| Taxes | Subnode |  | List of the item tax No, can include multiple TaxRuleID subnodes, and save the tax No. of the items. |
| Ingredients | Subnode |  | List about classification of the items, can include multiple IngredientID subnodes, save the number of the ingredient forms of the itmes, and valid to bMobile, bDrive and bPlus only. |
| LabelFormats | Subnode |  | List about classification of the items, include multiple LabelFormatID subnodes, and save the label No. of the items. |
| Barcodes | Subnode |  | List of the barcode No. of the items, can include multiple BarcodeID subnodes, save the barcode No. of the items, and valid to bMobile, bDrive and bPlus only. |
| NutritionInformation | Subnode |  | List of the nutrition form No. of the items, can include multiple NutritionInformationID subnodes, save the nutrition form No. of the items and valid to bMobile, bDrive and bPlus only. |
| FixedQuantity | Subnode |  | Fixed quantity of the item and can include multiple FixedQuantity nodes in one item structure. |
| TraceInfoID | Subnode |  | Trace information No. |
| TraceabilityFlag | Subnode |  | Trace code starting label which is not valid to bPlus and bMobile/bDrive scales. |
| PriceRule | Subnode | Int | Unit price rule No. which is not valid to bPlus and bMobile/bDrive scales. |
| Images | Subnode |  | List of image No., can include multiple Image subnodes, save the image No. of the item, and valid to bCom/bPro, bMobile/bDrive and bPlus only. |
| StaggerPrices | Subnode |  | List of stagger price, can include multiple StaggerPrice subnodes, save the stagger prices of the items, and valid to bMobile, bDrive, bPlus and FreshBase only. |

AlternativeItemID structure (Art. No.)

Xml node name: AlternativeItemID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| AlternativeItemID | Text | String | Art. No. which is 13 bits maximally. |

Description structure (description text of the item):

Xml node name: Description

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Attribute | String | Type of text:  ItemName: Name of item  ItemShortName: The second name of the item  ExtraText: Additional text |
| ID | Attribute | Int | Text No., wherein the additional text No. shall be input when the type of the text is ExtraText, and other types is not required to fill in. |
| Language | Attribute | String | Language of the text: Valid to bMobile/bDrive and bPlus only.  zho: Chinese  eng: English  fra: French  deu: German  All of other Language nodes are identical with this language. |
| Text | Text | String | Content of the name of the item |

Date structure (date label printed):

Xml node name: Dateoffset

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Attribute | String | Type of date  SellBy: expiration date  BestBefore: Date Recommended  PackedDate: Packaging date |
| UnitOfOffset | Attribute | String | Unit  day: The number of days  hour: Number of hours, valid to bMobile, bDrive, bPlus and FreshBase and invalid to the packaging date.  Date: Date which is valid to bMobile, bDrive, bPlus and FreshBase only.  Time: Time which is valid to bMobile, bDrive, bPlus and FreshBase only.  Invalid to the packaging date |
| PrintFormat | Attribute | String | Print format: bMobile, bDrive, bPlus and FreshBase shall be invalid.  YYMMDD: Year, month, date  DDMMYY: Date, month, year  MMDD: Month, date  Days: Number of days, wherein the packaging date shall not be compatible with this format.  MMDDYY: Month, date, year |
| Value | Text | String | Date value printed, wherein the format is YYYY-MM-DD for date, such as 2014-06-09;  The format shall be HH:nn:ss for time, for example: 08:21:32 |
| PrintEnabled | Attribute | Bool | Whether to print the lable |

CategoryID structure (category No.):

Xml node name: CategoryID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| CategoryID | Text | Int | Category No. |

TareID structure (tare No.):

Xml node name: TareID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| TareID | Text | Int | tare No. |

ItemPrice structure (price information of the item):

Xml node name: ItemPrice

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Index | Attribute | Int | Order of the unit price, starting from 0 |
| UnitOfMeasureCode | Attribute | String | Unit of price:  GRM: Yuan/g  KGM: Yuan/kg  LBR: Yuan/pound which is valid to bMobile/bDrive and bPlus only.  PCS: Count  100g: Yuan per 100g  500g: Yuan per jin (a unit of weight) |
| PriceOverrideFlag | Attribute | Bool | Label allowing override |
| DiscountFlag | Attribute | Bool | Label allowing discount |
| Quantity | Attribute | Int | 数量。  Quantity |
| Currency | Attribute | String | Unit of currency: Valid to bMobile, bDrive and bPlus only.  CNY: RMB  HKD: HKD  USD: U.S. dollar  GBP: Pound  JPY: Yen  EUR: Euro |
| UnitDes | Attribute | String | Unit of items to be counted, which shall be used when the fixed weight is arranged in the scale as the unit of items to be counted. |
| Value | Text | Double | Price |

TaxRuleID structure (tax No.):

Xml node name: TaxRuleID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| TaxRuleID | Text | Int | Tax No. |

IngredientID structure (Art. No.):

Xml node name: IngredientID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| IngredientID | Text | Int | Ingredient No. |

LabelFormatID structure (label No.):

Xml node name: LabelFormatID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Index | Attribute | Int | Order of the label starting from 0, wherein 8442 and RL00 are compatible with one label number only; bCom and bPro are compatible with two label numbers; bPlus, bMobile, bDrive and FreshBase are compatible with at most three label numbers; and the rest scale shall not be compatible. |
| LabelFormatID | Text | Int | Label No. |

BarcodeID structure (barcode No.):

Xml node name: BarcodeID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| BarcodeID | Text | Int | Barcode No. |

NutritionInformationID structure (Nutrition form No.):

Xml node name: NutritionInformationID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| NutritionInformationID | Text | Int | Nutrition form No. |

FixedQuantity structure (fixed quantity):

Xml node name: FixedQuantity

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| UnitOfMeasureCode | Attribute | String | Unit:  GRM: g  KGM: kg  LBR: Pound which is valid to bMobile/bDrive and bPlus.  PCS: Count  100g: 100g  500g: Jin |
| Value | Text | Double | Fixed weight or quantity |

Image structure (image No.):

Xml node name: Image

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Index | Attribute | Int | Order of image, which starts from 0 and is 3 at most; bCom, bPro, bPlus, bMobile, bDrive and FreshBase shall be compatible; Index=0: Plu image; Index=1: SafeHandling image; Index=2: StoreLogo (bPro and bCom are not compatible) |
| Type | Attribute | String | Type of image  Item: Plu image |
| ImageID | Text | String | Image No. which is compatible with the number only in the bCom/bPro. |

StaggerPrice structure (stagger price):

Xml node name: StaggerPrice

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ValueTypeCode | Attribute | String | Value type subordinated must be in line with the ValueTypeCode of certain price in the ItemPrice. |
| Condition | Attribute | Double | Condition value: Value of weight or quantity |
| Price | Text | Double | Price |

Sample of Xml text: 

**3.5.2 Additional Text**

Command No.: ExtraText

Control word compatible:

* + Update: 8442, BlackEagle, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + Delete: 8442, BlackEagle, bCom, bPro, RL00, bMobile,bDrive, bPlus, FreshBase
  + DeleteAll: 8442, BlackEagle, bCom, bPro, RL00, bMobile,bDrive, bPlus, FreshBase
  + Read: 8442, BlackEagle, bCom, bPro, RL00, bMobile,bDrive, bPlus, FreshBase
  + ReadAll: 8442, BlackEagle, bCom, bPro, RL00, bMobile,bDrive, bPlus, FreshBase

Xml node name: ExtraText

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Additional text No. |
| Name | Subnode | String | Name |
| Language | Subnode | String | Language |
| DepartmentID | Subnode | Int | Department No. |
| ETTexts | Subnode |  | List of the contents of the additional text which can include multiple ETText nodes and the ET content for indicating the sections. |

ETText structure (contents of the additional text):

Xml node name: ETText

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Index | Attribute | Int | Section No. which starts from 0 and is compatible with the Section 4 only for 8442, BlackEagle, bCom and RL00 and Section 8 only for bMobile/bDrive and bPlus. |
| FontSize | Attribute | Int | Font sizes 1-29 which shall be invalid to bMobile, bPlus and bCom. |
| Text | Text | String | Contents of the additional text |

Sample of Xml text: 

**3.5.3 Preset Keys**

Command No.: PresetDefinition

Control word compatible:

* + Update: All types of scales
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: All types of scales

Xml node name: PresetDefinition

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| PresetPage | Subnode |  | Paging information of the preset keys, which can include multiple PresetPage nodes in one PresetDefinition structure; and this structure is retained only so far. |
| PresetKey | Subnode |  | Location information of the preset keys, which can include multiple PresetKey nodes in one PresetDefinition structure. |

PresetPage structure (paging information of the preset keys):

Xml node name: PresetPage

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Node | Int | Paging No. which is 1 fixedly so far. |
| Title | Node |  | Paging title which can include multiple Title nodes in one PresetPage. |
| Height | Node | Int | Height (the number of the lines of each page, the FreshBase is required to fill in) |
| Width | Node | Int | Width (the number of the rows of each page, the FreshBase is required to fill in) |
| KeyCount | Node | Int | The number of the locations on the keyboard |
| Type | Node | String | Type (the FreshBase must be Graphics) |
| Visible | Node | Bool | Whether is visible (FreshBase must be true, or will not be displayed) |

PresetKey structure (location information of the preset keys):

Xml node name: PresetKey

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| PageID | Node | Int | Paging No., which indicates the paging of the page where the key belongs to and is 1 fixedly so far. |
| Type | Node | String | Type:  PLU: Art. No.  Tare: Tare No. which is compatible with bMobile/bDrive and bPlus.  Event: Function keys, which is compatible with bMobile/bDrive and bPlus.  Page: The paging No. nested which is compatible with FreshBase only. |
| Destination | Node |  | Location directing information of the preset key, which includes such a structure only. |
| Title | Node |  | Paging title which can include multiple Title nodes in one PresetKey. |
| KeyNo | Node | Int | Key No. which is invalid to bMobile, bDrive and bPlus. |
| Column | Node | Int | Column No. which is invalid to bMobile, bDrive and bPlus. |
| Row | Node | Int | Row No. which is invalid to bMobile, bDrive and bPlus. |
| Level | Node | Int | Number of levels which starts from 1 and is 2 at most. |
| ImageLocation | Node | String | Location of the image file |

Title structure (information of the title structure):

Xml node name: Title

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Language | Attribute | String | Language |
| Text | Text | String | Contents of the title |

Destination structure (location directing information of preset keys):

Xml node name: Destination

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| DepartmentID | Attribute | Int | Department No. |
| Text | Text | String | Contents directed can be the article No., the tare No. and the function name. |

Sample of Xml text: 

**3.5.4 Header and Footer**

Command No.: HeadingFoot

Control word compatible:

* + Update: All types of scales (bTwin and bHigh shall be debugged further)
  + Delete: All types of scales (bTwin and bHigh shall be debugged further)
  + DeleteAll: All types of scales (bTwin and bHigh shall be debugged further)
  + Read: All types of scales (bTwin and bHigh shall be debugged further)
  + ReadAll: All types of scales (bTwin and bHigh shall be debugged further)

Xml node name: HeadingFoot

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | No. of the header and the footer |
| Name | Subnode | String | Name |
| Type | Subnode | String | Type  HeadingText: Header  FootText: Footer |
| Language | Subnode | String | Language |
| Align | Subnode | String | Alignment:  Left: Left justify  Center: Center justify  Right: Right justify |
| FontSize | Subnode | Int | Font sizes 1-29 which are invalid to bMobile, bDrive, bPlus and FreshBase. |
| Text | Subnode | String | Contents of the header and the footer |

Note: The header and the footer of identical ID must be in one-to-one correspondence and transmitted together.

