User Guide

RFID Encoding Machine

用户手册

Section 1: Device Model & meaning

设备名称及含义

D5000　　Standard RFID encoding machine　全自动标准版编码机

D5000C Customized RFID Encoding Machine 全自动定制版编码机

D9500U Standard UHF Encoding Machine 全自动 UHF 标准版编码机

D9500H Standard HF Encoding Machine 全自动 HF 标准版编码机

Meaning　相关代表含义：

D：Device　产品系列简称

5000：UPH is 5000pcs　每小时最高产能 5000pcs.

C：Customized Machine 为用户定制版本

U:　For the version of Ultra High Frequency　一体化超高频 UHF 版本

H:　For the version of High Frequency　高频 HF 版本

Section 2: Summary of Encoding Machine

编码设备简介

1. Standard Dimension: 产品尺寸(净尺寸\工厂包装\发货包装)

- Device size: 1.4m (L) x 1.55m (H) x 0.60m (W), Net weight: 65kg

设备净空尺寸

- Factory Packing: 1.4m (L) x 0.95m (H) x 0.65m (W), Weight: 67kg

 LCD Touch screen folded and with necessary spare parts

工厂初次包装，折叠 LCD 触摸屏并含相关必要配件

- Shipping Package: 1.5m (L) x 1.20m (H) x 0.7m (W), weight: 87kg

产品打木箱包装以后尺寸

2. Standard Machine: 标准版设备

Standard machine include most of RFID Read/Write public function that is with limited update service free charge provided from machine manufacturer. Support with regular function like OK indicator, NG indicator, Alarm indicator, Stop, General Report, Rejection process.

标准版包括常规大多数的读写检测或编写 RFID 功能应用的所应有的功能，可允许有限次数的升级服务. 支持包括采集、数据库、自动序列编码或品检的能力，同时针对良品、不良品给予声光报警提示、品检编码日志记录等、异常处理方法可选择人机交互、自动、手动等任意方式

3. Customized Machine:定制版设备

According to special requirement, support encoding machine OEM ODM development. Including ink marker or bad process unit for label rejection, barcode scan, customized database loading unit, software plug-in development, special UI interface development, RFID function customized like HAS, AES128, P-SAM encryption, different kind of communication protocol and so on.

定制版：主要是标准版的基本上增加了可添加定制的 BARCODE 采集单元、不良品喷墨单元（油墨易堵需要定期清理，对标签表面材质

有一定要求，油墨相对不容易干），自动取标单元，及不良品自动碳带标记功能（避免油墨不干问题),以及软件功能特殊定制,数据库开发,软件插件开发, 特定 UI 接口开发,RFID 功能定制如 HAS,AES128, P-SAM 加密,特殊的通讯协议等等。

Section 3: Purpose of Encoding Machine

编码设备用途

In order to do RFID label industrial Quality Control, Encoding process piece by piece for 100 percent automatically.

以 RFID 电子标签编解码应用为主要目的，全面实现对 HF、UHF 等多种频率范围的不同协议电子标签、INLAY 等产品进行的批量初始化写码、编码或性能品质综合校验，并对不良品进行相应标识、替换标处理、或剔除处理等。

Main function 主要功能

- Completely Graphic UI and touch screen design 全面采用图形化操作界面，傻瓜式操作

- Support loading any task to continue work process from break point 采用任务型设计理论,提供任务断点自动续接功能.

- Real time task / report save and output 实时任务进度、日志进度保存功能

- Auto Location / Identification System for label searching and

finding function 任务断点手、自动定位功能

- Support multiple data source comparision & QC inspection from label itself.支持表面码/内部码独立式品检校验或组合式品检校验

- Support multiple or single encoding program to the label 支持独立式编码或组合式编码操作

- Support anytime STOP by mechanical button without report missing or lost.不影响生产日志及编写码数据条件下,支持随时机械式紧急暂停机动作

- Support anytime STOP by software from LCD Touch Screen, it will cause to save report and quantity counter or task saved also.支持任何情况下的紧急触控停机，自动保存当前进度（包含计数器数据和日志数据），下次启动任务可以选择继续或重新开始。

- Follow project task loading function, no debug is required, avoid parameter missing or lost from 2nd debug process.采用编码配置文件载入的方法对设备进行自动化功能设定，有效防止设置不完整或设置参数错误而引起的编写码数据出入。

- Counter & Report Function, output file format is TXT or Excel. Summary of project task will be recorded into "Query" and the report file will be saved at the folder of "/Report/" 计数

器日志功能，可以对选择的日志进行数量统计并显示或日志导出功能，如 TXT 或 XLS。项目任务可以在"Query"查询，对应的日志文件存储在目录"REPORT"指定目录中。

Report Function record all the process of Datetime, label number, read/write UID/TID/EPC/USER/RESERVE or block information. 生产日志功能，主要记录编写码、品检生产过程中的数据，如时间、EPC、UID、TID、USER、RESERVE、BLOCK 等字段内容信息

- Create report/config files named automatically with the last sequence number from 001 to 999. 根据配置文件名自动生成带后缀编号为 001-999 系列的生产日志文件，二次启动时如果是延续中断任务则不更新文件名，否则即自动生成新编号日志文件。

- There is manual/semi-auto/auto mode for label feeding and tracking which is cooperated with label sensor like metal sensor, gap sensor, color sensor, thickness sensor and so on. 支持人工/半自动/全自动等功能切换支持多种不同材质的标签基材识别能力，包括金属识别、间距识别、色彩识别、厚度识别等。

- Support familiar protocols like ISO14443A, 14443B, Ultralight，15693, ISO18000-6B, 18000-6C, GEN2V2 支持常用标签协议

- In order to control UHF Label sensitivity, frequency band, gain control and create label performance chart for comparision, debugging is required before QC inspection.频段支持灵敏度识别、频率识别、信号场强控制并可生成相应曲线图

- There is 2 Rejection Operation which is Ink marker and auto-peeller. There is 3 options that allowed for selection like auto-skip, manual-skip and peel off. 不良品处理方式,可选择喷墨、自动剔标等处理方式，处理过程可以采用自动模式、正常模式、人机交互模式。

- Feed Alarm will be appeared while the feed distance is exceeding or less than calculated parameter required which right parameter must be typed and calculated by label pitch(mm) x 6 times.根据不同标签可以设定不同的跳标位移距离，设置不合理自动报警提示， 正确的 FEED 参数应该是标签间距(mm) x 6。

- Plug-in kit is supported for personalized requirement 支持安装插件以适应个性化编码要求

- Portable and movable design is comfortable for any kind of workshop.轻便及活动式设计的设备具有可灵活,可移动作业的优点。

- Ultra Low Consumption totally less than 100watt. (latest machine is less than 300watt) 超低能耗设计，整机功率不超过 100W(新型设备 300W).

- Frequency Range is at 10-18Mhz and 860-960Mhz or customized required.支持标签频率范围 10-18Mhz, 860-960Mhz,或定制频率

- Minimum label size must more than 10x10mm

  Maximum label size must less than 180mm,

  Minimum web size of reel is 15mm,

  Maximum web size of reel is 180mm,

  Maximum Reel Diameter is 500mm,

  支持最小标签尺寸 10x10mm, 卷产品幅宽最小 15mm,最大不超过 180mm,卷直径最大 500mm,卷材材料长度不限

Section 4: Installation of hardware 编码设备安装

1) Take off all of the packing foam and spare parts from encoding machine inside and check for sure all screws are fixed without missing or losing. 取出包装内泡棉及相关备品备件，确认所有螺丝已经固定好

2) Re-Assembly LCD touch screen kit via fixing 2 screws and hanging the screen in a right position. 通过重新 2 个螺丝重新组装液晶触摸屏使

