



DL.CODE 中文操作手册_V1.0.1

Matrix N 系列 Product

DL. CODE™ 系列有以下产品





Model	Lens Focus Type	d ₀	Viewing Angle Horizontal	Viewing Angle Vertical	Viewing Angle Diagonal	Min Reading Distance mm		
Matrix 210 2x5-xxx	7 mm software	14 mm	35°	23°	41°	40		
MODELS	Focus Distance mm (in)	Field of View ⁽¹⁾ mm (in)	PPI ⁽²⁾	Typ. Linear and Stacked Code Resolution mm (mils)	2D Code Resolution mm (mils)	Reading Distance ⁽³⁾ mm (in)		
						min.	max.	
211-xxx NEAR	45 (1.77)	35 × 22 (1.38 × 0.87)	545	0.10 (4)	Max.	0.13 (5)	42 (1.65)	53 (2.08)
					Typ.	0.19 (7.5)	36 (1.42)	61 (2.40)
212-xxx MEDIUM	65 (2.56)	50 × 32 (1.97 × 1.26)	380	0.15 (6)	Max.	0.19 (7.5)	54 (2.13)	90 (3.54)
					Typ.	0.25 (10)	47 (1.85)	101 (3.97)
213-xxx FAR	105 (4.13)	80 × 50 (3.15 × 1.97)	238	0.20 (8)	Max.	0.25 (10)	85 (3.35)	135 (5.31)
					Typ.	0.38 (15)	70 (2.76)	192 (7.55)

(1) @ Focus Distance

(2) Pixels per inch @ Focus Distance

(3) Measurement Conditions:

- Test Chart: provided with the reader
- Still code at the center of the FOV
- Code Symbology: Data Matrix ECC 200
- Tilt Angle: 45°
- Skew Angle: 15°

- Code Contrast = Low *
- Decoding Complexity = Very High *



Model	Lens Focus Type	d ₀	Viewing Angle Horizontal	Viewing Angle Vertical	Viewing Angle Diagonal	Min Reading Distance mm
Matrix 300 4x1-0xx	6 mm manual	7 mm	66°	55°	80°	35
Matrix 300 4x2-0xx	9 mm software	14 mm	40°	32°	50°	22
Matrix 300 4x3-0xx	9 mm manual	11 mm	41°	34°	52°	70
Matrix 300 4x4-0xx	12 mm manual	4 mm	32°	26°	40°	70
Matrix 300 4x5-0xx	16 mm manual	5 mm	24°	19°	30°	80

Matrix410N

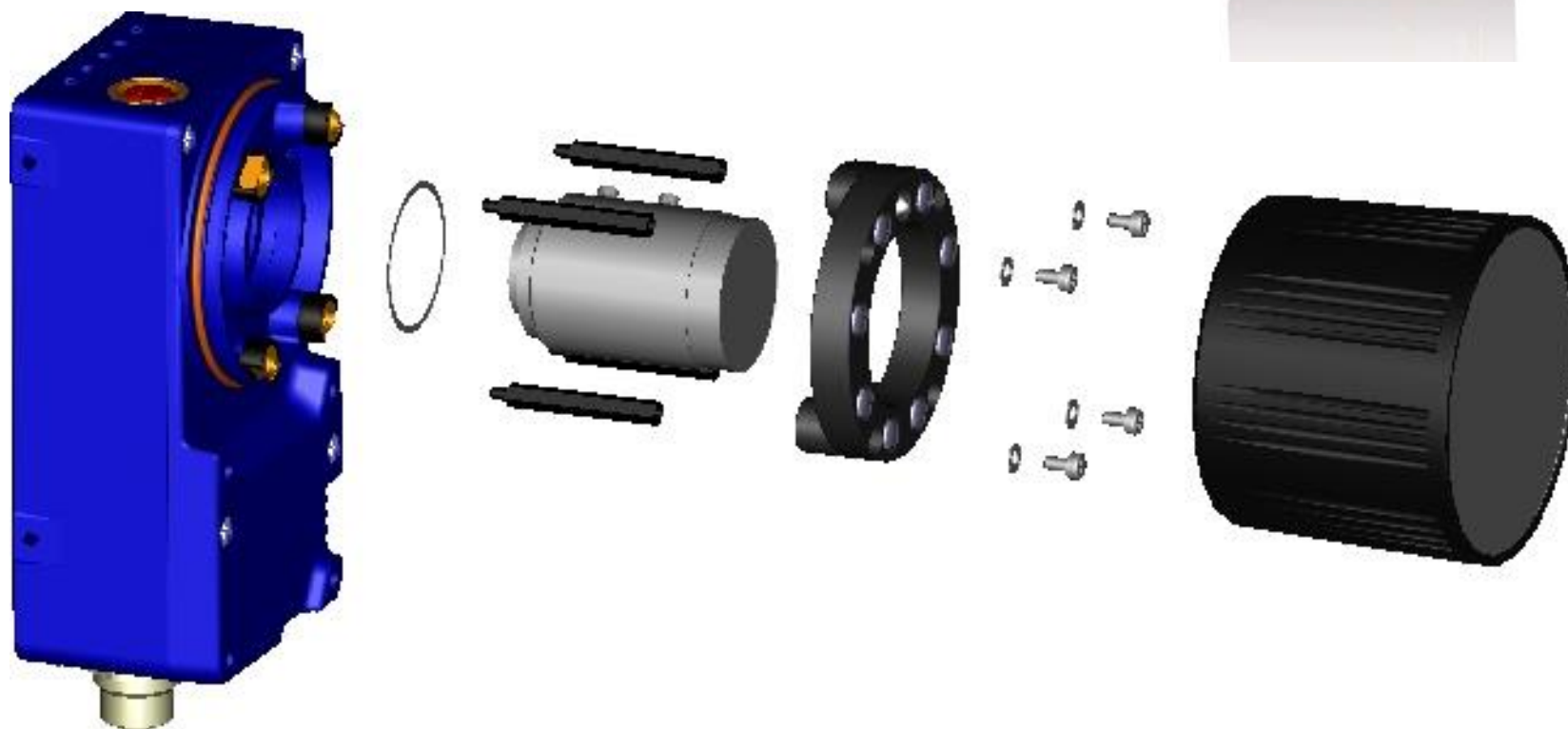
2种像素传感器(SXGA, UXGA)

7种可变镜头

5种光源

2种数据接口(串口, 以太网)