Sample of Xml text: 

**3.5.5 Password Setting**

Command No.: Password

Control word compatible:

* + Update: 8442, BlackEagle, bCom,bPro, RL00, i15, ~~bMobile, bDrive, bPlus, FreshBase~~
  + Delete: 8442, BlackEagle, bCom, bPro, RL00, i15, ~~bMobile, bDrive, bPlus, FreshBase~~
  + DeleteAll: bCom, bPro

Xml node name: Password

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Subnode | String | Type of password  Manager: Password of the Administrator  Scale: Password of the electronic scale  Code: Password of the Code key  ChangePrice: Password of override  Discount: Password of discount  Refund: Password of refund  Report: Password of the report  Notes: The password of the Code key shall be compatible for RL00, 8442, BlackEagle, bPlus and bMobile/bDrive; i15 is compatible with refund and the password of the Code key; bCom shall be compatible with the password of refund, and all types of the passwords except the password of the report. |
| Password | Subnode | String | The content of the password: The password is limited to 6 numeric digits, the first number shall not be 0, and 0 shall be supplemented if the password is less than 6 numeric digits for the RL00, 8442, BlackEagle scales, for example, the content of the password is 1234, the actual valid password shall be 123400; the password shall be 6 numeric digits at most for bCom/bPro, and 7 numeric digits at most for bPlus and bMobile/bDrive. |

Sample of Xml text: 

**3.5.6 Label Format**

Command No.: LabelFormat

Control word compatible:

* + Update: 8442, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase

Xml node name: LabelFormat

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| LabelNo | Subnode | Int | Label No. |
| DataFile | Subnode | String | Name of the label file |

Sample of Xml text: 

**3.5.7 Barcode Standard**

Command No.: Barcode

Control word compatible:

* + Update: 8442, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + Delete: bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: 8442, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: 8442, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + DeleteRange: bMobile, bDrive, bPlus, FreshBase

Xml node name: Barcode

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Symbology | Attribute | String | Type of barcode:  EAN8:  EAN13:  Code25N: Code25窄码  Code25N: Code25 narrow code  Code25W: Code25宽码  Code25W: Code25 wide code  EAN-128:  EAN13+5:  UPC-A  Code128  Interleaved2Of5  QRCode: Two-dimensional code  Notes: RL00 is compatible with EAN8, EAN13, Code25N, Code25W, EAN-128/Code128, EAN13+5 and QRCode only;  8442 is compatible with EAN8, EAN13, Code25N, Code14, UPC-A, EAN-128/Code128 and Code20 only;  bCom is compatible with EAN8, EAN13, Code25N, Code25W, EAN-128/Code128, EAN13+5, UPC-A and QRCode only.  Code25N and Code25W in the Caeser scale and the bMobile scale cannot occur at the same time. |
| ID | Subnode | Int | Barcode No. |
| Description | Subnode | String | Name of barcode |
| Definition | Subnode | String | Barcode which shall be deemed as the superior barcode if including $D, and the scales 8442, bCom, bPro and RL00 shall not be compatible. |
| Parity | Subnode | String | Verification mode:  Normal: Normal verification  Reverse: Reverse verification  None: No verification |
| ItemNoShift | Subnode | Int | Shift of Art. No., which is negative for left shift and positive for right shift.  8442 and RL00 are not compatible with the shift; while bPro/bCom is compatible with the right shift only, with range of 0-8 numeric digits. |
| TotalShift | Subnode | Int | Shift of total price, which is negative for left shift and positive for right shift.  8442 and RL00 are not compatible with the shift; while bPro/bCom is compatible with the right shift only, with range of 0-2 numeric digits. |
| WeightShift | Subnode | Int | Shift of weight, which is negative for left shift and positive for right shift.  8442 and RL00 are not compatible with the shift; while bPro/bCom is compatible with the right shift only, with range of 0-2 numeric digits. |
| CountShift | Subnode | Int | Shift of quantity, which is negative for left shift and positive for right shift.  8442 and RL00 are not compatible with the shift; while bPro/bCom is compatible with the left shift only, with range of 0-8 numeric digits. |
| PriceShift | Subnode | Int | Shift of unit price, which is negative for left shift and positive for right shift.  8442 and RL00 are not compatible with the shift; while bPro/bCom is compatible with the right shift only, with range of 0-2 numeric digits. |

Sample of Xml text: 

Explanation to barcode placeholder:

|  |  |
| --- | --- |
| Placeholder | Explanation |
| F | Department No., which is displayed as K in the scales except bPlus and bMobile/bDrive. |
| P | Item No. |
| A | Art. No. |
| G | Scale No. with which the bPlus and the bMobile/bDrive are compatible. |
| O | Operator No. |
| D | Date |
| J | Time, which is displayed as T in the scales except bPlus and bMobile/bDrive. |
| Q | Quantity |
| M | Unit price, which is displayed as U in the scales except bPlus and bMobile/bDrive. |
| B | Total price |
| C | Check bit |

**3.5.8 Advertising Text**

Command No.: Advertisement

Control word compatible:

* + Update: 8442, bCom, bPro, RL00
  + Delete: 8442, bCom, bPro, RL00
  + Read: 8442, bCom, bPro, RL00

Xml node name: Advertisement

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Advertising text No. |
| Name | Subnode | String | Name |
| Language | Subnode | String | Language |
| Text | Subnode | String | Contents of advertising text |

Sample of Xml text: 

**3.5.9 Mobile Caption**

Command No.: RunningMessage

Control word compatible:

* + Update: 8442, bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase
  + Delete: 8442, bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase
  + Read: 8442, bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase

Xml node name: RunningMessage

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Language | Subnode | String | Language |
| Text | Subnode | String | Contents of the mobile caption |

Sample of Xml text: 

**3.5.10 Tare**

Command No.: Tare

Control word compatible:

* + Update: 8442, bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase
  + Delete: bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: 8442, bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: 8442, bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: Tare

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Tare No. which ranges from 1 to 99 in bPlus, bCom and bPro, and ranges from 1 to 16 in other scales. |
| TareWeight | Subnode |  | Contents of tare |

TareWeight structure (contents of tare):

Xml node name: TareWeight

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Name | Attribute | String | Name of tare |
| Value | Text | Double | Tare value with default unit of g. |
| UnitOfMeasureCode | Attribute | String | Unit of price:  GRM: g  KGM: Kg PCT: percentage, which shall be invalid to bMobile, bDrive, bPlus and FreshBase. |

Sample of Xml text: 

**3.5.11 Operator Information**

Command No.: User

Control word compatible:

* + Update: 8442, BlackEagle, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + Delete: 8442, BlackEagle, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: 8442, BlackEagle, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + Read: 8442, BlackEagle, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: 8442, BlackEagle, bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: User

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Operator No. |
| Name | Subnode | String | Name |
| Password | Subnode | String | Password in which the number is allowable only, and the first number shall not be 0.  The 8442 scale, BlackEagle scale and RL00 scale are compatible with the password. |
| VenderKey | Subnode | Int | Location of the key with which the bMobile/bDrive scale, bPlus scale and the FreshBase scale are compatible with only. |
| Fix | Subnode | Bool | Whether to lock, and only bMobile/bDrive, bPlus and FreshBase are compatible with this node name |
| AccessDomains | Subnode | String | Limits of authority with which bMobile/bDrive, bPlus and FreshBase are compatible only. |

Sample of Xml text: 

**3.5.12 Special Price**

Command No.: SpecialPrice

Control word compatible:

* + Update: bCom, bPro, RL00, i15, bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bCom, bPro, i15, bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: SpecialPrice

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Special price No. ranging from 1 to 10000; RL00 shall be compatible with one special price; bPro and bCom can own multiple special prices; and i15 shall be compatible with 5 special prices at most. |
| Name | Subnode | String | Name |
| StartDate | Subnode | String | Starting date of special price with format of YYYY-MM-DD, for example, 2014-06-09; and the formats of other dates shall be identical with this format. The special price shall be implemented within the period of time specified each day if no starting date and ending date are input, or within the time from starting date + starting time to the ending date + ending time. |
| EndDate | 子节点  Subnode | String | Ending date of the special price, wherein the special price shall be implemented within the period of time specified each day if no starting date and ending date are input on bPro and bCom, or within the time from starting date + starting time to the ending date + ending time. |
| StartTime | Subnode | String | 特价开始时间, 时间格式为HH:mm:ss, 例如: 09:12:12, 其他所有时间的格式都与此相同。  Starting time of the special price with format of HH:mm:ss, for example, 09:12:12; and the formats of other times shall be identical with this format. |
| EndTime | Subnode | String | Ending time of the special price |
| Target | Subnode | Bool | List of the off-price merchandises, which can include multiple Target nodes, and RL00, bPro, bCom and i15 shall be compatible with 100 products at most. |

Target structure (List of the off-price merchandises):

Xml node name: Target

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| PLU | Subnode | Int | Art. No. |
| DepartmentID | Subnode | Int | Department No. |
| Value | Subnode | Double | Special price |

Sample of Xml text: 

**3.5.14 Promotion Rules**

Command No.: PromotionRule

Control word compatible:

* + Update: ~~i15~~, bMobile, bDrive, bPlus, FreshBase
  + Delete: ~~i15~~, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: ~~i15~~, bMobile, bDrive, bPlus, FreshBase
  + Read: ~~i15~~, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: ~~i15~~, bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: PromotionRule

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Promotion rule No. |
| Name | Subnode | String | Name |
| DateTime | Subnode |  | List of promotion periods of time, in which multiple DateTime nodes can be included. |
| Condition | Subnode | Int | List of promotion conditions, in which multiple Condition nodes can be included. |
| Target | Subnode | Bool | List of promotion results, in which multiple Target nodes can be included. |

DateTime structure (list of promotion periods of time):

Xml node name: DateTime

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| StartDate | Subnode | String | Starting date with format of YYYY-MM-DD, for example, 2014-06-09; and the formats of other dates shall be identical with this format. |
| EndDate | Subnode | String | Ending date |
| Time | Subnode |  | Time list, in which multiple Time nodes can be included. |

Time structure (list of promotion times):

Xml node name: Time

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| StartTime | Subnode | String | Starting time with format of HH:mm:ss, for example, 09:12:12; and the formats of other times shall be identical with this format. |
| EndTime | Subnode | String | Ending time |

Condition structure (list of promotion conditions)

Xml node name: Condition

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Condition group No. |
| DepartmentID | Subnode | Int | Department No. |
| ConditionType | Subnode | String | Type of condition:  PLU: Item  Category: Category of item  Group: Item group  SalesTotal: Subtotal |
| ValueType | Subnode | String | Type of condition value:  Weight: Weight  Count: Quantity  Price: Total price  SalesTotal: Subtotal |
| ValueOperand | Subnode | String | Operating type of the condition value:  Min: Minimum  Per: Unit price |
| Value | Subnode | Double | Condition value |

