



ZB-500A technical performance

类别 CATEGORY	项目 PROJECT	规格参数 SPECIFICATION	
光学系统 Optical system	摄像机 Camera	500 万千兆网彩色高速相机 (全局曝光) 5M High speed smart digital industrial camera	
	分辨率 resolution Image	标配 15 微米/点 (对应 FOV: 36 毫米*30 毫米) 15 microns/points (corresponding to the FOV: 36 mm * 30 mm)	
	光学镜头 Optical lens	5.0M 像素级远心镜头、景深: 8 毫米-10 毫米 Telecentric lens at pixel level of 5.0 M, depth of field: 8 mm - 10 mm	
	光源系统 light source system	RGB 环形多角度 LED 结构光源 RGB ring multi-angle LED light source structure	
	光源控制系统 Light control system	数字式恒流控制器 Digital constant current controller	
软件识别系统 Software recognition system	检测算法 Detection algorithm	模版匹配 Template matching	搜索窗口内, 自动搜索与预先采样的彩色模版最为相似的图像, 并计算出相似度的百分比 Within the search Windows, automatic search and sampling of the color template is the most similar images in advance, and calculate the percentage of similarity
		智能侦测 Intelligent detection	软件智能学习模版并输出数值, 无需人工干预 Software intelligent learning template and output value, without human intervention
		圆侦测 Circle detection	自动搜索圆, 定位, 并计算出圆的半径 Automatic search circle, positioning, and calculate the radius of the circle
		极性检测 Polarity detection	根据定位的元件图像, 检测元件是否极性反 According to the positioning of the component images, Detecting element is reverse polarity
		桥连检测 Bridge detection	通过亮度是否贯穿窗口来判断元件不良 Through the brightness is judged through the window element

		亮度平均值 Average brightness	计算窗口内平均亮度 average brightness Window
		亮度最大值 maximum brightness	搜索窗口内的亮度平均值最大的设定区域, 并输出平均值 Biggest set the brightness of the average area within the search Windows, And the output mean value
		亮度最小值 Brightness of the minimum	搜索窗口内的亮度平均值最小的设定区域, 并输出平均值 Set the brightness of the average minimum area within the search Windows, and the output mean value
		亮度抽取 Luminance sampling	抽取窗口内的亮度, 并设定百分比 Extract the brightness of the window, and set a percentage
		亮度范围 Brightness range	搜索窗口内的亮度范围值的设定区域, 并输出值 Range of brightness values within the search Windows setup area, and the output value
		相对偏移 Relative offset	输出元件偏移的 X/Y 的数值 Output components, the value of X/Y offset
		字符识别 Character recognition	自动识别元件本身上的字母及数字 Automatic identification Letters and Numbers on the element itself
		两端角度侦测 Two end point detection	智能追踪元件两端电极并且计算出角度 Intelligent tracking components on both ends of the electrodes and calculate the Angle
		整版侦测 Whole detection	区域性的进行整版侦测, 检测 PCB 的异物 Regional for the whole detection, foreign body detection of PCB
		条形码识别 Bar code identification	智能识别一维, 二维条形码 Intelligent identification one-dimensional, two-dimensional bar code
	图像处理速度 image processing speed	FOV 处理速度 FOV processing speed	<170 毫秒 <170ms
		运动速度 Movement speed	最大 700 毫秒 Max: 700mm/s

		检测速度 Detection speed	3500 平方毫米/秒 3500mm ² /s
		特点 The characteristics	IPE 是 Image Processing Expression 的缩写, 允许用户使用简单的表达式自定义图像源, 配合不同的算法可以组合出不同的效果, 可以极大的提高检出率和减低误报率。Qubit AOI 系统中图像源可以理解像素的点阵集合, 每个像素由 1 到 4 个通道的数据表示, IPE 表达式可以对图像源中的每个像素做独立计算, 生成新的图像。可检测板上任意位置多件 The abbreviation of IPE is Image Processing Expression, allow the user to use simple Expression custom Image source, with different algorithms can be combined from different effects, can greatly increase the detection rate and reduce the rate of false positives. Qubit AOI system in the image source can understand pixels of lattice, each pixel data from 1 to 4 channel, said IPE expressions can do independent calculation of each pixel in the image source, generate a new image. More than any place on the plate can be detected
		操作 Operation	图形式离线编程及调试, 精确自动定位微米, 制程快捷, 支持远程式离线调试, 不影响设备正常测试 Figure forms offline programming and debugging, precise automatic positioning microns, quick process, support offline debugging remote type, does not affect the normal test equipment
	Mark	点数 Points count	可选择 2 个常用的 Mark 点或多个 Mark 点 The choice of two commonly used Mark points or more of the Mark
	检测内容 Test content	锡膏印刷 Solder paste printing	偏斜, 无锡, 少锡, 多锡, 断路, 污染, 桥接 Deflection, wuxi, little tin, More tin, break, contamination, bridge