其挂在正确的位置。

3) Place encoding machines in a correct location as mentioned below, otherwise RF signal shadow and reflection will be happened and causing different result exception of HF/NFC signal. 按照以下要求把设备放置在指定位置，以避免 RF 信号的反射及折射给测试带来影响。
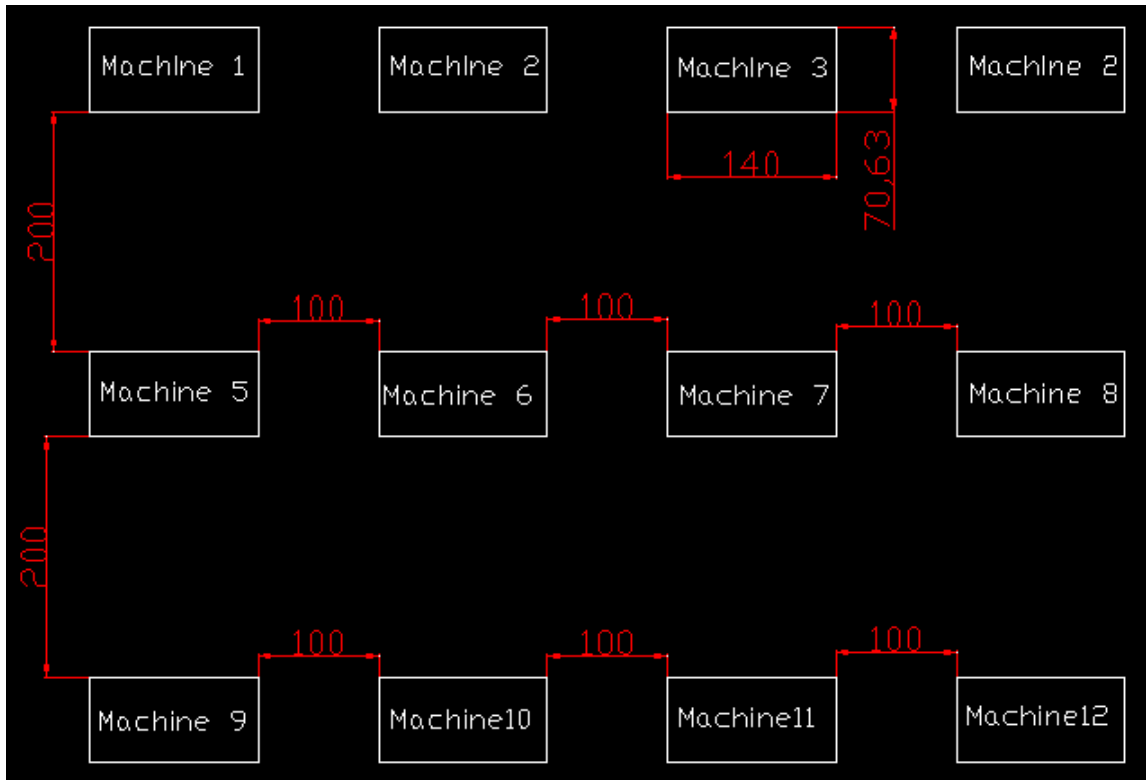
4) Prepare air-compressor in a place where is as far as possible to the encoding machine, then connect to the air input of encoding machine with air tube, adjust button changing air pressure value as below mentioned 把空压机准备好放置在离编码机尽可能远的位置，然后用气管将其连接起来

5) Connect Power Plug of encoding machine to power supply and turn on Machine power switcher, fix or replace all of necessary screws from the related position. 连接好电源插头并打开设备电源,固定或更换好对应的螺丝
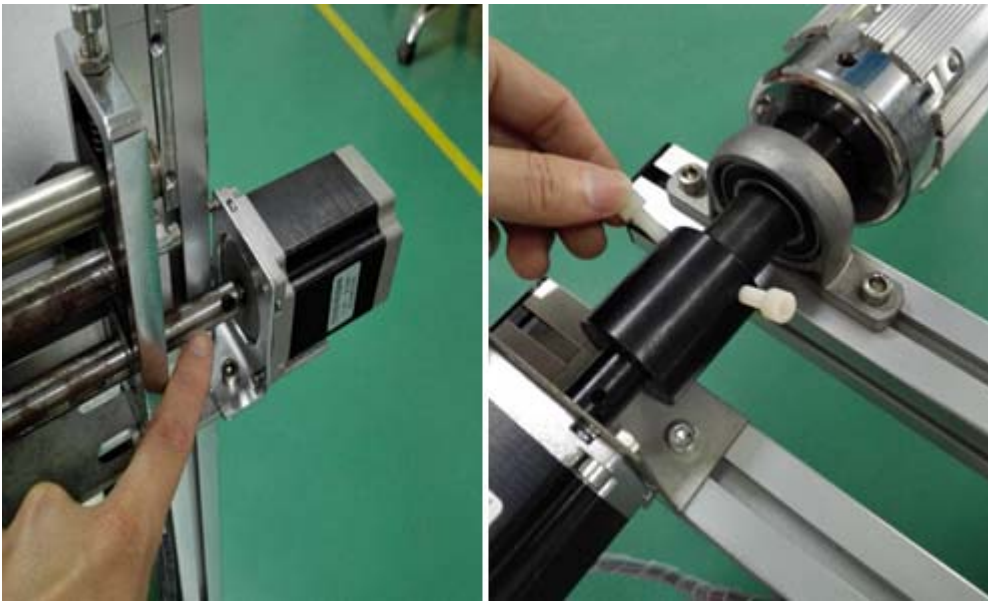
6) Ready for use.准备好使用

Section 5:   Device Operation
编码设备操作

Generally Encoding Machine is following below workflow:

通常设备是按照以下流程来执行的

1) Measure Label Pitch in mm and calculate by 6 get ready for next use, For example, label pitch is 25mm, then FEED parameter will be 25mm x 6 =150 for transferring setup.

测量标签跳距以 MM 为单位，然后乘 6 来计算参数待用

2) Take parameter from step 1 and setup it into machine "FEED"

从第 1 步骤中获取参数并设置

3) Place labels via RFID inspection Area from sending reel to the receiving

reel, charging/releasing air to/from the reel 把标签通过 RFID 检测区

域放置于放料轴和收料轴之间。
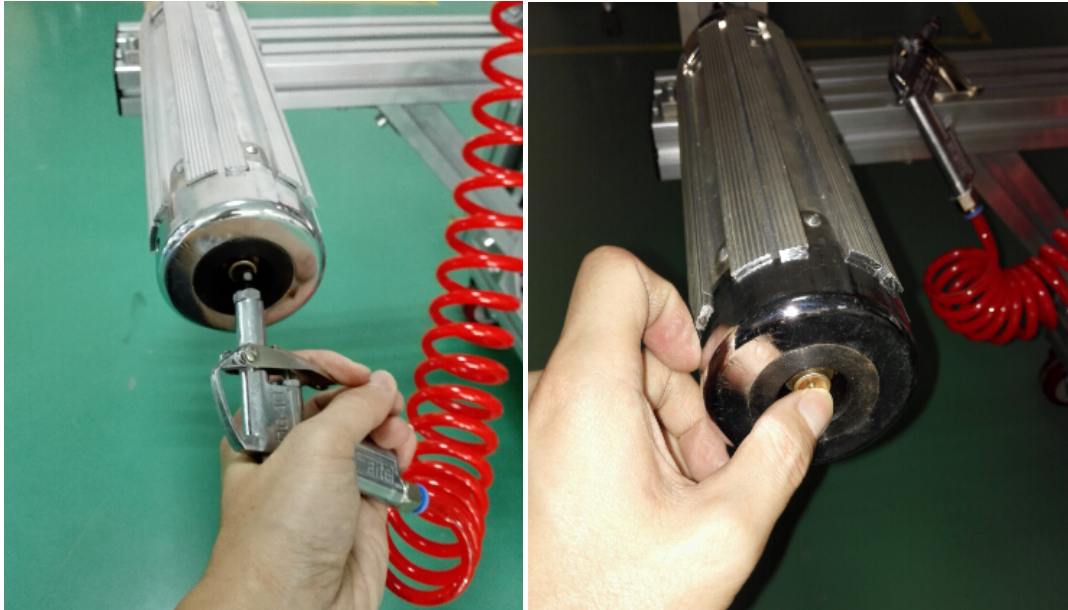
4) Adjust label sensor 调节标签传感器

Adjust the tuner to make LED Light or Dark, there is 2 sensors that you

can select for label detection, the sensor input sockets is belong to the

hanging pole

5) Make label running for several times to transfer material from sending reel to receiving reel to make sure sensor and feed parameter works fine 让标签从放料轴传送至收料轴，正常运行几次以确认传感器和 Feed 送料参数工作正常。

6) Stop feeding debug and move forward to debug RFID parameters with a right position for RFID Read/Write, to get as less error ratio as possible. 停止 Feed 调试，进入 RFID 参数调节使标签的检验错误率尽可以低.

7) Restart again inspection for sure there is no Alarm appeared and there is no more good labels with rejection notice. 重新启动校验程序以确认不存在报警和误操作性

8) Done 完成

Remark: There are some workflow rules for encoding machine 作业规则

- Total Feeding Distance = Feed distance by parameter + sensor tracking distance (less than 5mm) 传送距离总长度计算方法

- Begin→Feed label "1,2,3…N" one by one → Hold on at a right location → Label Read/Write/Inspection → OK or NG process → END (Repeat N times from Begin to End for mass production) 单标签设备作业流程。

按照设备的工作流程，对于电子标签的检验或编码，一般是按照这个特定流程来执行的: 首先电机按照 FEED 设置使 Reel 标签产品定量传送到 XX 距离,紧接着传感器工作并持续 5mm 长度的判断有无标签正确入位至指定读写器读头位置，正确入位后, HF/UHF 读头对标签进行指定功能要求的操作如读\写\加密等等，然后将结果反馈给设备输出执行单元进行显示、统计或标签分捡系统包括喷墨、替换标执行单元, 完成计数累加则完成一个标签的编写码校验动作。该编码机设备自动化操作的过程即是指通过执行以上循环 N 多次来实现的。