With **DL** DL CODE



XRF410N

With

DL
DL CODE



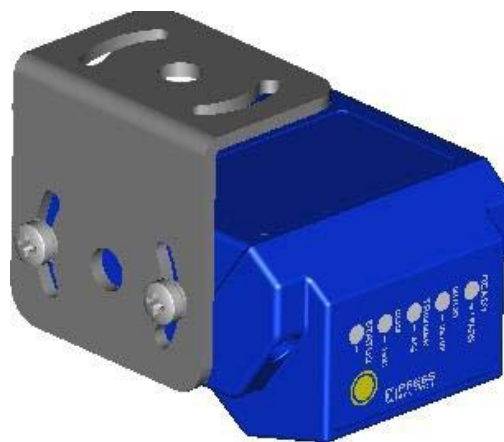
一、产品使用说明

<1>扫码器镜头及光源的正确安装

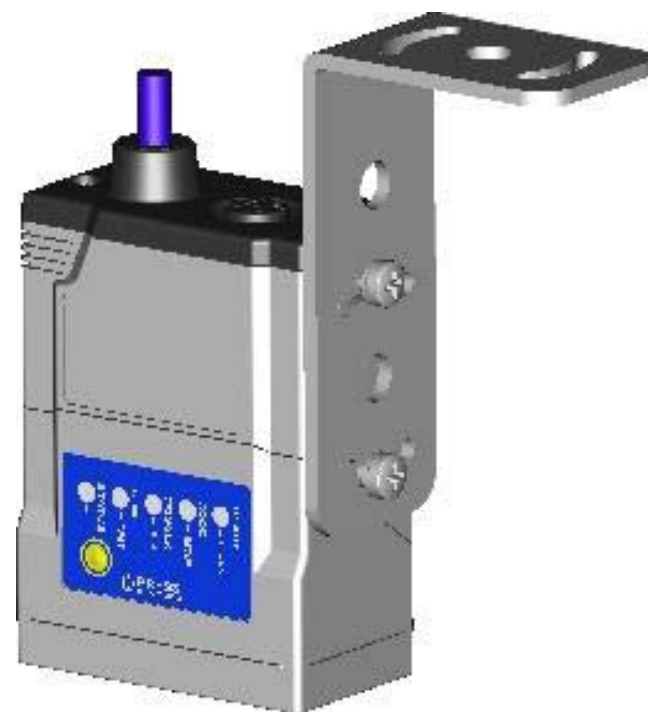
Matrix210N



Matrix210N-21X-110

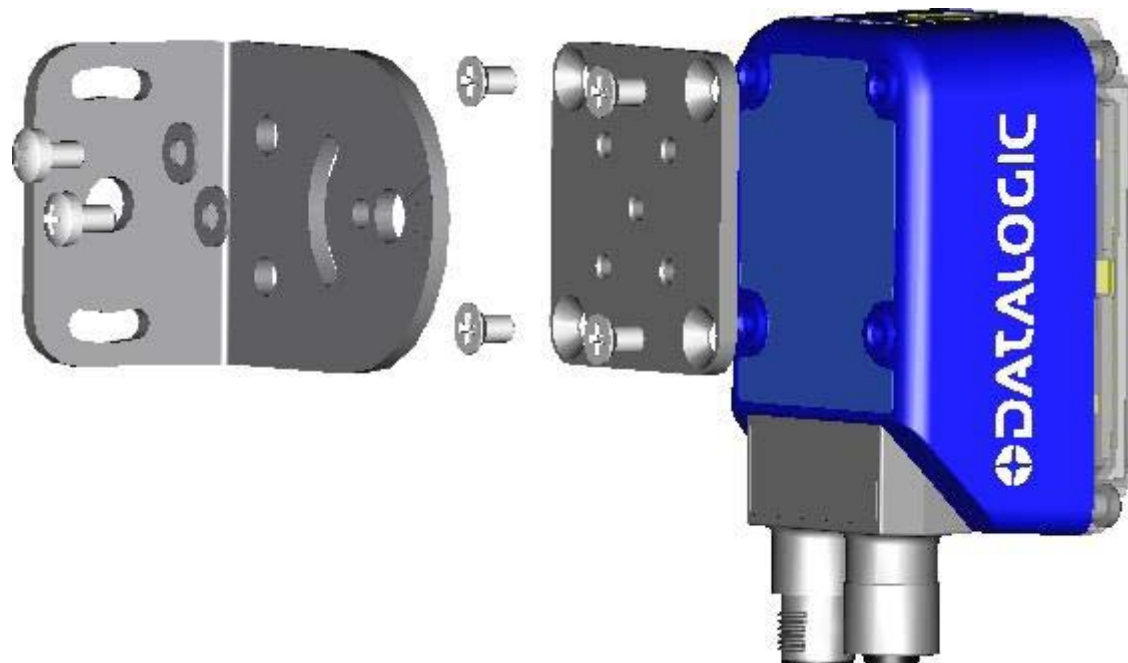


Matrix210N-21X-010



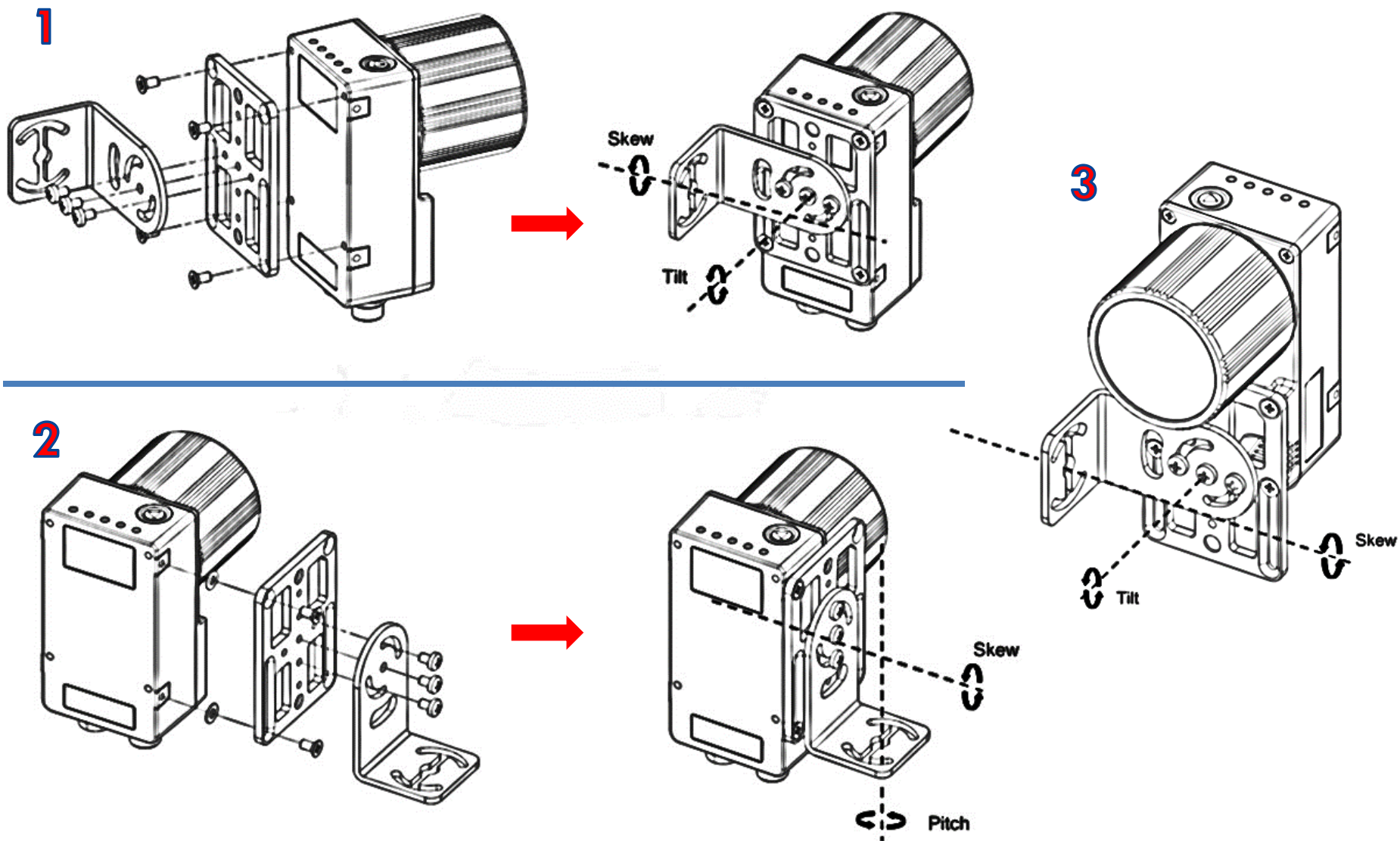