Target structure (list of promotion results):

Xml node name: Target

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Result content No., such as item No, and group No. |
| DepartmentID | Subnode | Int | Department No. |
| TargetType | Subnode | String | Type of condition:  PLU: Item  Category: Category of item  Group: Item group  SalesTotal: Subtotal |
| PromotionType | Subnode | String | SpecialPrice: Special price  AbsoluteDiscount: Absolute discount  PercentDiscount: Percent of discount  Gift: Subtotal  StaggerPrice: Stagger price  BuyXGetY: Buy X and get Y free |
| PromotionValue | Subnode | Double | Value of the result |

Sample of Xml text: 

**3.5.14 Time Information**

Command No.: DeviceTime

Control word compatible:

* + Update: All types of scales
  + Read: All types of scales
  + ReadAll: All types of scales

Xml node name: DeviceTime

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| AdjustTime | Attribute | Bool | Whether the label is corrected according to the system time, and the value of the DeviceTime node shall be invalid if it is True. |
| DeviceTime | Subnode | String | Time, more specifically the time among 2001 and 2100 shall be compatible. |

Sample of Xml text: 

**3.5.15 Format of General Label**

Command No.: GeneralLabelFormat

Control word compatible:

* + Update: 8442, BlackEagle, bCom, bPro, RL00, bPlus, FreshBase

Xml node name: GeneralLabelFormat

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| LabelType | Subnode | String | Category of label:  ServiceWeight: Weighing of services  TotalLabel: Subtotal  PrepackCount: Counting of pre-packages  PrepackWeight: Weighing of pre-packages  TotalLabel2: Subtotal 2, bPlus only |
| LabelNo | Subnode | Int | Label No., wherein bPlus shall be compatible with setting of the label No, and the settings as follows shall be ignored. |
| AdvNo | Subnode | Int | Advertising text No. |
| Align | Subnode | String | Alignment:  Left: Left justify  Center: Center justify  Auto: Automatic justify |
| ETFont | Subnode | Int | Fonts of additional text ranging from 0 to 29. |
| PLUNameFont | Subnode | Int | Fonts of item names ranging from 0 to 29. |
| PrintStoreName | Subnode | Boolean | Print label of store name, True and False |
| PrintDates | Subnode |  | Print label of date, in which multiple PrintDate subnodes can be included in order to save the print information of the date on the general label. |

PrintDate structure (print label of date):

Xml node name: PrintDate

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Attribute | String | Category of date  SellBy: Expiration date  BestBefore: Recommended date  PackedDate: Packaging date |
| PrintPrompt | Attribute | Int | Prompt sign of print: 1,2,3 |
| PrintFormat | Text | String | Print format:  ~~Noprint: No print~~  YYMMDD: Year, month, date  DDMMYY: Date, month, year; the 8442 and the RL00 do not support this format.  DDMMYY  MMDD: Month, date  Days: Number of days, wherein the packaging date shall not be compatible with this format.  MMDDYY: Month, date, year |
| PrintEnabled | Attribute | Bool | Whether to print the label |

Sample of Xml text: 

**3.5.16 Private Trace Code**

Command No.: PrivateTraceInfo

Control word compatible:

* + Update: bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase

Xml node name: PrivateTraceInfo

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | String | Index No. of trace code: bPro, bCom and RL00 shall be compatible with the number only. |
| PLU | Subnode | Int | Art. No. |
| DepartmentID | Subnode | Int | Department No. |
| CreationDate | Subnode | String | Creation time which shall be generated according to the character string of the time format. |
| TraceText | Subnode | String | Trace code |
| Description | Subnode | String | Description, in which the structure may be required to adjust. |
| TraceNo | Subnode | String | Trace code No., mnemonic symbol |

Description structure (description text of the trace code):

Xml node name: Description

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Language | Attribute | String | Language of text, which shall be valid to bMobile, bDrive, FreshBase and bPlus only. |
| Text | Text | String | Description contents of the trace code |

Note: The fields used by the cash scale, such as weight limit except the trace code shall be supplemented later.

Sample of Xml text: 

**3.5.17 Public Trace Code**

Command No.: PublicTraceInfo

Control word compatible:

* + Update: bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bCom, bPro, RL00, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase

Xml node name: PublicTraceInfo

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| TraceNo | Subnode | String | Traceability No., mnemonic symbol |
| CreationDate | Subnode | String | Creation time which shall be generated according to the character string of the time format. |
| TraceText | Subnode | String | Trace code |
| Description | Subnode | String | Description: Undetermined |

Note: The fields used by the cash scale, such as weight limit except the trace code shall be supplemented later.

Sample of Xml text: 

**3.5.18 Tax Rate**

Command No.: TaxRule

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: TaxRule

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Tax No. |
| Name | Subnode | String | Name |
| TaxPercent | Subnode |  | Content of the tax value: Multiple contents of tax values can be included. |

TaxPercent structure (content of tax value):

Xml node name: TaxPercent

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Attribute | String | Type:  InHouse: In store  ToGo: Takeout |
| Value | Text | Double | Percent of tax value |

Sample of Xml text: 

**3.5.19 Online Status of Electronic Scale**

Command No.: CheckOnline

Control word compatible:

* + Read: All types of scales

Xml node name: CheckOnline

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Status | Subnode | Int | Online status: 0: original status; 1: online; -1: offline |
| Details | Subnode | Int | Detailed information of online status, in which multiple Detail subnodes may be included in order to save the information of the online status in detail. |

Detail structure (information of the online status in detail):

Xml node name: Detail

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Subnode | Int | Type: 0: Ping status; 1: status of issuing the communication (not compatible yet); 2: status of registration package (not compatible yet) of the electronic scale. |
| Status | Subnode | Int | Online status: 0: original status; 1: online; -1: offline |

Sample of Xml text: 

**3.5.20 Department**

Command No.: Department

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: Department

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Department No. |
| Name | Subnode | String | Name |
| TraceablityFlag | Subnode | Bool | Enabling label of the trace code |
| TraceInfoID | Subnode | String | Information No. of the trace code |

**3.5.21 Item Group**

Command No.: ItemGroup

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: ItemGroup

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Department No. |
| Name | Subnode | String | Name |
| DepartmentID | Subnode | Int | Department No. which must be filled in bMobile/bDrive and bPlus, or shall be defaulted to 0. |
| TraceablityFlag | Subnode | Bool | Enabling label of the trace code |
| TraceInfoID | Subnode | String | Information No. of the trace code |
| TaxRuleIDs | Subnode |  | List of tax No. in which multiple TaxRuleID subnodes can be included in order to save the tax numbers of the item group. |

TaxRuleID structure (tax No.):

Xml node name: TaxRuleID

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| TaxRuleID | Text | Int | Tax No. |

**3.5.22 Classification**

Command No.: Category

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: Category

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Classification No. |
| Name | Subnode | String | Name |

**~~3.5.23 Customer List~~**

~~Command No.: Customer~~

~~Type of the scale compatible: bMobile,bDrive, bPlus~~

~~Control word compatible: Update~~

~~Xml node name: Customer~~

|  |  |  |  |
| --- | --- | --- | --- |
| ~~Xml node name~~ | ~~Type of Xml node~~ | ~~Type of data~~ | ~~Explanation~~ |
| ~~ID~~ | ~~Subnode~~ | ~~Int~~ | ~~Customer No.~~ |
| ~~Name~~ | ~~Subnode~~ | ~~String~~ | ~~Name~~ |

**3.5.24 Discount**

Command No.: Discount

Control word compatible:

* + Update: 8442, RL00, bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + Delete: 8442, RL00, bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: 8442, RL00, bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: 8442, RL00, bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: Discount

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | No. |
| Name | Subnode | String | Name |
| Type | Subnode | String | Type of discount:  Percentage: Percent  Absolute: Absolute value with which the bMobile, bDrive, bPlus, FreshBase are compatible. |
| Value | Text | Double | Discount |

**3.5.25 Fast Tender**

Command No.: FastTender

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase
  + ~~DeleteRange: bMobile, bDrive, bPlus, FreshBase~~

Xml node name: FastTender

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | No. |
| Amount | Subnode | Double | Value |
| Currency | Subnode | String | Unit of currency |

**3.5.26 Information affiliated of Stores**

Command No.: BranchText

Control word compatible:

* + Update: bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + Delete: bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + Read: bCom, bPro, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bCom, bPro, bMobile, bDrive, bPlus, FreshBase

Xml node name: BranchText

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Affiliated information No. |
| Language | Subnode | String | Language |
| Text | Subnode | String | Contents of the affiliated information |

Example of Xml:

**3.5.27 Information of Stores**

Command No.: StoreInfo

Control word compatible:

* + Update: bCom, bPro, RL00, i15, bTwin, bHigh, bMobile, bDrive, bPlus, FreshBase

Xml node name: StoreInfo

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| StoreID | Subnode | Int | Store No. which shall be invalid to bCom, bPro, i15, RL00, bTwin and bHigh. |
| StoreName | Subnode | String | Name |
| StoreLogo | Subnode | String | Image No. which shall be invalid to bCom, bPro, i15, RL00, bTwin and bHigh. |
| Align | Subnode | String | Alignment (invalid to bMobile, bDrive, bPlus and FreshBase)  Left: Left justify  Center: Center justify  Right: Right justify |
| Font | Subnode | Int | Font ranging from 1 to 29 shall be invalid to bMobile/bDrive, bPlus and bPro/bCom. |

Sample of Xml text:

**3.5.28 Firmware**

Command No.: Firmware

Control word compatible:

* + Update: All types of scales

Xml node name: Firmware

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| DataFile | Subnode | String | File name |

Sample of Xml text: 

**3.5.29 File**

Command No.: File

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Delete: bMobile, bDrive, bPlus, FreshBase

Xml node name: File

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| FileType | Subnode | String | Type:  Lang: Language  Font: Font  Image: Image  Conf: Configuration, default  Label: File with label  Unknown: Others |
| Name | Subnode | String | File name in the scale  The file name cannot be the absolute path when the type of the file is Lang, Font, Image, Conf and Label. |
| FileContent | Subnode | String | File content |
| DataFile | Subnode | String | The content shall be read from theh file name offered by the DataFile if the FileContent is blank, and the DataFile and the FileContent cannot occur at the same time. |

Sample of Xml text: 

**3.5.30 Configuration Information**

Command No.: ConfigValue

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase
  + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase

Xml node name: ConfigValue

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Name | Subnode | String | Name of the configuration item |
| Value | Subnode | String | Value of the configuration item |

Sample of Xml text:

**3.5.21 Payment Method**

Command No.: PaymentMethod

Control word compatible:

* + Update: i15, bMobile, bDrive, bPlus, FreshBase
  + Delete: i15, bMobile, bDrive, bPlus, FreshBase
  + Read: i15, bMobile, bDrive, bPlus, FreshBase
  + ReadAll: i15, bMobile, bDrive, bPlus, FreshBase
  + DeleteAll: i15, bMobile, bDrive, bPlus, FreshBase