Section 6:   Mechanical Control (PLC) & HOST Computer 编码设备 PLC 机械控制及 HOST 上位机主机

HOST Computer

Label Sensor

Rejection Marker

标记

1550 mm

Width 600 mm

对位模块　　读写模块

1400 mm

Sending Reel

PLC Controller

Receiving Reel

FEEDING DIRECTION / 产品运转方向
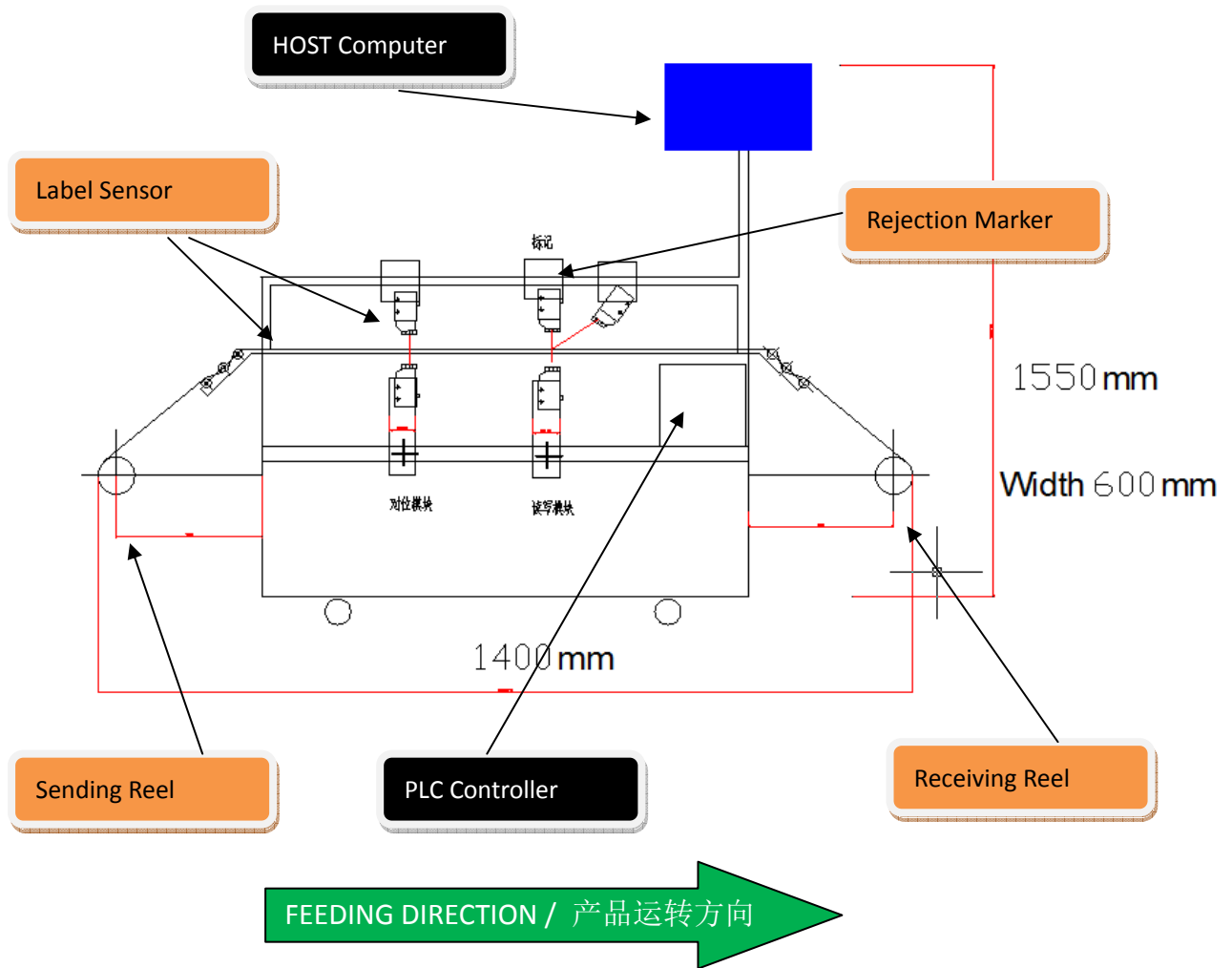
PLC Controller and Host Computer they are independent and cooperated.

上位机和 PLC 是相互独立却又相互协作的两个模块

- In case of any of PLC stopped and host computer stopped, the machine will not continue process for next label. "START" should run in a new project/task 如果 PLC 或上位机均停止，设备"启动"会运行一个全新的项目或任务

- In case of PLC running and host computer not yet ready,　press "START" button from touch screen of Host computer will create new

project/task directly. 如果 PLC 运行而上位机停止，设备"启动"同样会运行全新的项目或任务

● In case of host computer running and PLC stopped, restart PLC will continue the current project task with no any issue. 如果上位机运行而 PLC 停止，"重启"PLC 可以继续当前的项目或任务。

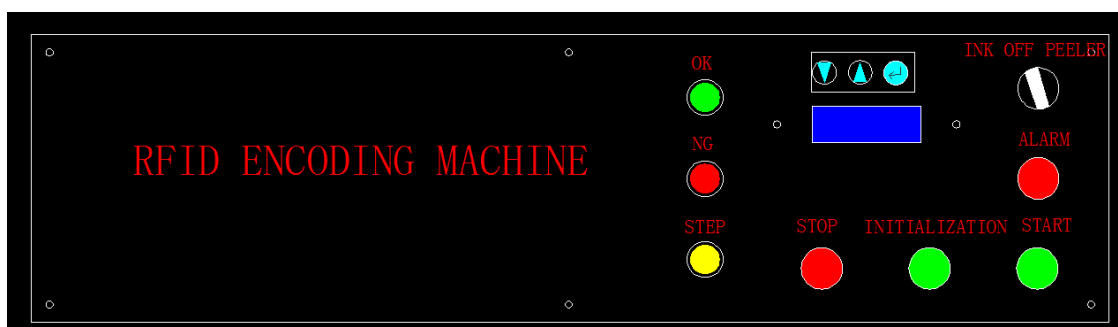**PLC Controller including Front Panel and Side Panel both**

*** Default communication Port: COM 1****

Otherwise change PORT number from file Config2.XML
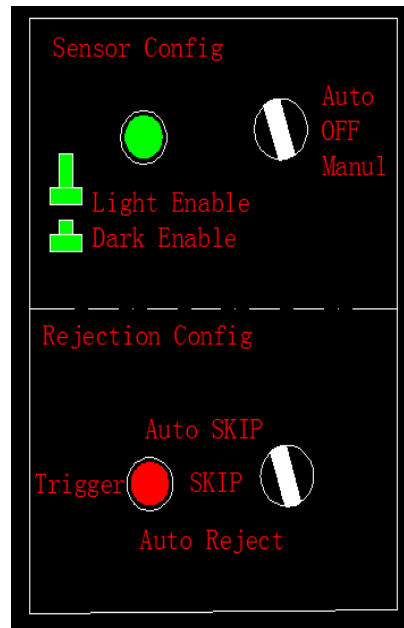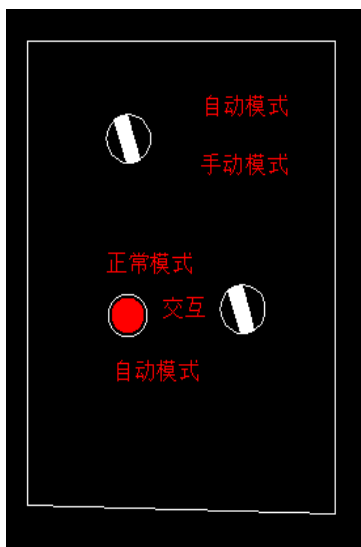
默认端口地址: COM1，编辑文件 Config2.XML 可修改端口地址

PLC 控制包括前面板和侧面板两部份

● 前面板 Front Panel

- ## 侧面板 Side Panel

- ### OK/良品指示:
  Label passed from machine indicated by LED light or Beeper
  可以通过此按键切换良品标签采用声音或指示灯的方式进行提醒

- ### NG/不良品指示:
  N.G Labelis founded from machine and indicated by LED light
  不良品标签提配显示,同时在喷墨或取标功能时,可以通过长按此按键实现手动喷墨、或喷墨量调节或取标时间调节,可用于设置标签处理不良品时的登记时间

- ### STEP/点动：
  Is special worked on manual sensor setting, label transferred to perform RFID transaction for one time while the button of "STEP" is getting one press.
  右侧面板上开关如果处于手动模式时，触发一次，执行一次单标签编码或品检工作，一般用于调机状态或者是自动模式下，异常情况下触发补标，以实现特别订单要求的必须连号、不允许断号的要求。

- **STOP/急停：**

  Anytime push down to stop workflow, turn on again will continue the current process, this button is similar to PAUSE function,任何情况下包括异常处理紧急停机，想停就停，不影响标签生产的任何参数，如数据、生产日志、质量等等

- **INITIALIZATION/初始化：**

  To release all troubles during label transaction process and make PLC controller waiting at "ready" status. Any time can be use except "ALARM" lighted, otherwise current tag will be missed for QC/Encoding process and counter value will be reduced 1pcs also.

  任何情况下均可使用，不影响生产数据、日志、质量等，同时提供了下位机计数器的复位功能，需要对标签送料距离进行设定，必须先执行一次"初始化"，操作方法是：长按 3 秒以上，然后松开就可。

- **START/PAUSE/启动/暂停：**

  Start PLC controller from "READY" to "RUN", 2nd press will be "PAUSE", 3rd press return back to "RUN".

  下位机在待机状态时按一次"启动"，按二次"暂停"，"暂停"功能目前无效。

- **ALARM/报警：**

  Wrong Label Transfer will receive this notice, press "ALARM" button for 1 second to release notice and go continue to next Encoding process, there are 2 reasons to light "ALARM" Light.

  Notice: Make sure current label placed in a right position for encoding process before "Release Alarm", otherwise counter value will be reduced 1pcs.