Matrix210N-235-110

Matrix300N



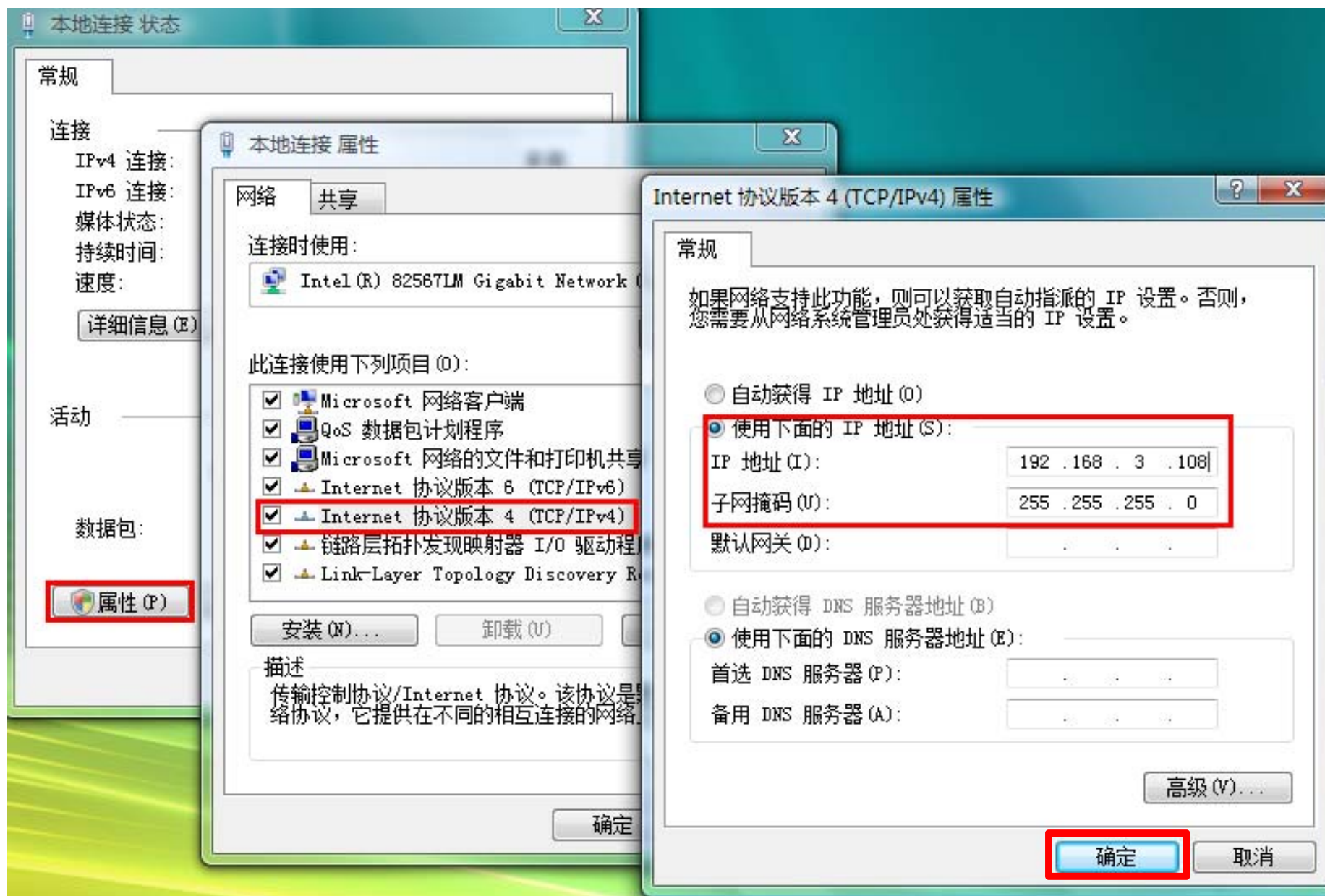
Matrix 300N-4XX-0XX

Matrix410N-X00-010



〈3〉连接前工作准备：

DC24V 供电连接正常，以太网正确连接, IP设置如下：



二、软件调试

打开调试软件DL.CODE 1.3

硬件正确安装读码器后，打开DL.CODE 1.3软件。有两种方法：

<1> 双击桌面上的快捷方式，如图：



<2> 从开始菜单启动，点击开始—>程序—>Datalogic—> DL.CODE 1.3 —> DL.CODE 1.3