Xml node name: PaymentMethod

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| ID | Subnode | Int | Payment method No. ranging from 1 to 99 |
| Name | Subnode | String | Name of payment method |
| Type | Subnode | Int | Type of the payment method taken  0: Manual input  1: Input by swiping card  2: Input by swiping card and verification by the server which are invalid to bMobile, bDrive, bPlus and FreshBase. |
| AmountInputType | Subnode | Int | Manual input method (valid under the manual input type only)  0: Without limit  1: Must be less than the maximum amount  2: Must be equal to the amount prescribed |
| AllowChange | Subnode | Bool | Whether to allow modification of amount, and valid only when the input method is not limited. |
| AllowGroupWhilePrinting | Subnode | Bool | Whether to allow to sum up to get the total amount during payment for multiple times. Valid to bMobile, bDrive, bPlus and FreshBase only. |
| AllowInRefundMode | Subnode | Bool | Whether to allow using when refunding, and input by swiping card shall be invalid; and valid to bMobile, bDrive, bPlus, and FreshBase only. |
| PayTimesLimit | Subnode | Int | Limit to using times:  0: Without limit  >0: The number of times limited to use |
| AllowCancel | Subnode | Bool | Allow cancelling, and valid to bMobile, bDrive, bPlus and FreshBase only. |
| DefaultAmount | Subnode | Int | Default amount to be paid:  0: The default displayed shall be the amount that should be paid.  1: 0 displayed.  Valid to bMobile, bDrive, bPlus and FreshBase only. |
| MaxAmount | Subnode | Double | Maximum amount to be paid, wherein 0: Without limit. Valid to bMobile, bDrive, bPlus and FreshBase only. |
| MinAmount | Subnode | Double | Minimum amount to be paid  Valid to bMobile, bDrive, bPlus and FreshBase only. |
| CardNumberInputMethod | Subnode | Int | Input type of card number:  0: No card number  1: Input the card number manually on the scale.  2: Input the card number on the external keyboard.  3: Input the card number in the way of scanning.  4: Input the card number by using the external card reader. |
| CreditCardSurcharge | Subnode | Double | Surcharge of credit card |
| TerminalConnection | Subnode | Int | Connecting types of the external equipment:  0: COM1 port  1: COM2口  1: COM2 port  2: USB  2: USB  3: 网络  3: Network |
| TerminalProtocol | Subnode | Int | TBD。 |
| PasswordType | Subnode | Int | Input type of password  0: No password  1: Input by using the keyboard.  2: Input on the electronic scale. |
| PrintCardNumber | Subnode | Bool | Whether to print the card number |
| PrintCardRemain | Subnode | Bool | Whether to print the remain. |
| AccType | Subnode | Int | Type of account  0: Pay by using deposit.  1: Pay by using integral. |
| KeyNo | Subnode | Int | Shortcut key No.; valid to i15 only. |
| Enabled | Subnode | Bool | Whether to enable (valid to bMobile, bDrive, bPlus and FreshBase only) |

Note: The structure needs adjustment so far, and i15 has not been implemented.

Sample of Xml text:

**3.5.32 Device Information**

Command No.: DeviceStatus

Control word compatible:

* + ReadAll: RL00, bPro, bCom, bMobile, bDrive, bPlus, FreshBase

Xml node name: DeviceStatus

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| DepartmentNo | Subnode | String | Department No. |
| ScaleNo | Subnode | String | Scale No. |
| ScaleIP | Subnode | String | IP of electronic scale |
| PrinterData | Subnode | String | Status of printer |
| LabelPrints | Subnode | String | Print status of label |
| BootVersion | Subnode | String | Version of Boot program |
| ApplicationVersion | Subnode | String | Version of application program |
| DeviceType | Subnode | String | Device type (compatible with bMobile, bDrive, bPlus and FreshBase only) |
| KeyboardVersion | Subnode | String | Version of the keyboard program |
| PrinterVersion | Subnode | String | Version of the printer program |
| ChargerVersion | Subnode | String | Version of battery program |
| ScaleMask | Subnode | String | Subnet mask |
| ScaleMac | Subnode | String | Mac address |
| RouterIP | Subnode | String | Router IP |
| RemoteIP | Subnode | String | Pipelining server IP |
| DataServer | Subnode | String | Online access server IP |
| DataSource | Subnode | String | Data source |
| ScaleType | Subnode | String | Type of electronic scale |
| PluRecords | Subnode | Int | Quantity of item information |
| ETRecords | Subnode | Int | Quantity of the additional texts |
| GraphicRecords | Subnode | Int | Quantity of images |
| NFRecords | Subnode | Int | Quantity of nutrition forms |
| FlowRecords | Subnode | Int | Flow records |
| LabelRecords | Subnode | Int | Quantity of labels |
| BarcodeRecords | Subnode | Int | Quantity of the barcodes |
| TraceInfoRecords | Subnode | Int | Quantity of the private trace codes |
| PTraceInfoRecords | Subnode | Int | Quantity of the public trace codes |
| KeyRecords | Subnode | String | Using condition of the keyboard |
| PluCapacity | Subnode | Int | Maximum capacity of the item information |
| ETCapacity | Subnode | Int | Maximum capacity of the additional text |
| GraphicCapacity | Subnode | Int | Maximum capacity of the image |
| NFCapacity | Subnode | Int | Maximum capacity of the nutrition form |
| FlowCapacity | Subnode | Int | Maximum capacity of the flow |
| LabelCapacity | Subnode | Int | Maximum capacity of the label |
| BarcodeCapacity | Subnode | Int | Maximum capacity of the barcode |
| TraceInfoCapacity | Subnode | Int | Maximum capacity of the Private Trace Code |
| PTraceInfoCapacity | Subnode | Int | Maximum capacity of the Public Trace Code |
| ETLength | Subnode | Int | Maximum length (number of bytes) of the ET text |
| CurrentPrintMiles | Subnode | Int | Current mileages printed |
| RemotePort | Subnode | Int | The port of the pipelining server |
| DataServerPort | Subnode | Int | The port of the data server |
| SPTimeRecords | Subnode | Int | Quantity of the period of times of the special price |
| SPTimeCapacity | Subnode | Int | Maximum capacity of the period of time of the special price |
| SPPluRecords | Subnode | Int | Quantity of the off-price merchandises |
| SPPluCapacity | Subnode | Int | Maximum capacity of the off-price merchandises |

Note: The structures in bMobile scale, bDrive scale, bPlus scale and FreshBase scale are in adjustment so far, and the field of only one part of the version information shall be available.

Sample of Xml text: 

**3.5.33 Execution of Command**

Command No.: Execute

Control word compatible:

* + Update: bMobile, bDrive, bPlus, FreshBase

Xml node name: Execute

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| DataFile | Subnode | String | File name |

Sample of Xml text:

**3.5.34 Pipelining Data**

Command No.: Ticket

Ticket structure (subtotal structure)

Xml node name: Ticket

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| FlowNo | Subnode | String | Serial number |
| ScaleID | Subnode | String | Scale No. |
| TicketNo | Subnode | Int | Ticket No. |
| SubNo | Subnode | Int | Receipt SubNo |
| DeviceID | Subnode | String | Device No. |
| IPPoint | Subnode | String | Scale IP and port information |
| PaperType | Subnode | Int | Label type with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale are not compatible.  0: Receipt  1: Label |
| SellType | Subnode | Int | Transaction type (number)  0: Normal  1. Cancel  2. Refund  9: Abnormal |
| ReceiptID | Subnode | String | Receipt serial number with which the bPlus scale, bMobile scale, bDrive scale and FreshBase scale shall be compatible only |
| ReceiptDate | Subnode | DateTime | Transaction date |
| Timestamp | Subnode | DateTime | Transaction timestamp with which the bPlus scale, the bMobile scale, bDrive scale and the FreshBase scale shall be compatible only. |
| SalesType | Subnode | String | Transaction type (enumeration):  Sales: Details  SubTotal: SubTotal  CashIn: CashIn  CashOut: CashOut  InvalidOperation: Abnormal  Refund: Refund |
| VoidDate | Subnode | DateTime | Cancelling time with which the bPlus scale, bMobile scale, bDrive scale and FreshBase scale shall be compatible with only. |
| UserID | Subnode | Int | Operator No. |
| CustomerID | Subnode | Int | Customer No. with which bPlus scale, bMobile scale, bDrive scale and FreshBase scale shall be compatible only. |
| BarcodeID | Subnode | Int | Barcode No. with which bPlus scale, bMobile scale, bDrive scale and FreshBase scale shall be compatible only. |
| Weight | Subnode |  | Import node, in which the information affiliated of weight shall be included. |
| PriceToPay | Subnode | Double | Total price to be paid |
| DiscountAmount | Subnode | Double | Total discount amount |
| DiscountID | Subnode | Int | Discount No. with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| DiscountPercentage | Subnode | Double | Total discount percent with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| DiscountAbsolute | Subnode | Double | Total discount absolute value with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| Change | Subnode | Double | Change with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| RountAmount | Subnode | Double | Round amount |
| Payment | Subnode |  | Details of non-cash payment, in which multiple Payment nodes can be included. |
| Registration | Subnode |  | Detailed list in which multiple Registration nodes can be included. |
| VAT | Subnode |  | Detailed tax deduction in which multiple VAT nodes can be included; the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |

Weight structure (weight information):

Xml node name: Weight

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| UnitOfMeasureCode | Attribute | String | Weight unit |
| Value | Text | Double | Weight |

Structure of Payment (non-cash payment):

Xml node name: Payment

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| FlowNo | Subnode | String | Serial number |
| PaymentID | Subnode | Int | Payment method No. |
| PaymentName | Subnode | String | Name of payment method |
| TradeTime | Subnode | DateTime | Trade time |
| PaymentValue | Subnode |  | Payment amount node in which the information of the payment amount shall be included. |
| RemainMoney | Subnode | Double | Money remained |
| CardNo | Subnode | String | Card No. |
| ScaleID | Subnode | Int | Scale No. |
| UserID | Subnode | Int | Operator No. |
| SeqNo | Subnode | Int | Payment No. |

PaymentValue structure (amount of the non-cash payment):

Xml node name: PaymentValue

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Currency | Attribute | String | Unit of currency |
| Value | Text | Double | Payment amount |

Registration structure (transaction details):