  报警提示时说明当前标签操作未能正确执行，（注意解除报警时还会继续当前标签的未完成操作），报警原因有 2 个

  1） Label pitch calculated or "FEED" parameter value was set too small or too big "标签送料距离"设定长度参数太小了或者太大了
  2） Current processed label is empty label 当前 FEED 送料标签是空标签，导致标签未能正常定位在正确位置
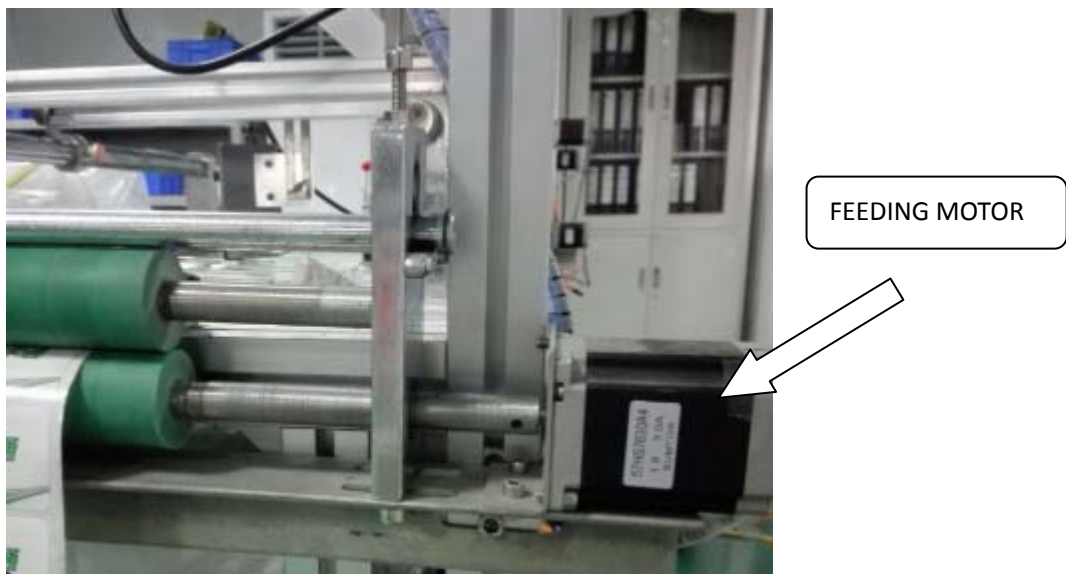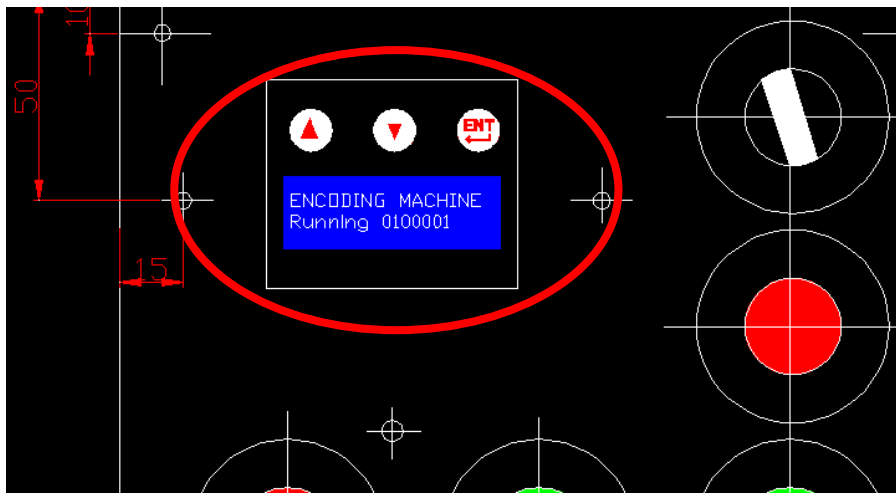
  "解除报警"长按"ALARM"按钮 1 秒即可解除

  请注意解除报警前，对标签位置进行人工确认，确认标签在正确的检测位置上然后进行 ALARM 解除，否则会导致标签计数器减少或增加。

- **INK/喷墨：**

  Do NG label by ink marker process
  开关位置处于喷墨档，启用不良品自动喷墨功能，喷墨参数可 PC 设定

- **OFF/无功能：** Non function
  开关位置处于 OFF 档, 不良品标签不执行任何操作

- **PEELER/取标：**
  Do NG label by peeler to peel off bad label automatically
  开关位置处于取标档，则启用不良品全自动取标收集功能，设定同上。

- **FEED /LCD DISPLAY/标签送料设定：**

FEEDING MOTOR

There are 3 buttons of "Plus", "Minus", and "Menu/Enter" to adjust transferring parameter ▲ ▼ ENT , LCD Display shows the parameter what's distance configed and the parameter can be adjusted only while PLC is on hold in "ready" state, otherwise "INITIALIZATION" button will be required.

This parameter is calculated by a appointed formula as above "SECTION 5"

workflow mentioned.

For example, label pitch is 25mm, then FEED parameter will be 25mm x 6 =150 for transferring setup.

LED 屏上方三按键依次为"加"、"减"、菜单/确认"

标签送料距离设定，先按"菜单"进入，然后用"加"、"减"键进行调节参数，此参数的计算公式为标签跳距 MM x 6，如标签跳距为 25MM，则该参数为 25*6=150

- **Auto/Off/Manual for sensor config**

  侧面板传感器部份的自动/无/手动模式

  - **Auto mode:** Transfer labels by Feed distance + sensor distance

  - **Manual:** Transfer labels by Feed distance only and need to cooperate with "STEP" button for piece by piece label check. Special design for debugging purpose

  - **Off:** No function

  手动模式需要配合"点动"按键，实现对标签或设备调机，

  自动模式：正常工作时的模式设定，标签传送距离=设定 FEED 距离 + 传感器跟踪距离(小于 5mm)。

  OFF 档:暂时保留无功能

- **Light Enable /Dark Enable (Green Button)for sensor**

  侧面板传感器部份的亮有效/暗有效功能

  - **Light Enable:**　green button locked in higher look, Sensor

light effect to stop label tracking

- **Dark Enable:** green button locked in lower look, Sensor Dark effect to stop label tracking（No. 2 sensor has this both mode, other sensors are worked at "Light enable" mode only）绿色开关锁定在高位或低位时分别代表传感器亮灯送料停止有效或暗灯送料停止有效(只有No. 2号传感器工作于双模式,其它传感器仅工作在"亮灯有效"模式)

● **Auto Skip/Manual Skip/Auto Reject for rejection config 正常模式/交互模式/自动模式:**

- **Auto Skip:** Auto skip all of the bad labels and continue to process next label

- **Manual Skip:** Notice people there is a bad labels positioned and asking for skip by manual via "SKIP" button

- **Auto Reject:** worked & cooperated with "PEELER" mode only to process rejection (peel off bad label) from roll automatically and move forward to next loop "begin – End" (see above workflow).

此三个档位主要是针对不良品标签的处理方式，采用正常模式时一般是喷墨或是对不良品不需要进行处理的情况下，自动模式是针对不良品采用"取标"的方法自动进行处理的情况下使用的，"交互"模式，此模式下，一旦出现不良品标签，设备会自动进入等待，人工确认"交互"红色确认按钮

后方可继续执行品检或编码。

Section 7:   RFID Function
编码设备 **RFID** 功能模块

- **Standard UHF Reader system UHF288D** 标准 **UHF** 读写器系统

Presently UHF 288D is the standard UHF reader in used for this machine via RJ45 connection. Other kind of reader or customized reader is accepted in ODM software development.

- Usually DC 12V/24V Power supply is provided inside the machine.
- The default IP address of UHF Reader is the Machine No. plus 1 pre-code

  For example, Machine No: 055, then IP address is 192.168.1.155

Remark: RF transmit power value must be less than 24dBm in order to read/write one UHF label only in each loop of encoding transaction. And prevent multiple UHF tags to be read/writen in one time.

标配 UHF 读写器 288D,可以支持专用版本读写器，也可以支持用户定制版本读写器。

通用 DC 12V/24V 电源供应本设备已经有内部提供了,允许直接使用

默认 IP 地址已经被设定为机器编号加前缀 1, 如设备编号 055, 则 IP 地址为 192.168.1.155

注意: 为了更好的读写一个 UHF 标签, RF 发射功率必须低于 24dBm, 否则可能会有多个操作被同时操作。

● **Standard HF/NFC Reader system 530U-E 标配版本 HF/NFC 读写器**

The HF/NFC reader is combined HF reader antenna and UHF reader antena both, allow to work at dual interface in same time according to special requirement.

API interface is compatible with ISO Ultralight, NFC, ISO14443A, ISO14443B, ISO15693 and so on.

*** Default Communication Port:　COM 3 ***

(Otherwise modify physical PORT number entering from PC manage or change PORT number from file Config2.XML)

目前该模块中同时包含了 HF/NFC 读头和 UHF 读写器天线读头模块，标配标准接口 USB 通讯方式，供电模式 USB　DC 5V，API 同时支持 Ultralight, NFC, ISO14443A, ISO14443B, ISO15693 等.

默认端口地址: COM3 ，修改端口地址可以从计算机设备的串口管理中修改或者通过编辑文件 Config2.XML 修改端口地址

- **Support any kind of Customized Reader**

  Any customized reader will work with personalized software application development including SDK or API required.