<3>打开软件后，在工具栏上把界面语言改为中文Options—>Change Language —>Chinese

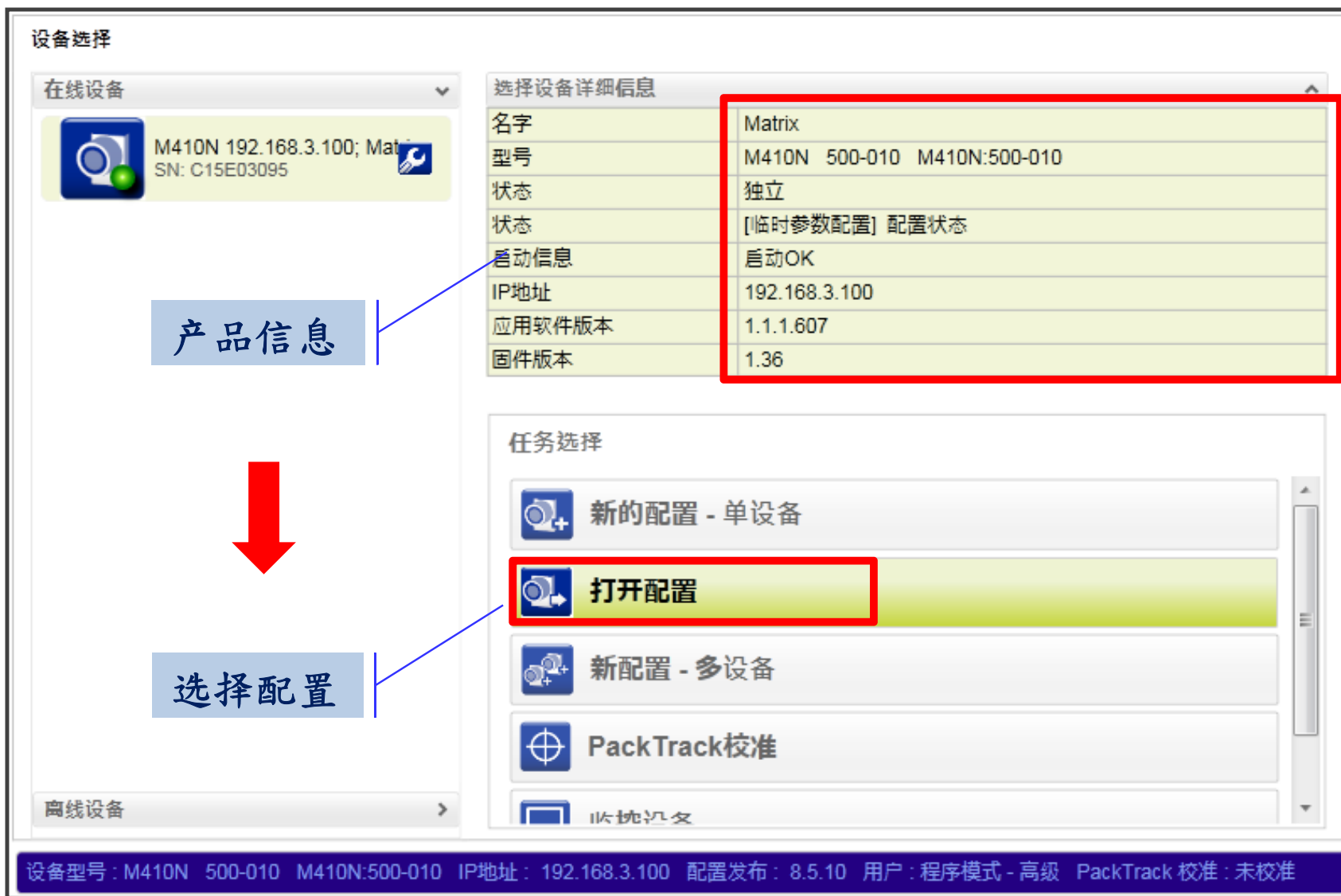
如图；



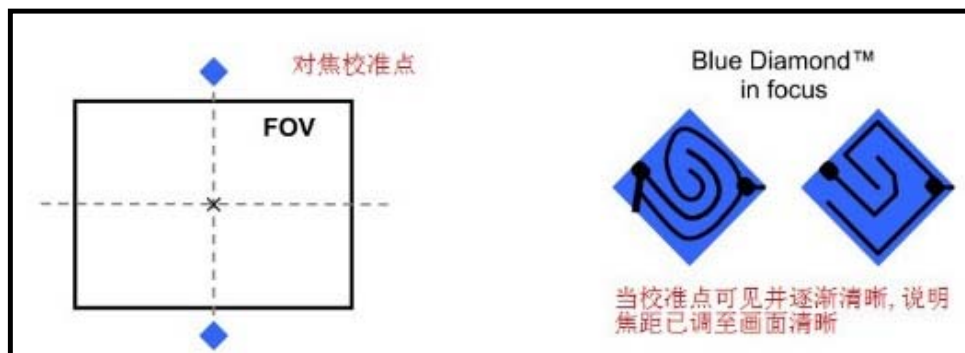
点击“查找设备”按钮

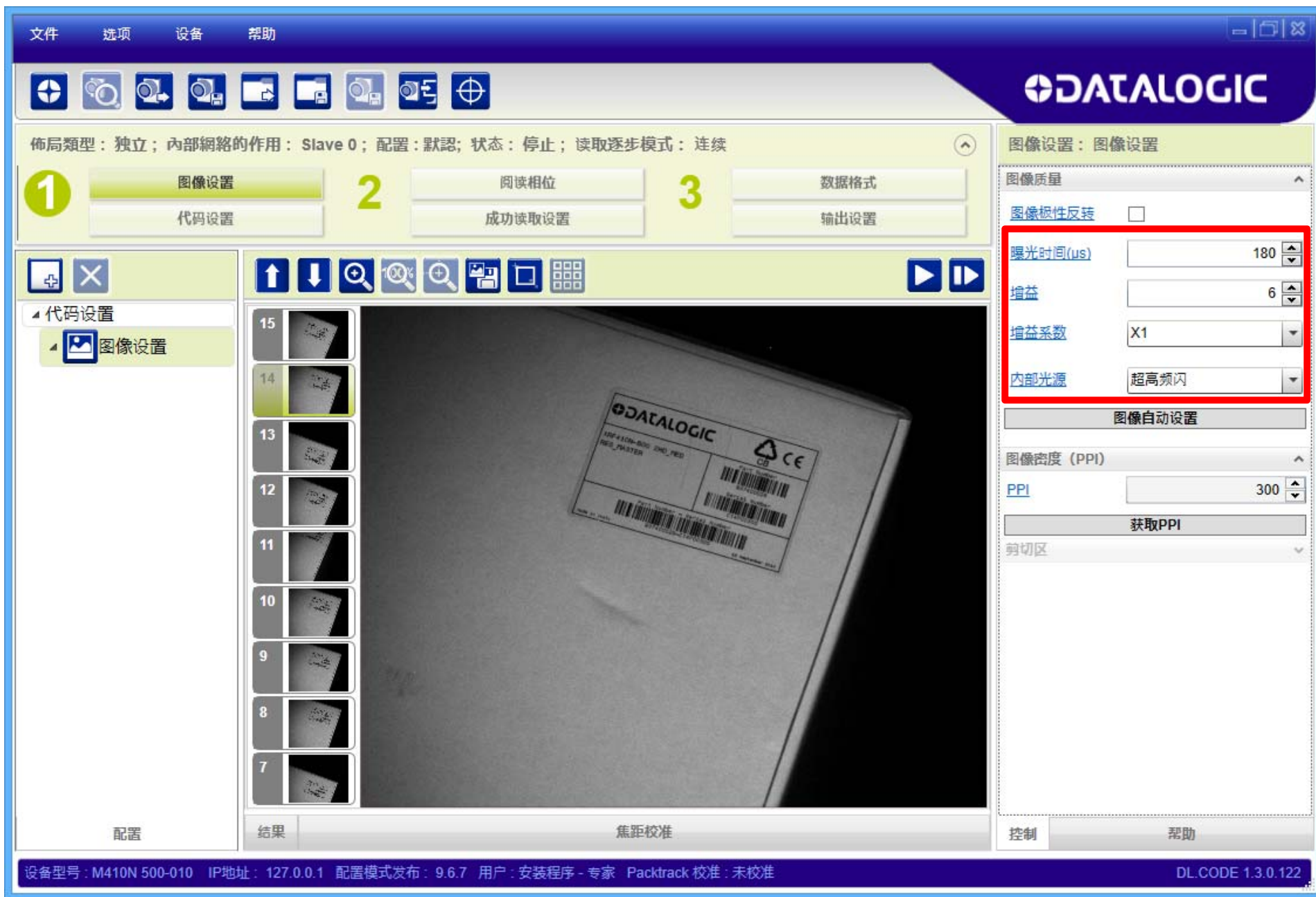


双击已连接设备进入



进入到参数配置，第一步：图像设置；手动调节镜头焦距和光圈，使相机捕捉到清晰的图片(Matrix410N系列)