Xml node name: Registration

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| FlowNo | Subnode | String | Serial number |
| ScaleID | Subnode | String | Scale No. |
| TicketNo | Subnode | Int | Ticket No. |
| SubNo | Subnode | Int | Receipt SubNo |
| DeviceID | Subnode | String | Device No. |
| IPPoint | Subnode | String | Scale IP and port information |
| SellType | Subnode | Int | Transaction type (number)  0: Normal  1. Cancel  2. Refund  9: Abnormal |
| SalesType | Subnode | String | Transaction type (enumeration):  Sales: Details  SubTotal: SubTotal  CashIn: CashIn  CashOut: CashOut  InvalidOperation: Abnormal  Refund: Refund |
| PLU | Subnode |  | Item information in which other information of the item shall be included. |
| DepartmentID | Subnode | Int | Department No. |
| AlternativeItemID | Subnode | String | Art. No. |
| Description | Subnode | String | Name of article |
| TradeDate | Subnode | DateTime | Trade time |
| GroupID | Subnode | Int | Group No. with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| Count | Subnode | Int | Quantity |
| Weight | Subnode |  | Node of detailed weight information, in which other affiliated information of weight should be included. |
| BasePrice | Subnode |  | Node of trade price information, in which the other information of the price shall be included. |
| ExtraText | Subnode | String | Additional text |
| TareWeight | Subnode |  | Node of tare information, in whch the additional information of the tare should be included. |
| PaperType | Subnode | Int | Label type with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale are not compatible.  0: Receipt  1: Label |
| PriceToPay | Subnode | Double | Total price that should be paid |
| Amount | Subnode | Double | Total price |
| RoundAmount | Subnode | Double | Round amount |
| DiscountAmount | Subnode | Double | Total discount amount |
| DiscountID | Subnode | Int | Discount No. with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| DiscountPercentage | Subnode | Double | Total discount percent with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| DiscountAbsolute | Subnode | Double | Total discount absolute value with which the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |
| TraceCode | Subnode | String | The trace code |
| PrIntTime | Subnode | DateTime | Print time of receipt, which shall be identical to that of the trade time on the receipt. |
| VAT | Subnode |  | Tax deduction node in which other information of the tax rate shall be included; and the bPlus scale, the bMobile scale, the bDrive scale and the FreshBase scale shall be compatible only. |

PLU structure (item information)

Xml node name: PLU

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Type | Attribute | String | Type of item |
| Value | Text | Int | Art. No. |

Weight structure (detailed weight information):

Xml node name: Weight

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| UnitOfMeasureCode | Attribute | String | Weight unit |
| Value | Text | Double | Weight |

BasePrice structure (detailed price):

Xml node name: BasePrice

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| UnitPrice | Attribute | Double | Unit price |
| BasePrice | Attribute | Double | Base price |
| ValueTypeName | Attribute | String | Label of unit price |
| UnitOfMeasureCode | Attribute | String | Price unit |

TareWeight structure (detailed tare structure):

Xml node name: TareWeight

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| UnitOfMeasureCode | Attribute | String | Weight unit |
| Value | Text | Double | Weight |

VAT structure (detailed tax rate information)

Xml node name: VAT

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| VATID | Attribute | Int | Tax rate No. |
| Percent | Attribute | Double | Tax deduction percent |
| Value | Text | Double | Tax deducted |

Structure of TicketVAT (information of the subtotal tax rate)

Xml node name: VAT

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| VATID | Attribute | Int | Tax rate No. |
| VATValue | Attribute | Double |  |
| VATTurnover | Attribute | Double |  |
| Value | Text | Double | Tax deducted |

Sample of Xml text:

**3.5.35 Directory Information**

Command No.: Directory

Control word compatible:

* + Read: bMobile, bDrive, bPlus, FreshBase
  + ReadAll: bMobile, bDrive, bPlus, FreshBase

Xml node name: Directory

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Name | Attribute | String | Current directory path |
| Directory | Subnode |  | Sub-directory information, in which multiple Directory nodes can be included. |
| File | Subnode |  | File information in which multiple File nodes can be included. |

File structure (file information):

Xml node name: File

|  |  |  |  |
| --- | --- | --- | --- |
| Xml node name | Type of Xml node | Type of data | Explanation |
| Name | Attribute | String | File name |
| CRC | Attribute | String | CRC correction value of file |
| Size | Attribute | Int | Size of file |

1. **Explanation of Data Synchronization (Remote Access) Function**

**4.1 Explanation of Data Synchronization**

The data synchronization shall refer to saving of one part of the data of the PC by means of real synchronization after connecting the electronic scale and the software of the PC terminal in presence of network, therefore the operation of issuing a plenty of data can be saved, and the real-time and accurate data can be ensured. Moreover, the synchronization data view or form is required to set up in the database of the PC terminal when using the function, and see the Appendix for parameters setting of the database.

**4.2 Explanation of Database Structure**

The database structure shall include all fields used, and the fields shall be differentiated during using according to the type of the scale which is used actually.

**4.2.1 Item Data**

Name of form: v\_SK\_Item

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| dept\_no | integer | Department No. |
| category\_no | integer | Category No. |
| plu\_no | integer | PLU No. |
| item\_no | varchar(50) | Item No. |
| name\_text\_a | varchar(255) | Item name A |
| name\_text\_b | varchar(255) | Item name B |
| unit\_price\_a | numeric(18,8) | Item price A, the first unit price |
| price\_change\_flag\_a | smallint | Label A allowing override: 0: Not allowable 1: Allowable |
| discount\_flag\_a | smallint | Label A allowing discount  0: Not allowable 1: Allowable |
| plu\_count\_a | integer | Quantity A of items to be counted |
| price\_unit\_a | varchar(15) | Price unit A:  KGM: Kg  GRM: G LBR: Pound 500g: Jin 100g: 100g PCS: Counting |
| price\_currency\_a | varchar(15) | Currency unit A: CNY: RMB HKD: Hong Kong dollar USD: U.S. dollar GBP: Pound JPY: Yen EUR: Euro |
| price\_unit\_des\_a | varchar(50) | Unit A of items to be counted |
| unit\_price\_b | numeric(18,8) | Item price B, the second unit price |
| price\_change\_flag\_b | smallint | Label B allowing override: The range shall be identical with that of the Label A allowing override. |
| discount\_flag\_b | smallint | Label B allowing discount: The range shall be identical with that of the Label A allowing discount. |
| plu\_count\_b | integer | Quantity B of items to be counted |
| price\_unit\_b | varchar(15) | Price unit B: The range shall be identical with that of the price unit A. |
| price\_currency\_b | varchar(15) | Currency unit B: The range shall be identical with that of the currency unit A. |
| price\_unit\_des\_b | varchar(50) | Unit B of items to be counted |
| unit\_price\_c | numeric(18,8) | Item price C, the third unit price |
| price\_change\_flag\_c | smallint | Label C allowing override: The range shall be identical with that of the Label A allowing override. |
| discount\_flag\_c | smallint | Label C allowing discount: The range shall be identical with that of the Label A allowing discount. |
| plu\_count\_c | integer | Quantity C of items to be counted |
| price\_unit\_c | varchar(15) | Price unit C: The range shall be identical with that of the price unit A. |
| price\_currency\_c | varchar(15) | Currency unit C: The range shall be identical with that of the currency unit A. |
| price\_unit\_des\_c | varchar(50) | Unit C of items to be counted |
| unit\_price\_d | numeric(18,8) | Item price D, the fourth unit price |
| price\_change\_flag\_d | smallint | Label D allowing override: The range shall be identical with that of the Label A allowing override. |
| discount\_flag\_d | smallint | Label D allowing discount: The range shall be identical with that of the Label A allowing discount. |
| plu\_count\_d | integer | Quantity D of items to be counted |
| price\_unit\_d | varchar(15) | Price unit D: The range shall be identical with that of the price unit A. |
| price\_currency\_d | varchar(15) | Currency unit D: The range shall be identical with that of the currency unit A. |
| price\_unit\_des\_d | varchar(50) | Unit D of items to be counted |
| unit\_price\_e | numeric(18,8) | Item price E, the fifth unit price |
| price\_change\_flag\_e | smallint | Label E allowing override: The range shall be identical with that of the Label A allowing override. |
| discount\_flag\_e | smallint | Label E allowing discount: The range shall be identical with that of the Label A allowing discount. |
| plu\_count\_e | integer | Quantity E of items to be counted |
| price\_unit\_e | varchar(15) | Price unit E: The range shall be identical with that of the price unit A. |
| price\_currency\_e | varchar(15) | Currency unit E: The range shall be identical with that of the currency unit A. |
| price\_unit\_des\_e | varchar(50) | Unit E of items to be counted |
| label\_no\_a | integer | Label No. A |
| label\_no\_b | integer | Label No. B |
| label\_no\_c | integer | Label No. C |
| et\_no | integer | Additional text No. |
| tare\_no\_a | integer | Tare No. A |
| group\_no | integer | Group No. |
| tax\_rule\_no\_a | integer | Tax No. A |
| fix\_weight | numeric(18,8) | Fixed weight |
| fix\_weight\_unit | varchar(15) | Unit of the fixed weight: The range shall be identical with that of the price unit A. |
| packed\_date | varchar(50) | Packaging date |
| sell\_by\_date | varchar(50) | Expiration date |
| best\_before\_date | varchar(50) | Recommended date |
| packed\_date\_unit | varchar(10) | Unit of packaging date: Day: The number of days  Date: Date |
| sell\_by\_date\_unit | varchar(10) | Unit of expiration date: Day: The number of days  Hour: The number of hours Date: Date  Time: time |
| best\_before\_date\_unit | varchar(10) | Unit of the recommended date:  Day: The number of days Hour: The number of hours Date: Date  Time: time |
| is\_print\_packed\_date | smallint | Whether to print the packaging date: 0: No 1: Yes |
| is\_print\_sell\_by\_date | smallint | Whether to print the expiration date: 0: No 1: Yes |
| is\_print\_best\_before\_date | smallint | Whether to print the recommended date: 0: No 1: Yes |
| packed\_date\_format | varchar(10) | Printing format of the packaging date:  YYMMDD: Year, month, date  DDMMYY: Date, month, year  MMDD: Month, date MMDDYY: Month, date, year |
| sell\_by\_date\_format | varchar(10) | Printing format of the expiration date:  YYMMDD: Year, month, date  DDMMYY: Date, month, year  MMDD: Month, date  Days: The number of days MMDDYY: Month, date, year |
| best\_before\_date\_format | varchar(10) | Printing format of the recommended date:  YYMMDD: Year, month, date  DDMMYY: Date, month, year  MMDD: Month, date  Days: The number of days MMDDYY: Month, date, year |
| is\_traceable | smallint | Enable the traceability label: 0: Forbidden 1: Enabled |
| trace\_no | varchar(50) | Trace No. |
| price\_rule\_no | integer | Price rule No. |
| barcode\_no | integer | Barcode No. |
| nutrition\_no | integer | Nutrition form No. |
| graphic\_no\_a | varchar(50) | Image No. A |
| graphic\_no\_b | varchar(50) | Image No. B |
| graphic\_no\_c | varchar(50) | Image No. C |

**4.2.2 Additional Text**

Name of form: v\_SK\_ExtraText

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| dept\_no | integer | Department No. |
| et\_no | integer | ET No. |
| text\_a | text | Content A |
| font\_size\_a | integer | Font size No. A: 1-29 |
| text\_b | text | Content B |
| font\_size\_b | integer | Font size No. B: 1-29 |
| text\_c | text | Content C |
| font\_size\_c | integer | Font size No. C: 1-29 |
| text\_d | text | Content D |
| font\_size\_d | integer | Font size No. D: 1-29 |
| text\_e | text | Content E |
| font\_size\_e | integer | Font size No. E: 1-29 |
| text\_f | text | Content F |
| font\_size\_f | integer | Font size No. F: 1-29 |
| text\_g | text | Content G |
| font\_size\_g | integer | Font size No. G: 1-29 |
| text\_h | text | Content H |
| font\_size\_h | integer | Font size No. H: 1-29 |