  用户版本读写器目前硬件设施是由客户根据需要自由选择，目前仅提供"定制插件"的 SDK 开发文档及接口操作规范。

- **All of RFID readers will work with below HOST software system**

  所有的读写器系统都是基于以下软件系统而工作的。

Section 8: Software System
编码设备软件功能系统模块

- **Default Config / 默认配置**

Software is working in HOST Computer(PC), the default IP address is as same as to the Machine No.for communication between those parts.

For example, Machine No: 055 and HOST PC IP address is 192.168.1.055

软件工作在 HOST PC 电脑上的，默认通讯 IP 地址等同于设备编号

如设备编号为 055，那么 IP 地址是 192.168.1.055

- **HOST Software minimum requirement / 主机软件最低配置要求**

  Free Installation of Software can be placed and run in any folder in specified windows environment as below:

  - HOST CPU: Celeron 1.8Ghz or above

  - RAM Memory: 4Ghz or above

  -Hard Disk: SDD disk free space 32Gb or above

  -Microsoft Windows 7 professional

  - Dot netframework2.0(sp1) or above

  - Microsoft Excel 97 or above

  - The pack file of Mdacsdk.rar is necessary for win2K (MDB 报表查询控件补丁）

  - The Pack file of Windows2000-KB891861-v2-x86-CHS.EXE (Chinese version) or Windows2000-KB891861-v2-x86-ENU.EXE (For English version) is necessary installation for Win2K

  分别针对中文 win2K 系统和英文 Win2K 系统安装）

  - The pack file of WindowsInstaller-KB893803-v2-x86.exe for Win2K (Win2K 的安装补丁)

- **Software Structure & Files Description 软件结构及文件说明**

1) \Data\   Folder of loading data files for "Plug-in"

   插件数据源存放路径,每个插件文件或数据对应不同子目录

2) \database\   Folder of loading data file (TXT only) for "DATABASE"

写码使用的数据库存放路径，以*.txt 文件存放在该目录中即可

3) \Filter\   Folder of filter files(TXT only) for "Filter)

以*.txt 存放在该目录中，每行只允许一个数据，用于查找或过

滤标签，使用时要选择对应的文件

4) \HF\   HF/NFC Reader Driver/API Folder

文件夹存放 HF 读写器的相关 API 动态库等

5) \UHF\   UHF Reader Driver/API Folder

文件夹存放 UHF 读写器的相关 API 动态库等

6) \LOG\   Encoding Log Folder

文件夹存放编码机运行时

7) \Report\   Encoding Report Folder

指定路径用于存放所有的详细日志报表,如配置文件有指定其它

路径则以路径下文件生成文件为准

8)\ChangeLog.txt   Encoding Update history

软件修改日志，以 XLS 的更新细则为准

9) \CodeMachine.exe   Encoding Software Execute File

编码机执行程度文件

10)\Config.xml   Encoding Config file

用记事本可打开修改相关编码机的配置，非专业人员不建议修

改，以防导致编码机不工作或异常

11)\CustomControlBycr.Dll   Encoding PLC Library file

编码机动态文件

12)\Innov.Office.Dll   Encoding report Library file

编码机操作动态文件

13)\Innov.RFID.dll   Encoding RFID library file

编码机动态文件

14)\Innov.RFID.UI.dll   Encoding UI Interface library file

编码机界面控件库

15)\Log.MDB   Encoding production LOG file

*** Can't be updated with new software unless it's necessary ****

记录编码机所有的生产日志(软件更新时不允许覆盖, 除非是维修必要)，主要体现合格数量、总数量、良率、以及编码异常数据详细数据以 Report 目录中文件为准
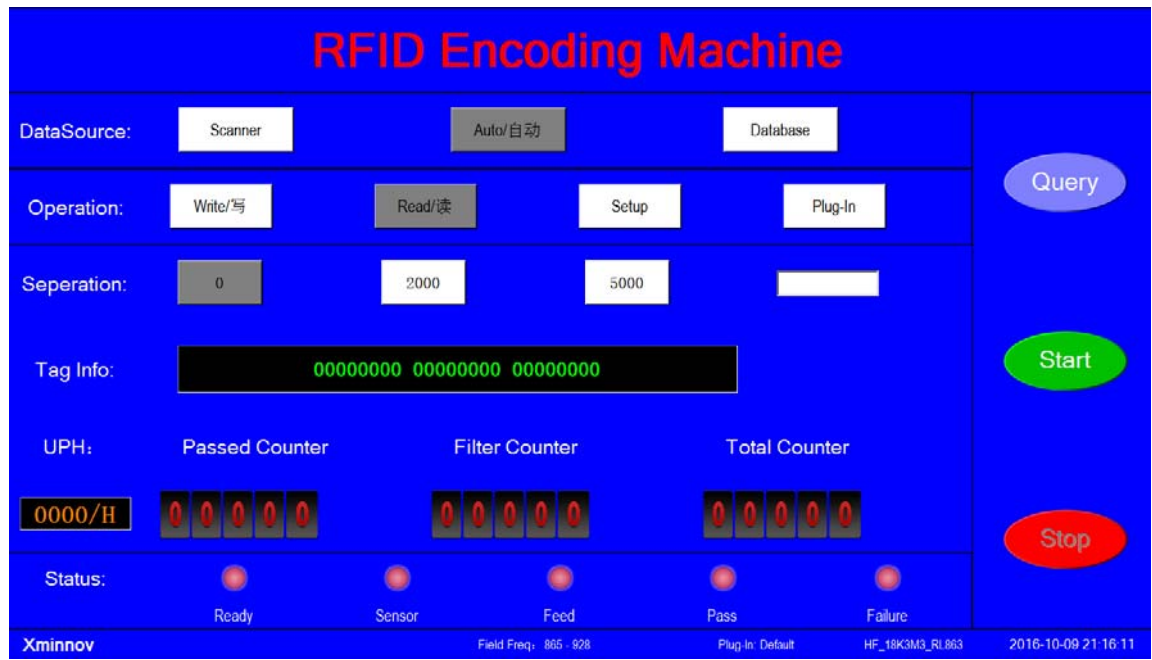
16)\Microsoft.office.Interop.Excel.dll   Excel Report Library file

报表动态数据库文件

17)\ReaderApi.dll   Reader API library

读写器动态文件

18)\Newtonsoft.Json.dll   Json data format analyzed library file

Json 数据格式解析库

- **Main UI Interface 主界面 UI 控制器**

RFID Encoding Machine

DataSource:	Scanner	Auto/自动	Database
Operation:	Write/写	Read/读	Setup	Plug-In
Seperation:	0	2000	5000	
Tag Info:	00000000 00000000 00000000		
UPH:	Passed Counter	Filter Counter	Total Counter
0000/H	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
Status:	Ready	Sensor	Feed	Pass	Failure

Xminnov   Field Freq: 865 - 928   Plug-In: Default   HF_18K3M3_RL863   2016-10-09 21:16:11

- ◼ "Datasource" → Scannner, Auto, Database

  数据源单元包括 OCR/条码扫描,数据自动生成, 调用数据库等

- ◼ "Operation" → Write, Read

  功能选择包括: 写和读(或品验)

- ◼ "Setup" → selection of RFID protocol and adjustment of RFID parameter

  设置键: 用于选择 RFID 协议及相关参数配置

- ◼ "Plug-in" → Customized or special plug-in

  Plug-in: 客户自定义或特殊插件功能选择

- ◼ "Separation" → Define the Reel Quantity for every process

  标签分卷数量设置(总数或合格数)

- ◼ "Tag info" → Display unit to show messages

  标签信息显示窗口

- ◼ "Status"

UPH means production capability pcs/ hour

Passed/Filter/Total counters and PLC status.

Shows running parameter what are loaded

状态栏包括 UPH 每小时产能,合格,过滤,总数三个计数器以及

PLC 工作状态,同时显示运行中 RFID 使用的参数

■ "QUERY", "START" and "STOP"

生产日志查询, "启动"或"结束"标签编解码生产

● **Host Software workflow**

Below Five steps will be done while "START" button is pressed and   is

finished at the button of "STOP"

当"START"键被开启以下 5 个步骤将会被执行,同时结束于"STOP"键.

Step 1: "Datasource" unit collect datas from Barcode scanner, Auto

code generation or Loading database, and then transfer to the "Data

Process" unit, get ready for encoding or Quality Comparison with RFID

datas.

"数据源单元"包含：图像采集（条形码、二维码、CCD 像机等）、

RFID 采集、数据集(自动、随机、数据库）等源采集单元,该数据将

传递给"数据处理单元"

Step 2: "Data Process" unit make special data process like take first

digit, take last digit, pre-digit, data format translating from decimal to hexadecimal and so on, then pass to next process of "RFID Writing/Reading" unit.

"数据处理单元"提供了对源数据的数据深加工业务,包括数据过滤器、数据前保留、后保留、裁前、裁后、加前缀、加后缀、进制转换等功能；以生成编码需要的数据或校准数据并传递给"编解码单元"(及日志单元)。

Step 3: "RFID Writing/Reading" Unit, process on RFID label with the saved and correct parameters.

"编解码单元"通过读写器对标签 RFID 芯片环节进行的读、写操作，同时可对数据库进行定位，并通过数据 Filter 比较器做出判断，最后将结果数据传递给"日志单元"。

Step 4: "TAG INFO" display unit shows what are doing from "Writing / Reading" unit presently.