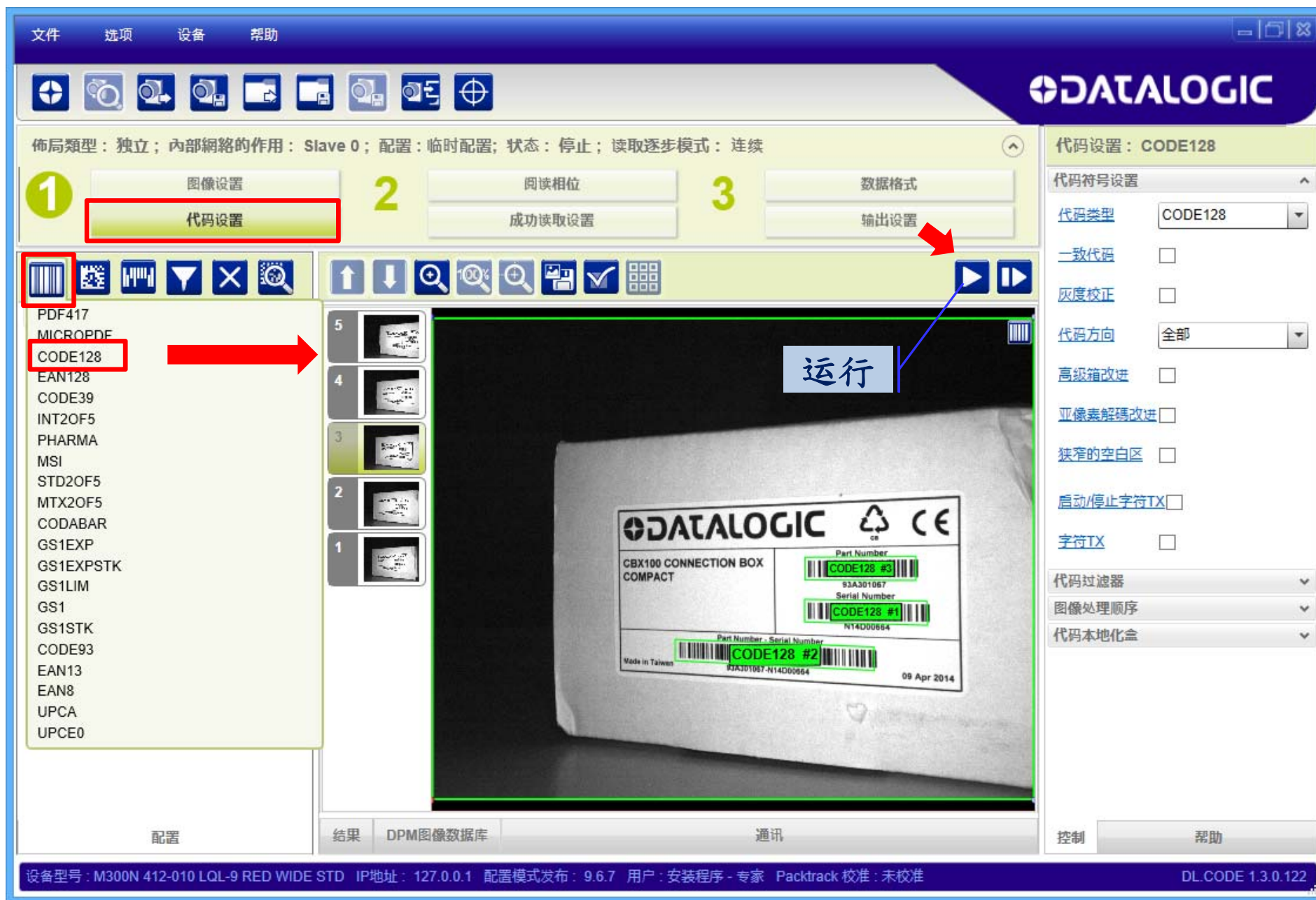


调好焦距后，微调图像质量参数项下的曝光和增益参数；

Matrix 300N-4XX-0XX

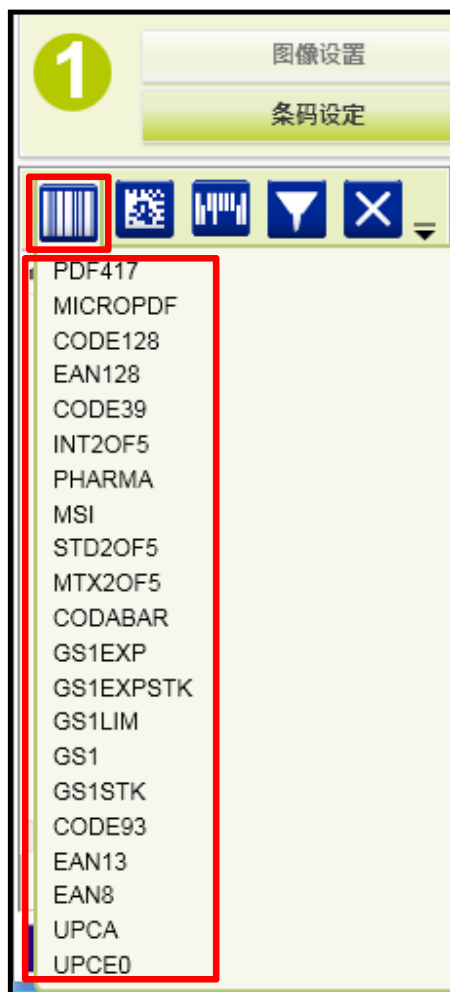


Matrix210N/300N则通过自学习自动对焦，再通过微调图像质量参数项下的曝光、增益、光源模式参数调整图像质量；

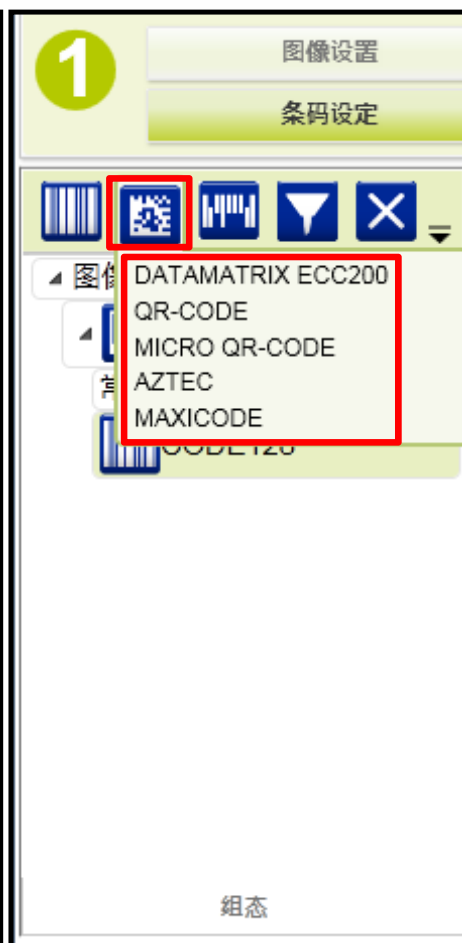


条码设定说明如图：

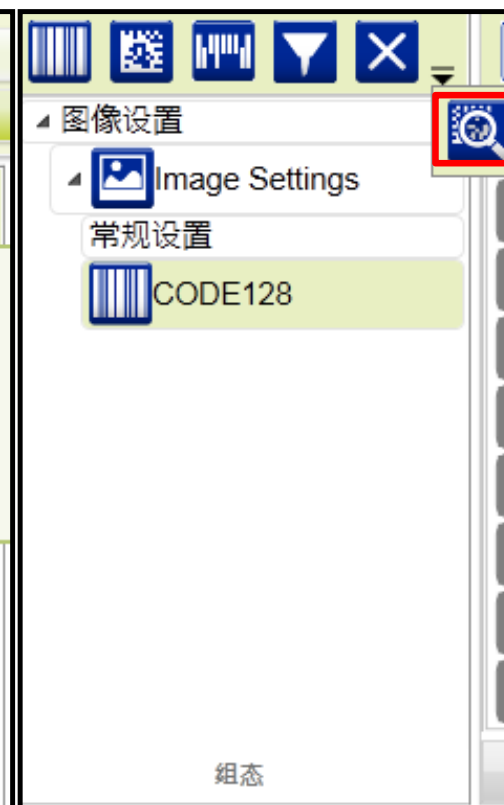
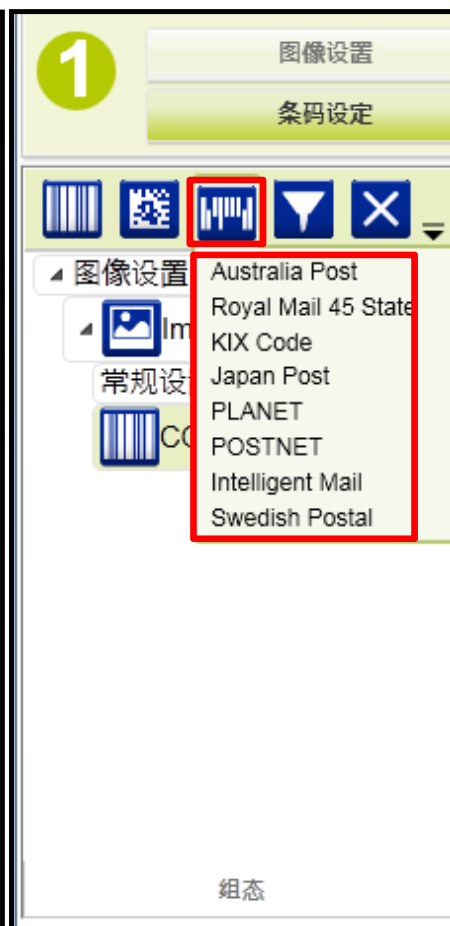
1D Code



2D Code



邮政码



不确定条码种类的情况下，使用自学习功能进行学习条码

在下拉选项中点击所需条码种类，即为选中当前项



图像过滤，根据解码特性要求对当前采集条码图像进行预处理，以达到最佳效果

进入到参数配置，第二步：运行模式；
运行模式一>触发模式  跳转到以下界面；



The screenshot displays the Datalogic Industrial Automation software interface. The top menu bar includes '文件' (File), '选项' (Options), '设备' (Device), and '帮助' (Help). The main toolbar contains various icons for file operations and system functions. The status bar at the top indicates the layout type is '独立' (Independent), internal network role is 'Slave 0', configuration is '临时配置' (Temporary), status is '停止' (Stopped), and reading step mode is '逐步模式' (Step Mode).