**4.2.3 Barcode**

Name of form: v\_SK\_Barcode

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| barcode\_no | integer | Barcode No. |
| barcode\_name | varchar(50) | Barcode name |
| barcode\_type | varchar(50) | Type of barcode  EAN8:  EAN13:  Code25N: Code25 narrow code  Code25W: Code25 broad code  EAN-128:  EAN13+5:  UPC-A Code128 Interleaved2Of5 QRCode: Two-dimensional code |
| barcode\_format | varchar(500) | Format of barcode |
| parity | varchar(10) | Verification mode |
| offset\_item\_no | integer | Offset of Art. No. |
| offset\_total | integer | Offset of total price |
| offset\_weight | integer | Offset of weight |
| offset\_count | integer | Offset of quantity |
| offset\_price | integer | Offset of unit pice |

**4.2.4 Tare**

Name of form: v\_SK\_Tare

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| tare\_no | integer | Tare No. |
| tare\_weight | numeric(18,8) | Tare value |
| unit\_of\_measure | varchar(15) | Unit: GRM: g  KGM: kg LBR: Pound PCT: Percentage |
| tare\_name | varchar(50) | Name |

**4.2.5 Operator**

Name of form: v\_SK\_User

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| vendor\_no | integer | Operator No. |
| vendor\_name | varchar(50) | Name of operator |
| vendor\_key | integer | Operator key |
| vendor\_pwd | integer | Password |
| is\_fixed | smallint | Whether to lock the operator key:  0: No 1: Yes |
| access\_domain | varchar(50) | limits of authority of operator |

**4.2.6 Department**

Name of form: v\_SK\_Department

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| dept\_no | integer | Department No. |
| dept\_name | varchar(50) | Name of department |
| is\_traceable | smallint | Whether is traceable: 0: Forbidden 1: Enable |
| trace\_no | varchar(50) | Tracing No. |

**4.2.7 Item Group**

Name of form: v\_SK\_ItemGroup

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| group\_no | integer | Group No. |
| group\_name | varchar(50) | Name of group |
| tax\_rule\_no | integer | VAT No. |
| is\_traceable | smallint | Whether is traceable: 0: Forbidden 1: Enable |
| trace\_no | varchar(50) | Tracing No. |

**4.2.8 Classification**

Name of form: v\_SK\_Category

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| category\_no | integer | Category No. |
| category\_name | varchar(50) | Category name |

**4.2.9 Discount**

Name of form: v\_SK\_Discount

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| discount\_no | integer | Discount No. |
| discount\_name | varchar(50) | Name of discount |
| discount\_value | numeric(18,8) | Discount value |
| discount\_type | varchar(15) | Discount type:  Percentage: Percentage  Absolute: Absolute value |

**4.2.10 Payment Method**

Name of form: v\_SK\_PaymentMethod

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| payment\_no | integer | Payment method No. |
| payment\_name | varchar(100) | Name of payment method |
| is\_enabled | smallint | Whether to enable:  0: No. 1: Yes |
| allow\_change | smallint | Whether to allow modification of amount 0: No. 1: Yes |
| allow\_group\_in\_printing | smallint | Whether to allow calculation of total amount after combination during paying for multiple times: 0: No. 1: Yes |
| allow\_in\_refund\_mode | smallint | Whether to allow usage when refunding: 0: No. 1: Yes |
| allow\_cancel | smallint | Whether to allow cancelling: 0: No. 1: Yes |
| amount\_input\_type | integer | Manual input method 0: Without limit  1: Must be less than maximum amount  2: Must be equal to amount prescribed |
| default\_amount | integer | Default amount 0: The default displayed shall be the amount that should be paid 1: 0 displayed |
| pay\_times\_limit | integer | Limit to using times 0: Without limit >0: Number of times limited |
| max\_amount | numeric(18,8) | Maximum amount  0: Without limit |
| min\_amount | numeric(18,8) | Minimum amount |

**4.2.11 Private Trace Code**

Name of form: v\_SK\_PrivateTraceInfo

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| trace\_no | varchar(50) | Tracing No. |
| short\_code | varchar(50) | Mnemonic symbol |
| lot\_no | varchar(50) | Trace code |
| generate\_datetime | timestamp | Generation time |
| description | varchar(255) | Description |

**4.2.12 Public Trace Code**

Name of form: v\_SK\_PublicTraceInfo

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| short\_code | varchar(50) | Mnemonic symbol |
| lot\_no | varchar(50) | Trace code |
| generate\_datetime | timestamp | Generation time |
| description | varchar(255) | Description |

**4.2.13 Tax Rate**

Name of form: v\_SK\_TaxRule

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| tax\_no | integer | Tax No. |
| tax\_name | varchar(50) | Tax name |
| tax\_percent\_a | numeric(18,8) | InHouse tax rate |
| tax\_percent\_b | numeric(18,8) | ToGo tax rate |

**4.2.14 Fast Tender**

Name of form: v\_SK\_FastTender

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| tender\_no | integer | Tender No. |
| tender\_value | numeric(18,8) | Tender value |

**4.2.15 Special Price**

Period of time of the special price: v\_SK\_SpecialPrice

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| sp\_no | integer | Special price No. |
| sp\_name | varchar(100) | Name of special price |
| use\_date | smallint | Whether to use the date:  0: No. 1: Yes |
| start\_date | varchar(10) | Starting date with format of "YYYY-MM-DD" |
| end\_date | varchar(10) | Ending date with format of "YYYY-MM-DD" |
| start\_time | varchar(8) | Starting time with format of "HH:mm:ss" |
| end\_time | varchar(8) | Ending time with format of "HH:mm:ss" |

Information of off-price merchandises: v\_SK\_SpecialPrice\_Target

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| sp\_no | varchar(36) | Special price No. |
| plu\_no | integer | Item No. |
| dept\_no | integer | Department No. |
| unit\_sprice | numeric(18,8) | Special price |

**4.2.16 Promotion Rule**

Rule of promotion rule: v\_SK\_PromotionRule

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| promotion\_no | integer | Promotion rule No. |
| promotion\_name | varchar(100) | Name of promotion rule |

Promotion date: v\_SK\_Promotion\_Date

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| promotion\_no | integer | Promotion rule No. |
| date\_no | integer | No. |
| start\_date | varchar(10) | Format: "YYYY-MM-DD" |
| end\_date | varchar(10) | Format: "YYYY-MM-DD" |

Promotion time: v\_SK\_Promotion\_Time

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| date\_no | integer | Date No. |
| start\_time | varchar(8) | Starting time with format of "HH:mm:ss" |
| end\_time | varchar(8) | Ending time with format of "HH:mm:ss" |

Promotion condition: v\_SK\_Promotion\_Condition

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| promotion\_no | integer | Promotion rule No. |
| condition\_no | integer | Condition No. |
| dept\_no | integer | Department No. |
| condition\_type | varchar(20) | Type of condition PLU: Item Category: Category of item  Group: Item group SalesTotal: Subtotal |
| condition\_value\_type | varchar(20) | Type of condition value Weight: Weight  Count: Quantity Price: Total price  SalesTotal: Subtotal |
| condition\_value\_operand | varchar(10) | Operating type of condition value Min: Minimum  Per: Unit price |
| condition\_value | numeric(18,8) | Condition value |

Promotion target: v\_SK\_Promotion\_Target

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| promotion\_no | integer | Promotion rule No. |
| target\_no | integer | Target No |
| dept\_no | integer | Department No. |
| target\_type | varchar(20) | PLU: Item Category: Category of item  Group: Item group SalesTotal: Subtotal |
| target\_value\_type | varchar(20) | Type of target value:  SpecialPrice: Special price  AbsoluteDiscount: Absolute discount  PercentDiscount: Percentage of discount Gift: Subtotal  StaggerPrice: Stagger price BuyXGetY: Buy X and get Y free |
| target\_value | numeric(18,8) | Target value |

1. **Explanation of Pipelining Recycling Function**

**5.1 Explanation of Pipelining Recycling**

The electronic scale shall save the detailed trade data in the scale into the PC software in real time actively with the software of the PC terminal by using connection of the network in presence of the pipelining recycling function, see the appendix for setting of database parameters.

**5.2 Explanation of Database Structure**

The database structure shall include all fields used, and the fields shall be differentiated during using according to the type of the scale which is taken practically.

**5.2.1 Data in Detail**

Name of form: Detail

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| FlowNo | String | Trade No. (unique number generated by the system automatically) |
| TicketNo | Int | Receipt No. |
| SubNo | Int | subNo. of receipt |
| TradeTime | DateTime | Trade time |
| DeviceID | String | Device No. |
| ScaleNo | Int | Scale No. |
| IPPoint | String | IP address and port No. |
| PluNo | Int | PLU No. |
| PluName | String | Name of item |
| ArticleNo | String | Art. No. |
| Weight | Double | Weight (g) |
| Quantity | Int | Quantity (Pcs.) |
| UnitPrice | Double | Unit price |
| OldPrice | Double | Original price |
| TotalPrice | Double | Total price |
| OperatorNo | Int | Operator No. |
| SellType | Int | Trade type (0: Normal; 1: Cancel; 2: Refund; 9: Abnormal) |
| Payment | Int | Pipelining type (0: Details; 1: Subtotal; 2: CashIn; 3: CashOut, 10: ON/OFF pipelining, etc.) |
| PluType | Int | PLU type |
| PaperType | Int | Type of label (0: Receipt; 1: Label) |
| StoreType | Int | Type of business |
| SubShopNo | String | Number of target store to be distributed |
| GrossWeight | Double | Manual input of weight tared |
| PrintTime | DateTime | Printing time of label |
| Discount | Int | Discount sign |
| TareType | Int | Type of tare |
| Tare | Int | Tare |
| PriceFlag | Int | Type of price  0: Not used  1: Member price |
| TraceCode | String | Trace code |
| BatchID | String | Batch No |
| NumberBak1 | Double | Reserved number field 1 |
| NumberBak2 | Double | Reserved number field 2 |
| NumberBak3 | Double | Reserved number field 3 |
| StringBak1 | String | Reserved character field 1 |
| StringBak2 | String | Reserved character field 2 |
| StringBak3 | String | Reserved character field 3 |
| DateBak1 | DateTime | Reserved date field 1 |
| DateBak2 | DateTime | Reserved date field 2 |
| DateBak3 | DateTime | Reserved date field 3 |

**5.2.2 Non-cash Payment**

Name of form: NoCashDetail

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| FlowNo | String | Trade No. (unique number generated by the system automatically) |
| TicketNo | Int | Receipt No. |
| SubNo | Int | subNo. of receipt |
| TradeTime | DateTime | Trade time |
| DeviceID | String | Device No. |
| ScaleNo | Int | Scale No. |
| IPPoint | String | IP address and port No. |
| OperatorNo | Int | Operator No. |
| SellType | Int | Trade type (0: Normal; 1: Cancel; 2: Refund; 9: Abnormal) |
| Payment | Int | Pipelining type (0: Details; 1: Subtotal; 10: ON/OFF pipelining) |
| PluType | Int | PLU type |
| PaperType | Int | Type of label (0: Receipt; 1: Label) |
| Discount | Int | Discount sign |
| PayTypeNo | Int | Payment method No. |
| PayMoney | Double | Amount that should be paid corresponding to the payment method |
| RemainMoney | Double | Money remained corresponding to the payment method |
| SeqNo | Int | Payment No. |
| CardNo | String | Card No. |
| NumberBak1 | Double | Reserved number field 1 |
| NumberBak2 | Double | Reserved number field 2 |
| NumberBak3 | Double | Reserved number field 3 |
| StringBak1 | String | Reserved character field 1 |
| StringBak2 | String | Reserved character field 2 |
| StringBak3 | String | Reserved character field 3 |
| DateBak1 | DateTime | Reserved date field 1 |
| DateBak2 | DateTime | Reserved date field 2 |
| DateBak3 | DateTime | Reserved date field 3 |