"屏显数据单元"，提供了总行数为 3 行的屏显，根据隔离字符（回车）做判断，第一行显示 UID/TID，第二行显示 EPC 或数据，第三行显示 USER 或数据

Step 5: "Report" unit, record all related production report for each label or each process and save into the specified folder for later

inspection or later other purpose. The default file name is beginning with data time and ending with 3 digit sequence numbers.

"日志单元"，根据所有单元中所传递的日志数据形成对应的日志文件（"设备编号 2 位"+"_"+"配置文件名 8 位"+"_"+"序号 3 位"的方法命名），插件部份的生产日志由插件模块完成(此功能以实际设计为准，如常用的"日期"+"编号"文件命名方法)。

- **Universal Parameter Setup /通用参数设置**

- Allow serial Interrupt: break number in the sequence is accepted.

  编码断号处理方法（允许/不允许）；

  >>**不允许**：检测到坏标，屏幕提示"重试"和"跳标"。

  如果选择"跳标"则执行坏标动作输出操作，同时做坏标或过滤器计数，总计数并结束当前循环，如果选择"重试"当前标签读或写动作，测试结果是好坏，则输出好标操作，做好标计数，总计数并结束当前循环。

  >>**允许断号**：检测到坏标，屏幕提示"检测到坏标请确认！"执行坏标动作输出操作，同时做坏标或过滤器计数，总数计数，然后等待确认后取消屏幕提示，结束当前循环。

- DataSource→ASCII: DataSource will be translated from ASCII content to Hexadecimal format

  数据源作为 ASCII 字符进行转换为 HEX,待编码使用

- UID(else block) of HF: special for HF reader, selection UID or BLOCK data for comparison

*** Wrong setting will result rejection done for good labels**

数据校验采用 UID 或 BLOCK 数据切换,只对 HF 读写器有效

- Roll Qty Set(By total/By Passed):   Reel separation mode.

- 分卷设置方法（可选择总数/合格数）

- Bad Marker(msec):   output for bad label (range 0-1000ms)

  坏标输出时间(以 0-1000ms 为上限)；

- Marker delay(pcs):   For ink/peeler rejection(range 0-15pcs)

  坏标延迟间隔(以 0-15pcs 为上限)，

- Delay before R/W: delay before RFID read/write(any value)

- Delay before FEED: delay before transfer next label (any value)

  入位延迟时间和离位延迟时间(以 ms 为单位设置,不设上下限,任何数值均可, 降低速度稳定运行特殊标签)。

Setup:	Scanner Config/条码配 ▾	Save
1.Select By	Left ▾	5.Pre-code	0000
2.Select From	1	6.Convert Radix	None ▾
3.Select Digits	10	7.Convert Digits	16
4.Powerd By	Pre-Righ ▾	8.Disable-Config ☑

"Data Process" For "Scanner" of SourceData, the "Data Process" is beginning from step 1 to step 7

条码扫描数据处理单元配置, 从步骤 1 至步骤 8 顺序运行

1. Select left/right: take contents from left or right

    提取左字符或提取右字符

2. Select from: take contents from which digit

    需要提取字符开始的位数

3. Select digits: take how many digits

    选择提取字符的长度

4. Powerd by: plus-digit from left or from right

    增加前缀或后缀字符

5. Pre-code: the contents for beginning or ending

    预补充字符内容

6. Covert Radix: None/HEX/DEC format

    字符格式转换:无/十六进制/十进制

7. Covert Digits: the final digits for RFID read/write encoding

    转换之后的长度设置

8. Disable-Config: Cancel Data process from Step 1 to Step 7.

    取消本配置功能的数据处理功能(1-7 步骤), 数据直接调用

Data Process for "AUTO" of DataSource, the most function is similar to the Scanner section above.

AUTO 自动配置-"数据处理单元"与"扫描部份"数据处理是类似的

A: Pre-left: typing the codes from first digit

预加前缀

B: Pre-Right: typing the codes from last digit

预加后缀

C: Set Length(bytes) Length setup in bytes

编码长度

D:Run Mode: Customized (Ramdom will disable all of those setting)

工作模式: 配置编码/(随机编码时这里的配置无效为随机码)

E: Start Number: Beginning number for serial sequence

起始编码号码

F: Sequence: Up/Down

编码顺序: 递增/递减

G: Step: 1,2,3 or any value opened

步进数量: 1,2,3 可以随意,不限制

H: Convert Radix: None/Dec/Hex

格式转换: 无/十进制/十六进制
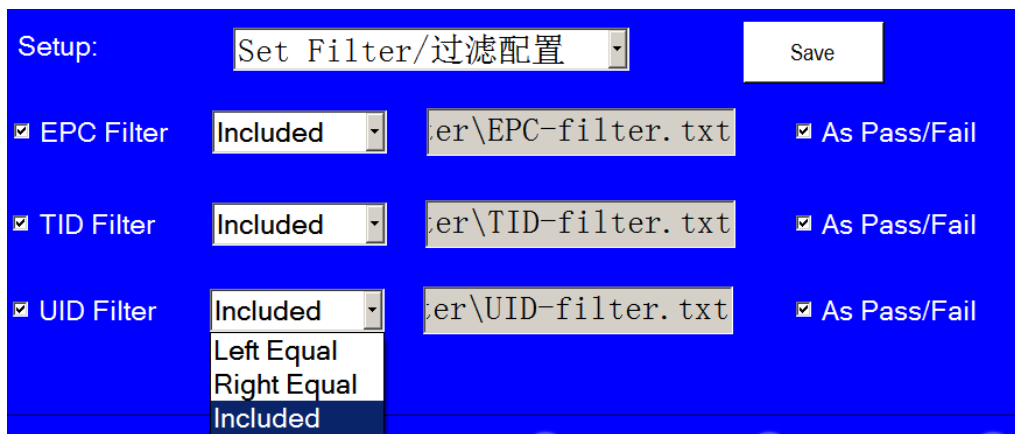
Filter Function to take off or just keep required labels for use

过滤器功能可以设置过滤指定标签或保留需要的标签

1st – type the numbers into TXT file, one code/record one line, there is a enter key between line and line.

第一步: 将需要过滤或保留的标签数据写到 TXT 文件中,每行一条记录,行行之间回车分隔

2nd - Loading files from this windows for function, there is 3 options for selection Included, left equal and right equal

第二步: 导入需要过滤或保留的文件, 可以选择包括/左边等于/右边等于任何一个, 设置为合格或不合格
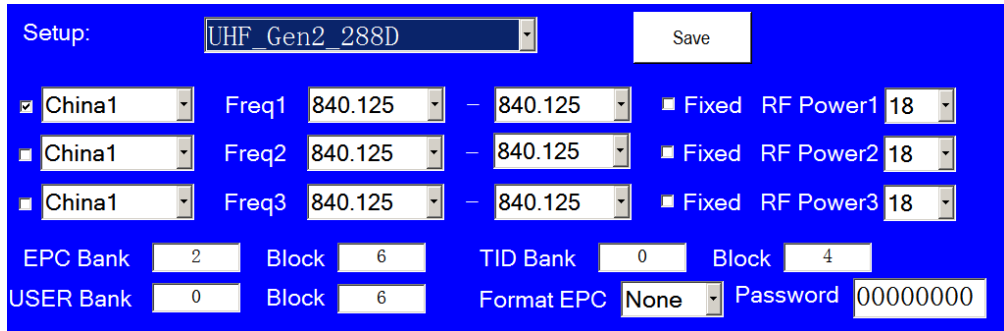
3rd - Save and get back to run "Start" while ready

第三步: 保存并返回运行"启动"

- **Specified Reader & Protocol /特定读写器及协议设置**

  Any protocol is always subject to the defined RFID reader

  任何一个协议都对应于不同指定的读写器
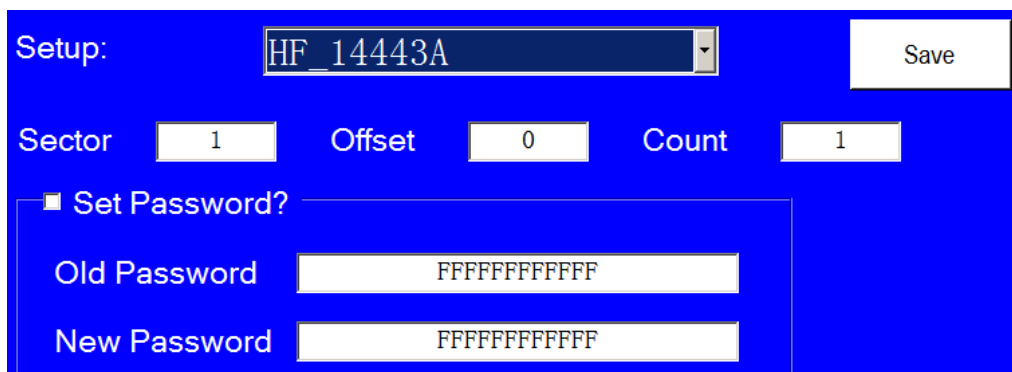
  Standard UHF GEN2 288D Reader Protocol provides a standard

  quality control standard with 3 points of Frequency + RF power.