The central workspace is divided into three numbered steps: 1. 图像设置 (Image Settings), 2. 阅读相位 (Reading Phase) - which is the active step, and 3. 数据格式 (Data Format). Step 2 includes sub-steps for '代码设置' (Code Settings) and '成功读取设置' (Successful Reading Settings).

On the left, a sidebar shows the '读取阶段' (Reading Stage) menu with options: '常规设置' (General Settings), '获取触发' (Get Trigger), '相位打开' (Phase Open) - which is highlighted, and '相位关闭' (Phase Close). Below this, there are sections for '通道' (Channels), '现场总线' (Fieldbus), '输入' (Inputs), '传感器' (Sensors), and '数据收集类型' (Data Collection Type).

The main workspace shows a configuration diagram. On the left, a list of components includes 'Matrix TCP 服务器', 'Main', 'Aux', '输入1' (Input 1), '输入2' (Input 2), and '良好的阅读' (Good Reading). On the right, a list of actions includes '获取触发' (Get Trigger), '相位打开' (Phase Open) - which is highlighted, and '相位关闭' (Phase Close). Arrows indicate connections from '输入1' to '相位打开' and '相位关闭'.

On the right side, there are checkboxes for 'Matrix TCP 服务器', 'Main', 'Aux', '输入1' (checked), and '输入2'. A dropdown menu is set to '前沿' (Leading Edge). Below this, the '触发延迟' (Trigger Delay) section shows '延时期间 (微秒)' (Delay period in microseconds) set to 0.

The bottom status bar displays the device model 'M300N 412-010 LQL-9 RED WIDE STD', IP address '127.0.0.1', configuration mode version '9.6.7', user '安装程序 - 专家' (Installation Program - Expert), Packtrack status '校准: 未校准' (Calibration: Not Calibrated), and DL CODE '1.3.0.122'.

设置触发开始和触发结束；



运行模式设置完成后, 在工具栏上点击  , 保存当前的设置参数到扫码器上；

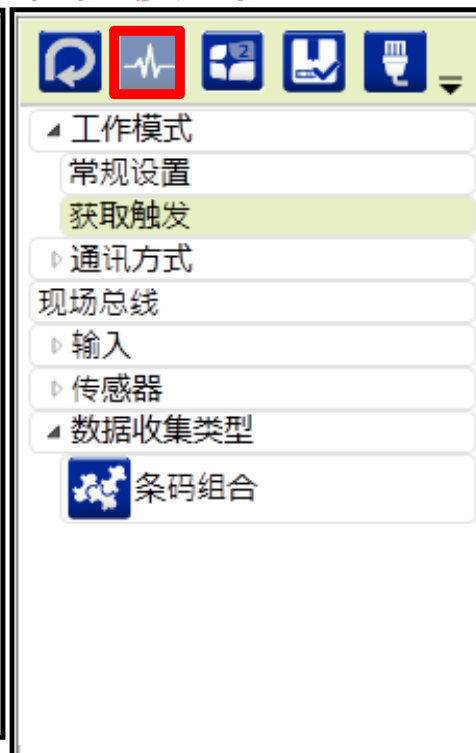
运行模式说明 如图：

连续模式



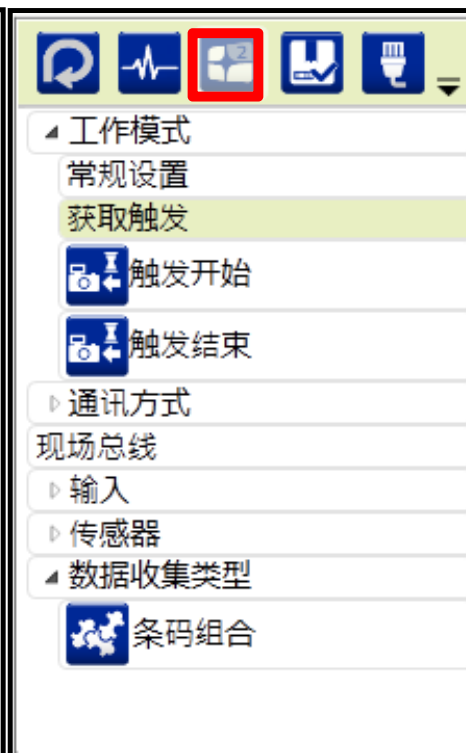
连续模式，相机一直处于工作状态，读到条码内容同时，通过选定通讯方式发送数据内容

单次模式



单次作模，每次信号触发，相机只拍照一次，根据当前图片进行解码，每次信号间隔不能小于最小解码时间

触发模式



触发模式，触发信号工作，结束信号关闭，此期间相机一直拍照工作解码，信号结束或解码完成同时发送解码信息

物流追踪模式



物流追踪，物流包裹信息追踪，结合现场环境和物流线速度进行设置使用

设置数据收集模式, 下面为条码代码集模式;



读取数据设置完成后, 在工具栏上点击  , 保存当前的设置参数到扫码器上;

数据收集

可设置读取单个或多个条码数据；
并根据实际应用需要，对数据进行筛选过滤

适用于单次和触发工作方式

数据输出方式：
以太网\串口



条码组合

默认单个数据收集方式，匹配当前条码设置

适用于单次和触发工作方式

数据输出方式：
以太网\串口



条码演示

仅适用连续工作方式, 相机一直处于工作状态, 读取到条码数据同时传出数据

数据输出方式:
以太网\串口



匹配条码

匹配解码数据内容, 指定某一规则数据条码内容输出, 当解码内容匹配失败时可输出错误信号

适用任何工作方式

数据输出方式:
以太网\串口



第三步设置数据格式,默认为TCP-IP输出,可设置输出字段和通讯参数:



数据设置完成后,在工具栏上点击 ,保存当前的设置参数到扫码器上;

TCP 通讯

The screenshot shows the 'Matrix TCP 服务器 字段' (Matrix TCP Server Fields) configuration window. On the left, the '输出数据格式' (Output Data Format) section is expanded, showing '输出信息' (Output Information) with '信息 1' (Info 1) and '信息 2' (Info 2), and '诊断信息' (Diagnostic Information) with '通道' (Channel) options: 'Matrix TCP 服务器' (selected), 'Main', 'Aux', and 'ID-Net'. The main area displays '输出数据信道' (Output Data Channel) with a diagram showing '成功' (Success) and '失败' (Failure) messages being sent to the 'Matrix TCP 服务器'. On the right, the '本地端口' (Local Port) is set to 51236 and '最大客户' (Maximum Clients) is set to 4.