**5.2.3 Structure of Subtotal**

Name of form: Total

|  |  |  |
| --- | --- | --- |
| Name of row | Type | Explanation of field |
| FlowNo | String | Trade No. (unique number generated by the system automatically) |
| TicketNo | Int | Receipt No. |
| SubNo | Int | subNo. of receipt |
| TradeTime | DateTime | Trade time |
| DeviceID | String | Device No. |
| ScaleNo | Int | Scale No. |
| IPPoint | String | IP address and port No. |
| OperatorNo | Int | Operator No. |
| RealSum | Double | Subtotal |
| CardDiscountSum | Double | Discount amount of member card |
| NoCashSum | Double | Total amount of non-cash payment |
| CashSum | Double | Cash paid |
| TotalDiscountSum | Double | Discount amount of total price |
| TotalRoundSum | Double | Rounded amount of total price |
| ActualPay | Double | Actual amount paid |
| DiscountPay | Double | Amount of profit concession |
| VipNo | Int | VIP No. |
| VipTotalDot | Int | Total integral of VIP card |
| VipVoidDot | Int | Total integral consumed of VIP card |
| Payment | Int | Pipelining type (0: Details; 1: Subtotal; 10: ON/OFF) |
| Discount | Int | Discount sign |
| NumberBak1 | Double | Reserved number field 1 |
| NumberBak2 | Double | Reserved number field 2 |
| NumberBak3 | Double | Reserved number field 3 |
| StringBak1 | String | Reserved character field 1 |
| StringBak2 | String | Reserved character field 2 |
| StringBak3 | String | Reserved character field 3 |
| DateBak1 | DateTime | Reserved date field 1 |
| DateBak2 | DateTime | Reserved date field 2 |
| DateBak3 | DateTime | Reserved date field 3 |

* **Appendix**

1. **Status Parameters and Parameters Prescribed**

**1.1 Main Program**

**1.1.1 General Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| MTScaleKey.Path | string | Path of MTScaleKey application program | Readable, and setting unsupported |
| MTScaleKey.Version | string | Version No. MTScaleKey | Readable, and setting unsupported |
| CommonLib.Version | string | Version No. of common library | Readable, and setting unsupported |
| MTScaleKey.GeneralSettings.DeviceID | string | Device No. of MTScaleKey | No |
| MTScaleKey.GeneralSettings.MonitorPort | int | Port No. of monitoring thread | No |
| MTScaleKey.GeneralSettings.APIPort | int | Number of port connected with the API interface | No |
| MTScaleKey.GeneralSettings.SaveTaskResultCount | int | Quantity saved of maximum task results | No |
| MTScaleKey.GeneralSettings.SaveTaskTime | int | Maximum storing time of task on the basis of day | No |
| MTScaleKey.GeneralSettings.ServerIP | string | IP of service end connected with the API interface | No |
| MTScaleKey.GeneralSettings.MaxPageNum | int | Maximum of data transmitted in one time | No |
| MTScaleKey.LogOutputPort | int | TCP output port of MTScaleKey log | Readable, and setting unsupported |
| MTScaleKey.GeneralSettings.Charset | gb2312:  gbk: Chinese  windows-1252: French, German  windows-1251: Russian  windows-1254:  windows-1254:  Turkish  Windows-1256:  Arabic Windows-1256: | Encoding character set of system | No |

**1.1.2 Log Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| MTScaleKey.LogSettings.LogLevel | "ALL"  "DEBUG"  "INFO"  "WARNING"  "ERROR"  "FATAL"  "OFF" | Threshold of log record, and the log having the threshold less than this threshold shall not be recorded. | No |
| MTScaleKey.LogSettings.MaxLogFileSize | int | Maximum of each log file, with unit of MB. | No |
| MTScaleKey.LogSettings.RollingDays | int | Maximum duration for storage of log on the basis of day. | No |

**1.1.3 User Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| MTScaleKey.UserSettings.ETLinkPLU | Bool, with default of false. | Indicate whether the Plu No. is identical with ET No.. | No |
| MTScaleKey.UserSettings.TraceIndexFormat | String, with default of PPPPPPPPPT. | Index format of trace code | No |
| MTScaleKey.UserSettings.DefaultUnitOfMeasure | The enumerated value of weight unit, with default of KGM. | Default weight unit | No |
| MTScaleKey.UserSettings.CODName | string | Customer No. | No |
| MTScaleKey.UserSettings.Password | string | Communication password | No |
| MTScaleKey.UserSettings.FixWeightUsage | 0: Fixed weight; 1: The unit of the items to be counted, with default of 0. | Usage of fixed weight field | No |
| MTScaleKey.UserSettings.DecimalDigits | int | Decimal places of amount | No |
| MTScaleKey.UserSettings.UseDept | The default of bool is false. | Whether to use the department No. | No |
| MTScaleKey.UserSettings.ETMethod | 0: Not to fragment  1: Fragment, with default of 0. | Whether ET will be subjected to fragmentation. | No |

**1.1.4 Setting of Electronic Scale**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| MTScaleKey.ScaleSettings.Update | List of electronic scales | Update the list of electronic scales and implement updating according to the DeviceID offered of the electronic scale. | No (compatible with setting, Type = 99) |
| MTScaleKey.ScaleSettings.Delete | List of electronic scales | Delete the scale specified in the list of the electronic scales, and implement deletion according to the DeviceID offered of the electronic scale. | No (compatible with setting, Type = 99) |
| MTScaleKey.ScaleSettings.DeleteAll | Not required | Delete all electronic scales | No (compatible with setting, Type = 99) |
| MTScaleKey.ScaleSettings.ReadAll | Not required | Read all electronic scales | No (compatible with setting, Type = 95) |

**1.2 Data Transmission**

|  |  |  |
| --- | --- | --- |
| Name of parameter field | Value | Explanation |
| TransferData.Running | "true"  "false" | Whether the data transmission component is in running. |

**1.3 Recycling Pipelining**

|  |  |  |
| --- | --- | --- |
| Name of parameter field | Value | Explanation |
| ReceiveTrade.Running | "true"  "false" | Whether the recycling pipelining component is in running. |

**1.3.1 General Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| ReceiveTrade.GeneralSettings.Used | "true"  "false" | Whether to use the pipelining recycling function | No |
| ReceiveTrade.GeneralSettings.UDPPort | int | UDP port No. used by pipelining recycling | No |
| ReceiveTrade.GeneralSettings.TCPPort | int | TCP port No. used by pipelining recycling | No |

**1.3.2 Setting of Database**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| ReceiveTrade.DatabaseSettings.Name | string | Sqlite: "Sqlite"  SqlServer:“SqlServer”  PostgreSQL: “PostgreSQL”  Type of database  Type and value compatible so far:  Sqlite: "Sqlite"  SqlServer:“SqlServer”  PostgreSQL: “PostgreSQL”  Wherein Sqlite supports connection with the file of Trade.sqlite database under the default Database folder only. | No |
| ReceiveTrade.DatabaseSettings.Server | string | Name of database server | No |
| ReceiveTrade.DatabaseSettings.Port | Int | Connecting port of the database | No |
| ReceiveTrade.DatabaseSettings.Database | string | Name of database | No |
| ReceiveTrade.DatabaseSettings.User | string | User name | No |
| ReceiveTrade.DatabaseSettings.Password | string | Password | No |

**1.4 Online Detection**

|  |  |  |
| --- | --- | --- |
| Name of parameter field | Value | Explanation |
| CheckOnline.Running | "true"  "false" | Whether the online detection component is in running. |

**1.4.1 General Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| CheckOnline.GeneralSettings.Used | "true"  "false" | Whether to use online detection. | No |
| CheckOnline.GeneralSettings.IntervalTime | int | Inspect interval time of online status of the scale, with unit of minute. | No |
| CheckOnline.GeneralSettings.Timeout | int | Timeout of each try to connect with the scale. | No |
| CheckOnline.GeneralSettings.RetryTimes | int | Number of retry times of connecting with the scale | No |
| CheckOnline.GeneralSettings.MaxThread | int | Maximum thread count subjected to concurrent connection. | No |
| CheckOnline.GeneralSettings.AutoCheck | "true"  "false" | Whether to implement automatic detection. | No |

**1.5 Data Synchronization (Remote Access)**

|  |  |  |
| --- | --- | --- |
| Name of parameter field | Value | Explanation |
| RetrieveData.Running | "true"  "false" | Whether the data synchronization component is in running. |

**1.5.1 General Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| RetrieveData.GeneralSettings.Used | "true"  "false" | Whether to use data synchronization. | No |
| RetrieveData.GeneralSettings.UDPPort | int | UDP port No. applied to data synchronization. | No |
| RetrieveData.GeneralSettings.TCPPort | int | TCP port No. applied to online access. | No |

**1.5.2 Setting of Database**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| RetrieveData.DatabaseSettings.Name | string | Sqlite: "Sqlite"  SqlServer:“SqlServer”  PostgreSQL: “PostgreSQL”  Type of database  Type and value compatible so far:  Sqlite: "Sqlite"  SqlServer:“SqlServer”  PostgreSQL: “PostgreSQL”  Wherein Sqlite supports connection with the file of Trade.sqlite database under the default Database folder only. | 否  No |
| RetrieveData.DatabaseSettings.Server | string | Name of database server | No |
| RetrieveData.DatabaseSettings.Port | int | Port No. of database | No |
| RetrieveData.DatabaseSettings.Database | string | Name of database | No |
| RetrieveData.DatabaseSettings.User | string | User name | No |
| RetrieveData.DatabaseSettings.Password | string | Password | No |