  标准 UHF 288D 读写器提供一个全新的质量控制方法,具有 3 点频率+功率组合检验

  EPC bank, User Bank ,TID bank and Password are most opened for

  read/write

  Format EPC: None/96bit/128bit, depends on RFID label characters.

  EPC 格式化扩展取决于 RFID 标签的特性

HF/NFC protocol provide Mifare compatible read/write function
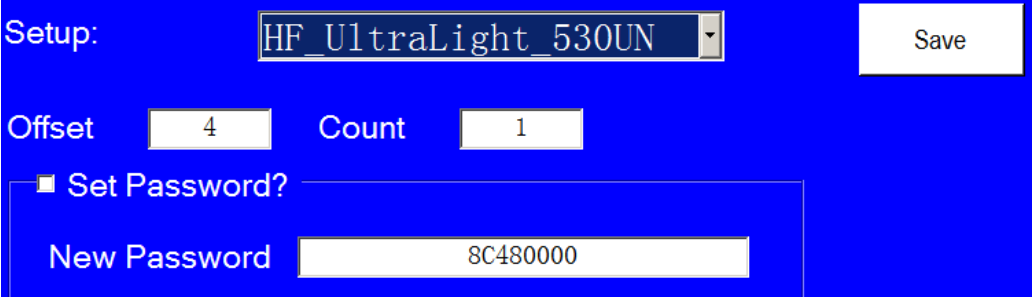
Type specified sector, offset and count number for read/write

Password is valid while the function is setted.
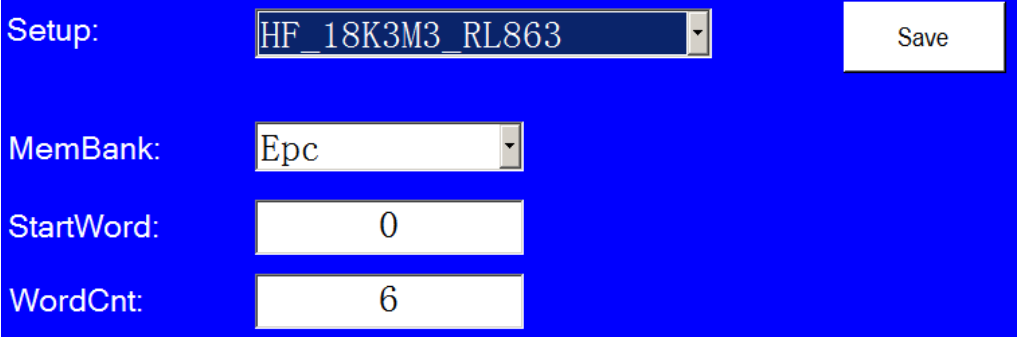
HF/NFC 协议提供了 MIFARE 兼容产品的读写功能

只需要填写对应的扇区,地址及块数即可完成相关读写操作

密码设置只有在功能开启时有效

Ultralight/NFC protocol provide total block of 220 for read/write

这个协议功能允许 220 个块的读写功能

ISO18000-3M3 Protocol provide TID/EPC/User/Reserve memory

inventory and read/write function, the maximum length is 240bits

of EPC.

ISO18K-3M3 提供全方位的 TID/EPC/USER/RESERVE 内存的清零读

写功能,最大可支持 240bit EPC

UHF 2204 Reader protocol provide regular inspection and encoding process for UHF GEN2 V1 labels.
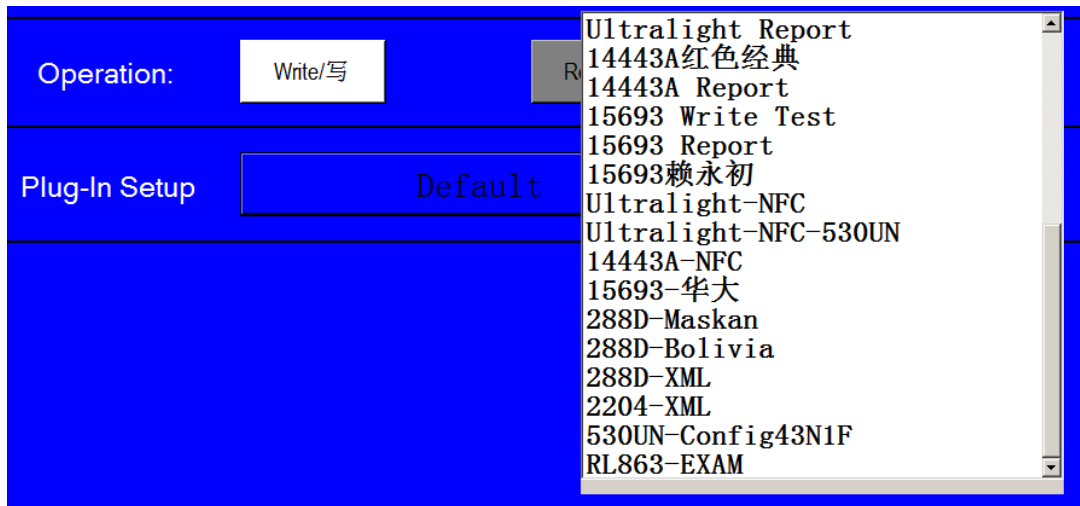
- **Specified Plug-in /指定插件功能设置**

Default means no Plug-in in used for function

"Default"表示软件"Plug-in"插件功能未开启

Some plug-in function will require operation code which can be provided from their distributor or special agent of machine.

部份 Plug-in 插件需要操作代码方可以使用,具体可以咨询该设备的分销商或代表商

The Plug-in is always related with the reader protocol so identify reader protocol is a necessary operation before use plug-in kit.

"Plug-in"插件功能是与读写器协议相关联的,所以使用前必须先设定读写器协议
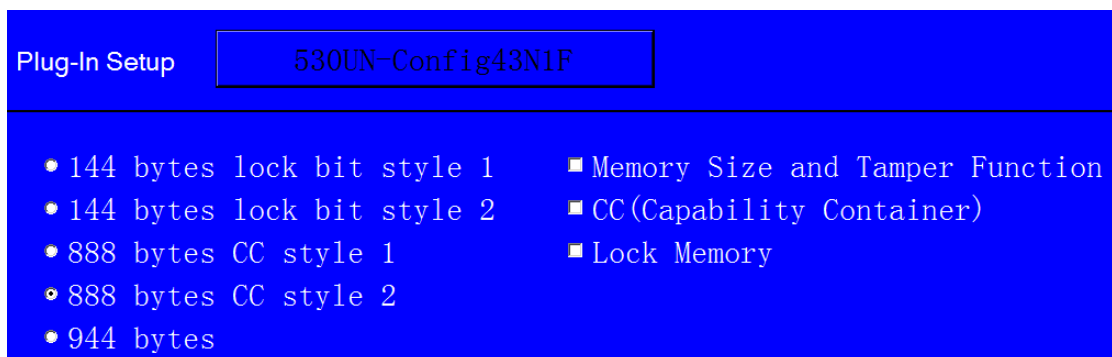
NFC NDEF format Initialization , memory resize, tamper config, lock memory and special function is provided from this plug-in

本 NDEF 格式初始化"Plug-in"插件,提供了内存重定义, 防伪配置,内存锁定等特定功能

"Ultralight-NFC" plug-in provide writing NFC website function with operation code

插件需要操作代码才可以写入 NFC 网址

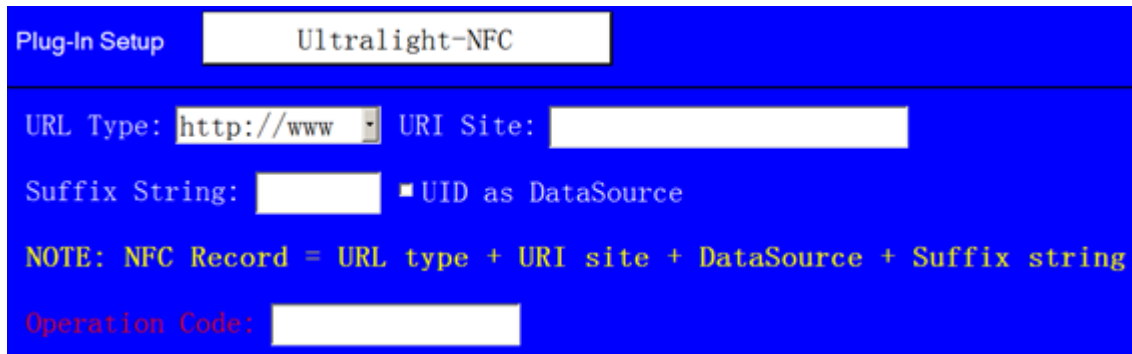◆ content stream = URL + URI + "DataSource" + "Last digit"

网址内容 ＝ URL + URI + "数据源" +"后缀"

◆ "DataSource" defined as any of the "Chip UID", "Scanner", "Auto", "Database"

"数据源"可以定义为"芯片 UID","扫描数据","自动数据","数据库数据" 其中任何一种

Performance test plug-in is providing a simple way to analyze UHF label with a consistent performance