串口通讯

RS232
RS422

The screenshot shows the 'Main 字段' (Main Fields) configuration window for RS422 serial communication. The '输出数据格式' (Output Data Format) section is expanded, showing '输出信息' (Output Information) with '信息 1' (Info 1) and '信息 2' (Info 2), and '诊断信息' (Diagnostic Information) with '通道' (Channel) options: 'Matrix TCP 服务器', 'Main' (selected), 'Aux', and 'ID-Net'. The main area displays '输出数据信道' (Output Data Channel) with a diagram showing '成功' (Success) and '失败' (Failure) messages being sent to the 'Matrix TCP 服务器'. On the right, the '接口类型' (Interface Type) is set to RS422, '波特率' (Baud Rate) is RS232, '校验位' (Parity) is 无 (None), '数据位' (Data Bits) is 8, and '停止位' (Stop Bits) is 1.

串口通讯

RS232

The screenshot shows the 'Aux 字段' (Aux Fields) configuration window for RS232 serial communication. The '输出数据格式' (Output Data Format) section is expanded, showing '输出信息' (Output Information) with '信息 1' (Info 1) and '信息 2' (Info 2), and '诊断信息' (Diagnostic Information) with '通道' (Channel) options: 'Matrix TCP 服务器', 'Main', 'Aux' (selected), and 'ID-Net'. The main area displays '输出数据信道' (Output Data Channel) with a diagram showing '成功' (Success) and '失败' (Failure) messages being sent to the 'Matrix TCP 服务器'. On the right, the '接口类型' (Interface Type) is set to RS232, '波特率' (Baud Rate) is 115200, '校验位' (Parity) is 无 (None), '数据位' (Data Bits) is 8, and '停止位' (Stop Bits) is 1.

I\O设置

从软件左边点开输入、输出, 在右边展开栏细项设置输入、输出端口和事件参数



I\O设置完成后, 在工具栏上点击  , 保存当前的设置参数到扫码器上;

工具栏功能说明

导航栏



入门指南



查找连线设备



创建新的参数配置



从设备上打开参数



当前设置保存到设备上



从电脑上打开参数设置



当前参数设置保存到电脑上



当前参数在设备中临时保存



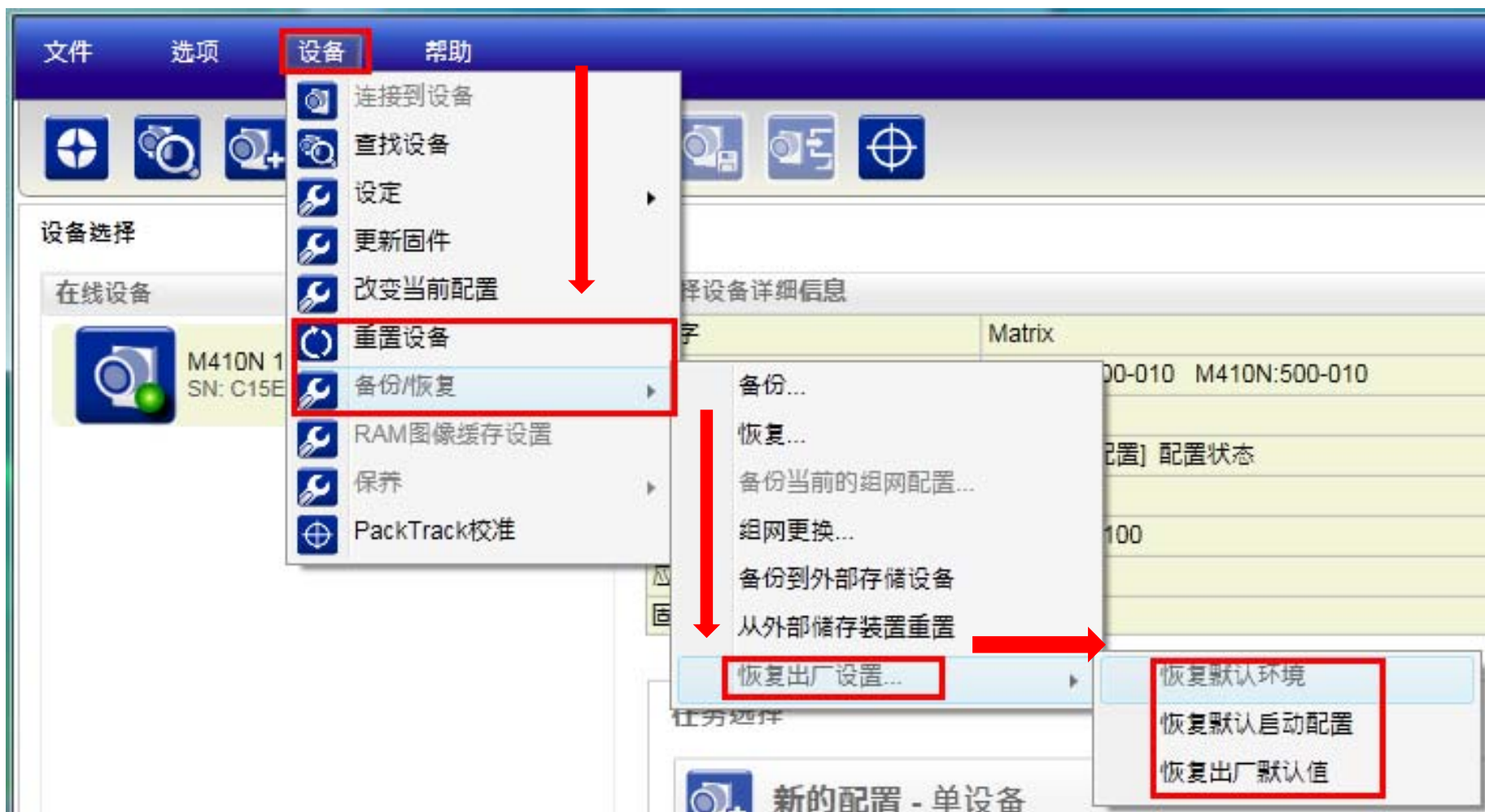
运行监控和参数设置切换



PackTrack

重置与恢复原厂设置功能操作说明：

在导航栏：设备—>重置设备\备份，恢复—>恢复原厂设置—>恢复原厂默认值



待相机重新启动后，恢复原厂设置完成，重新连接读码器进行参数设置



更详细操作方法，请参考机件附带原操作手册！

Thanks !

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