**1.5.3 Setting of Data Type**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| RetrieveData.DataSettings.Item.Batch | "true"  "false" | Batch synchronization of data  Type: Item information | No |
| RetrieveData.DataSettings.ExtraText.Batch | "true"  "false" | Batch synchronization of data  Type: Additional text | No |
| RetrieveData.DataSettings.Barcode.Batch | "true"  "false" | Batch synchronization of data  Type: Barcode | No |
| RetrieveData.DataSettings.Tare.Batch | "true"  "false" | Batch synchronization of data  Type: Tare | No |
| RetrieveData.DataSettings.User.Batch | "true"  "false" | Batch synchronization of data  Type: Operator | No |
| RetrieveData.DataSettings.Department.Batch | "true"  "false" | Batch synchronization of data  Type: Department | No |
| RetrieveData.DataSettings.ItemGroup.Batch | "true"  "false" | Batch synchronization of data  Type: Item group | No |
| RetrieveData.DataSettings.Category.Batch | "true"  "false" | Batch synchronization of data  Type: | No |
| RetrieveData.DataSettings.Discount.Batch | "true"  "false" | Batch synchronization of data  Type: Discount | No |
| RetrieveData.DataSettings.PaymentMethod.Batch | "true"  "false" | Batch synchronization of data  Type: Payment method | No |
| RetrieveData.DataSettings.PrivateTraceInfo.Batch | "true"  "false" | Batch synchronization of data  Type: Private trace code | No |
| RetrieveData.DataSettings.PublicTraceInfo.Batch | "true"  "false" | Batch synchronization of data  Type: Public trace code | No |
| RetrieveData.DataSettings.TaxRule.Batch | "true"  "false" | Batch synchronization of data  Type: Tax rate | No |
| RetrieveData.DataSettings.FastTender.Batch | "true"  "false" | Batch synchronization of data  Type: Fast tender | No |
| RetrieveData.DataSettings.SpecialPrice.Batch | "true"  "false" | Batch synchronization of data  Type: Special price | No |
| RetrieveData.DataSettings.PromotionRule.Batch | "true"  "false" | Batch synchronization of data  Type: Promotion | No |
| RetrieveData.DataSettings.Item.Single | "true"  "false" | Synchronization of individual data  Type: Item information | No |
| RetrieveData.DataSettings.ExtraText.Single | "true"  "false" | Synchronization of individual data  Type: Additional text | No |
| RetrieveData.DataSettings.Barcode.Single | "true"  "false" | Synchronization of individual data  Type: Barcode | No |
| RetrieveData.DataSettings.Tare.Single | "true"  "false" | Synchronization of individual data  Type: Tare | No |
| RetrieveData.DataSettings.Department.Single | "true"  "false" | Synchronization of individual data  Type: Department | No |
| RetrieveData.DataSettings.ItemGroup.Single | "true"  "false" | Synchronization of individual data  Type: Item group | No |
| RetrieveData.DataSettings.Category.Single | "true"  "false" | Synchronization of individual data  Type: Classification | No |
| RetrieveData.DataSettings.PrivateTraceInfo.Single | "true"  "false" | Synchronization of individual data  Type: Private trace code | No |
| RetrieveData.DataSettings.TaxRule.Single | "true"  "false" | Synchronization of individual data  Type: Tax rate | No |
|  |  |  |  |

**1.6 WAN Module**

|  |  |  |
| --- | --- | --- |
| Name of parameter field | Value | Explanation |
| WANService.Running | "true"  "false" | Whether the WAN module is in running. |

* + 1. **常规设置**

**1.6.1 General Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| WANService.GeneralSettings.Used | "true"  "false" | Whether to use the WAN module. | No |
| WANService.GeneralSettings.RegisterPort | int | Port of monitoring register package | No |
| WANService.GeneralSettings.TCPPort | int | TCP port monitored | No |
| WANService.GeneralSettings.TCPMaxConn | int | Maximum connection number of TCP | No |
| WANService.GeneralSettings.ServerIP | string | Server IP of DNS register package | No |
| WANService.GeneralSettings.ServerPort | int | Server port No. of DNS register package | No |
| WANService.GeneralSettings.IntervalTime | int | Interval time for sending the DNS register package, with unit of minute. | No |

**1.7 Automatic Explore of Device**

|  |  |  |
| --- | --- | --- |
| Name of parameter field | Value | Explanation |
| DeviceExplore.Running | "true"  "false" | Whether the automatic explore component is in running. |

**1.7.1 General Settings**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of parameter field | Value | Explanation | Resarting after setting |
| DeviceExplore.GeneralSettings.Used | "true"  "false" | Whether to use the automatic explore of the device. | No |
| DeviceExplore.GeneralSettings.AutoExplore | "true"  "false" | Automatic explore or manual explore | No |
| DeviceExplore.GeneralSettings.IntervalTime | int | Interval time of automatic explore, with unit of minute | No |
| DeviceExplore.GeneralSettings.UDPPort | int | UDP port used by the automatic explore function | No |
| DeviceExplore.GeneralSettings.ManualExploreWaitTime | int | Time of waiting response of the scale when manual explore is taken, with unit of second | No |

* **History of Version**

|  |  |  |
| --- | --- | --- |
| Version/status | Revision date | Description of revision |
| 1.0 | 2014/6/8 | Creation of file |
| 1.1 | 2014/7/11 | Explanation of supplemental agreement |
| 1.2 | 2014/7/24 | Amended error description in ConnectParams and added return value of ServiceError to ReturnCode. |
| 1.3 | 2014/8/7 | Amended some descriptive errors in the data structure and updated the sample file. |
| 1.4 | 2014/8/11 | Amended and updated errors in the sample file, and altered the type of the password and the specification of the password content. |
| 1.5 | 2014/8/27 | Amended and updated the specification of some content. |
| 1.6 | 2014/9/3 | Amended the format specification of the printing time of the date in the item data and added the specification of the placeholder in the barcode format. |
| 1.6 | 2014/10/22 | Added the structure of the label format and the nodes of the ET name and the barcode name. |
| 1.7 | 2014/10/30 | Adjusted the description of the scale type and added the access support of the item data and the additional text protocol. |
| 1.8 | 2014/11/11 | Adjusted the description of the scale type and the structure of the label No. in the item data and added the tare structure. |
| 1.9 | 2014/12/1 | Added the structure of the header, the footer, the advertising text, mobile caption and the operator information. |
| 1.10 | 2014/12/5 | Amended the structures of the item price and the tare. |
| 1.11 | 2014/12/9 | Added extra specification of partial structure. |
| 1.12 | 2014/12/15 | Amended the barcode type, the length of bCom/bPro password, the control words of the preset keys and the default unit of tare, and added DataNotSupportError in the ReturnCode. |
| 1.13 | 2015/1/13 | Amended the limit to the tare No. and the description of the placeholder of the barcode. |
| 1.14 | 2015/1/20 | Amended the limit to the tare No. and the description of the placeholder of the barcode. |
| 1.15 | 2015/1/21 | Added the structural specification of tax rate (TaxRule). |
| 1.16 | 2015/2/3 | Added the OutputFile field to the Task structure and the TaskResult structure. |
| 1.17 | 2015/3/3 | Adjusted the structures of item data, the tare, the operator information, the private trace code and the public trace code, and added the structures of the department, the item group, the classification, the customer list, the discount, the fast tender, the information of the branch store and the store information. |
| 1.18 | 2015/3/6 | Adjusted the structures of the item data and the universal label and added the calling of the interface of task cancelled. |
| 1.19 | 2015/3/17 | Added the calling of the status inquiry interface. |
| 1.20 | 2015/3/19 | Added the setting parameters and closed the calling of the process interface. |
| 1.21 | 2015/3/26 | Amended the structures of the operator and the fast tender. |
| 1.22 | 2015/3/27 | Amended the description of the scale type. |
| 1.23 | 2015/4/14 | Altered the specification of the operator information, added the structures of special price, promotion and configuration information. |
| 1.24 | 2015/4/16 | Added the task type of the automatic explore device. |
| 1.25 | 2015/4/17 | Altered the part in all data contents about supports of the electronic scale and the control word, in which the content with strikethrough line had not been implemented temporarily. Deleted the contents about the information of the branch stores and the customer list, and added the setting parameters information synchronizing with the list of the electronic scales in the status parameters. |
| 1.26 | 2015/4/20 | Alter some limiting description in the item information, and added the usage field of the fixed weight in the command word information in order to match with setting and usage in the scale.  Added the signs of updating the trace code in the item or not to the command word information.  Adjusted the structure of the special price information. |
| 1.27 | 2015/4/27 | Altered the header, the footer and the description during issuing the password. |
| 1.28 | 2015/5/4 | Added the structures of the payment method and the using information of the electronic scale.  Adjusted the structure of the store information.  Adjusted the structure of the task execution result information; added the single communication progress and status in the command word result information; added the command execution progress and the status to the result information of the electronic scale; and added the command execution progress and the status to the information about the setting result. |
| 1.29 | 2015/5/5 | Added relevant settings of MTScaleKey to the setting parameters inquiry. |
| 1.30 | 2015/5/11 | Remove the support of all deletions of the tare of the old scale.  Added the range deletion support of the item data of bPro and bCom.  Newly added the task information, the information of the electronic scale and the additional configuration information in the command word information in order to facilitate expansion in the future.  Newly added the error code of one part of task.  Altered the description of the discount information. |
| 1.31 | 2015/5/19 | Altered the structure of the task result information.  Altered the information in printing the date.  Amended the name of the payment method structure.  Altered the structure of the information (device information) about usage of the electronic scale.  Removed the function of DeleteRange temporarily. |
| 1.32 | 2015/5/26 | Added the option of implementing automatic detection or not to the CheckOnlie of the status parameter.  Altered the deletion if the i15 was not compatible with the tare.  Altered all deletions if the bPro was not compatible with the barcode.  Altered the specification of type option of the automatic adaptive scale. |
| 1.33 | 2015/6/2 | Added the types of Skipper 5000 scale and Skipper 7000 scale. |
| 1.34 | 2015/6/9 | Altered the description with which the electronic scale was compatible in the special price.  Added the type of printing date: time. |
| 1.35 | 2015/6/30 | Added all deletions of the payment method.  Added the deletion of the special price.  Altered the field name of the tax No. of the item group.  Removed the description of the setting parameters to the appendix.  Altered the structure of the device information.  Added Unknown to the scale type for use when the type of the scale cannot be validated by using automatic explore option.  Added the Unicode interface. |
| 1.36 | 2015/7/3 | Alter CloseProcess interface. |
| 1.37 | 2015/7/17 | Altered the structure of the preset keys and increased the field of ImageLocation and the type of Page.  Amend the structure of the device information and increased the field of DeviceType. |
| 1.38 | 2015/7/23 | Amend the structure of the payment method and increased the field of Enabled. |
| 1.39 | 2015/8/20 | Altered the structure of the store information and defined the structure of the affiliated information of the store.  Amended the unit of the tare. |
| 1.40 | 2015/9/6 | Amended the name of the store node.  Altered the specification of the structure of the preset keys. |
| 1.41 | 2015/9/15 | Increased the support of the two-dimensional barcodes of RL00 and bPro. |
| 1.42 | 2015/9/23 | Defined the structure of the stagger price. |
| 1.43 | 2015/10/10 | Added three items of configuration to the AdditionalConfig and increased the Type of data of the execution command. |
| 1.44 | 2015/10/21 | Increased settings of Charset and CODName in GeneralSetting. |
| 1.45 | 2015/10/30 | Increased the settings of length of the information related to the trace code in the AdditionConfig. |
| 1.46 | 2015/11/6 | Increased the release resource interface for the MTScaleAPI. |
| 1.47 | 2015/11/11 | Increased specification of the structure of the remote access database.  Amended setting of the Type of the data of remote access. |
| 1.48 | 2015/11/16 | Altered some configuration parameters. |
| 1.49 | 2015/12/13 | Altered the error in the configuration parameters and the structure of the unit price of the item. |
| 1.49 | 2015/12/21 | Altered the UseDept in the additional parameters of the task as True. |
| 1.50 | 2015/12/22 | Increased the specification of the Ticket structure and the pipelining recycling form. |
| 1.51 | 2015/12/24 | Increased the specification of the directory information. |
| 1.52 | 2015/12/30 | Increased pipelining types of CashOut and CashIn. |