插件提供了一种简单方法用于 UHF 标签性能的一致性测试

Other kind of plug-in kit 另一种的特殊功能插件

插件提供了一种简单方法用于 UHF 标签性能的一致性测试

Attachment #1 - Maintenance of machine

机器维护说明

**** Fixing & Replace necessary screws from machine

定型检查电机固定螺丝,以保证送料报警的尽可能少发生,(前提是送料参数设置正确)
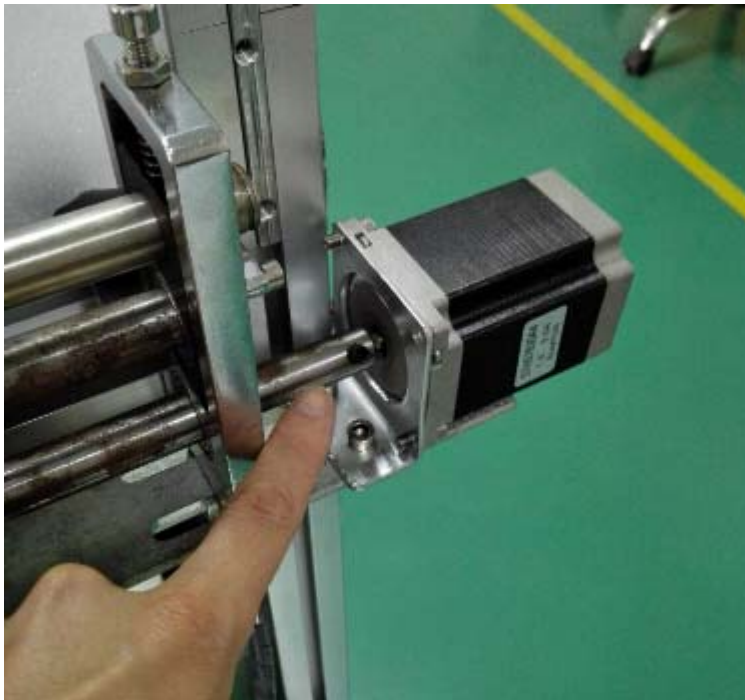
if there is a lot of time with feeding alarm even though feeding parameter was adjusted for several, please double check and fix this screw as well for one more time.

Replacement of the plastic screw for label receiving properly, or just fix screw as fine as possible to make 2 motors running sync. 定期更换或锁紧塑料螺丝,以尽可能保证两个电机能同步工作.

**** Clean dust as a necessary job for each 6 months running or as often as you can arrange

Take off the dust screen and running air-gun to clear dust 取出防尘网打开气枪清理即可,建议6月定期清理一次,或者据使用环境可以更频繁些.

Attachment #2   Work Process

特别说明：设备采用分离式的模块化结构设计以及左上料器、右步进轮（组合压轮）杠杆操作方式方便上下料，以及收料器组合离型器的方式来实现对收卷成品产品的松紧度灵活调节。同时考虑到人机操作的方便性，设立了独立的机前触控显示屏，并可对此屏进行角度、方向进行调整，最大限度满足实际的应用需求。

采用机械按键和触控按键相结合的控制方式进行电气控制，方便操作的同时，针对标签的多样化品种，更是保证了是否能提供出有效生产数据并保证准确性的唯一依据，常用机械控制键提供了"启动""坏标开关键"（喷墨、取标、空档），"停止"（提供了一种随时随地进行任务暂停、恢复、急停纠错等一个临时处理措施），"点动"，"好坏提醒键"、"坏标提醒键"、手自动切换（方便对不同产品进行调机时会用到的手动操作和自动编码时的一个选择）、好坏处理模式（可以有 2 种自动处理方法喷墨和取标，也可以选择触发交互 SKIP 的处理模式。

Attachment #3   -   Customized Design

1.客户可自选读写器、同时对读写器进行读写等相关操作含日志文件等功能，定制部分根据需要可按照我司提供的开发资料由客户进行软件开发，或由我司进行定制；

2.一旦客户启用了"定制插件"插件即启用了定制版编码设备，同时关闭了标准版本。定制版本在标准版本基础上保留了部份公有模块，用户模块需要按照我司所提供的设备接口说明及作业流程进行相关编程制作。

Attachment 4#

*******Necessary Config (Professional engineer only) ******

Check to open by notepad and revise file "Config2.XML" as below

```xml
<?xml version="1.0" encoding="UTF-8"?>

<CodeMachineConfig>

    <lastReader>HF_18K3M3_RL863</lastReader>

    <log>False</log>

    <countLimit desc="标签计数方式">TotalTag</countLimit>

    <badTagDelay desc="坏标输出时间（毫秒）">200</badTagDelay>

    <badTagInterval desc="坏标输出间隔数量">0</badTagInterval>

    <badTagAllowBreak desc="是否允许断号">True</badTagAllowBreak>

    <readType desc="读标方式">TID</readType>

    <autoEncoding desc="是否编码">False</autoEncoding>

    <tagDelay1>0</tagDelay1>

    <tagDelay2>0</tagDelay2>

    <uhfReaderIp desc="超高频读写器的IP地址">192.168.1.100</uhfReaderIp>

    <logPath desc="日志文件目录"> </logPath>

    <hf14443A>

        <com desc="HF 读写器 COM 地址">3</com>

        <address desc="读写数据块地址">4</address>
```

<blockCount desc="读写数据块长度">1</blockCount>

<encrypt desc="是否加密">False</encrypt>

<oldKey desc="加密时的原始密钥（标签当前密钥）">FFFFFFFFFFFF</oldKey>

<newKey desc="加密时的写入密钥（标签更新密钥）">FFFFFFFFFFFF</newKey>

</hf14443A>

<hf15693>

<sector desc="起始地址">0</sector>

<number desc="长度">4</number>

<flag desc="标志位">66</flag>

<writeTagDelay desc="写标延迟">500</writeTagDelay>

</hf15693>

<hf15693Rh12>

<disableInitMem desc="是否使标签 InitMem 指令失效">True</disableInitMem>

<url1 desc="CXF 服务地址">http://192.168.19.88:8080/Service/services/Service</url1>

<url2 desc="获取产品信息">http://111.200.199.233/CIC_fw/services/CXFService?wsdl/api/getAllProducts</url2>

<url3 desc="存库

">http://111.200.199.233/api/onceAddRelation</url3>

  </hf15693Rh12>

  <hfUltraLight>

    <address desc="起始地址">4</address>

    <blockCount desc="长度">1</blockCount>

    <encrypt desc="是否加密">False</encrypt>

    <password desc="新密码">8C480000</password>

  </hfUltraLight>

  <hf18K3M3>

    <MemBank>1</MemBank>

    <StartWord>0</StartWord>

    <WordCnt>6</WordCnt>

  </hf18K3M3>

  <uhfGen2_2204>

    <autoAntennaCheck>False</autoAntennaCheck>

    <power>18</power>

    <encrypt>False</encrypt>

    <region>IVR_REGION_OPEN</region>

    <useFixedFreq>False</useFixedFreq>

    <password>0</password>

    <newPassword>0</newPassword>

    <fixedFreq>915</fixedFreq>

```xml
<tidLength>8</tidLength>
<userLength>6</userLength>
<timeout>150</timeout>
<initTagFormats>
   <Int32>0</Int32>
   <Int32>96</Int32>
   <Int32>128</Int32>
</initTagFormats>
<currentInitTagFormat>0</currentInitTagFormat>
</uhfGen2_2204>
<uhfGen2_If2>
<power>18</power>
</uhfGen2_If2>
<uhfGen2_288D>
<region1>Chinese1</region1>
<freqMin1>0</freqMin1>
<freqMax1>0</freqMax1>
<power1>18</power1>
<regionEnabled2>False</regionEnabled2>
<region2>Chinese1</region2>
<freqMin2>0</freqMin2>
<freqMax2>0</freqMax2>
```

```xml
    <power2>18</power2>

    <regionEnabled3>False</regionEnabled3>

    <region3>Chinese1</region3>

    <freqMin3>0</freqMin3>

    <freqMax3>0</freqMax3>

    <power3>18</power3>

    <epcAddress>2</epcAddress>

    <epcCount>6</epcCount>

    <tidAddress>0</tidAddress>

    <tidCount>4</tidCount>

    <userAddress>0</userAddress>

    <userCount>6</userCount>

    <scanTime>3</scanTime>

    <initTagFormats>

        <Int32>0</Int32>

        <Int32>96</Int32>

        <Int32>128</Int32>

    </initTagFormats>

    <currentInitTagFormat>0</currentInitTagFormat>

</uhfGen2_288D>

<uhf6B>

    <offset desc="起始地址">0</offset>
```

```xml
    <length desc="长度">4</length>

</uhf6B>

<barCode>

    <remainCodeType>Left</remainCodeType>

    <remainCharCount>10</remainCharCount>

    <remainOffset>1</remainOffset>

    <complementCodeType>After</complementCodeType>

    <complementCodeString>0000</complementCodeString>

    <convertCodeType>No</convertCodeType>

    <convertCodeLength>16</convertCodeLength>

    <filterEnabled>True</filterEnabled>

</barCode>

<autoCode>

    <prefixCode>

    </prefixCode>

    <postfixCode>

    </postfixCode>

    <bytes>12</bytes>

    <startCode>000000000000000000000000</startCode>

    <itype>Foward</itype>

    <incrementValue>1</incrementValue>

    <acMode>Custom</acMode>
```

```xml
        <dSystem>Dec</dSystem>

    </autoCode>

    <deviceCodeSwitch>

        <com desc="硬件 PLC 控制板 COM 地址">1</com>

    </deviceCodeSwitch>

</CodeMachineConfig>
```