		贴片 Paster	缺件, 偏移, 歪斜, 立碑, 侧立, 翻件, 极性反, 错件, 破损, 污染, 桥接, IC 弯脚 任一位置多件 Missing parts, offset, skew, erection, side stand, turn, reverse polarity, fault, damage, contamination, bridge, IC clubfoot More than at any place
		回流焊后 After reflow soldering	缺件, 偏移, 歪斜, 立碑, 侧立, 翻件, 极性反, 错件, 破损, 污染, 桥接, 无锡, 少锡, 多锡, 假焊, 锡球, IC 弯脚, 任一位置多件 Missing parts, offset, skew, erection, side stand, turning parts, reverse polarity, fault, damage, contamination, bridge, wuxi, little tin, tin, false welding, solder balls, IC bent feet, more than at any place
		波峰焊后 After wave soldering	插入针, 无锡, 少锡, 多锡, 假焊, 锡珠, 锡洞, 短路, 任一位置多件 Insert the needle, wuxi, little tin, tin, false welding, solder ball, solder hole, short circuit, more than at any place
		红胶板 Red rubber sheet	缺件, 偏移, 歪斜, 立碑, 侧立, 翻件, 极性反, 错件, 破损, 益胶, 任一位置多件 Missing parts, offset, skew, erection, side stand, turn, reverse polarity, wrong, damaged, good adhesive, more than at any place
机械系统 Mechanical systems	防静电措施 Anti-static measures	防静电插座, 配防静电环 Antistatic socket, anti-static ring	
	PCB 尺寸 PCB size	35×35 毫米~450×330 毫米(可根据客户要求定制更大尺寸) 35 * 35 mm ~ 450 * 330 mm,(according to customer request custom bigger size)	
	PCB 厚度 PCB thickness of the	0.3 毫米~6 毫米 0.3 mm to 6 mm	
	PCB 翘曲度 PCB warp degrees	≤6 毫米 (有夹具辅助矫正变形) 可消除 PCB 变形影响 (特殊要求可定制) ≤6 mm or less (a fixture auxiliary rectify deformation) can eliminate PCB deformation effects (special requirements can be customized)	
	零件高度 Component height	上净高≤30mm 下净高≤75mm (特殊要求可订制) Top Side≤30mm Bottom Side≤75mm	

	最小零件 Smallest parts	0201 元件, 0.3 毫米间距及以上 IC (选配可达 01005) 0201 components, 0.3 mm pitch and above IC (optional up to 01005)	
	X、Y 平台 X, Y platform	驱动设备 Drive equipment	交流伺服电机系统 Ac servo motor system
		定位精确 Precision positioning	≤8 微米 ≤8um
控制系统 Control system	操作系统 Operating system	Windows 10-64Bit	
	电脑主机 Mainframe computers	I5 CPU,8G GPU 显卡,16G 内存, 128G 固态硬盘, 1TB 机械硬盘 I5 CPU, 8 g GPU graphics, 16 gb of memory, 128 gb SSD, 1 TB hard drive machinery	
	显示器 Display	21.5 英寸液晶宽屏显示器 widescreen display	21.5inches LCD
其它参数 Other parameters	机械外形尺寸 Mechanical dimension	90 厘米×110 厘米×135 厘米 90cm×110cm×135cm	
	重量 weight	约 500 公斤 500kg	
	电源 power supply	交流 220 伏特±10%, 频率 50/60Hz, 额定功率 1000W AC220V±10%, Single phase 50/60HZ, Power consumption 1000W	