

# ULTRASCAN SCAN HEAD

## 光电振镜方头



### 产品特点

#### FEATURES



低噪声、高线性度和低漂移。  
Low noise, high linearity and low drift.



适配多种F-theta镜头。  
Applicable to a variety of F-theta lenses.



模块化设计，易于安装维护。  
Modular design, easy integration and maintenance.



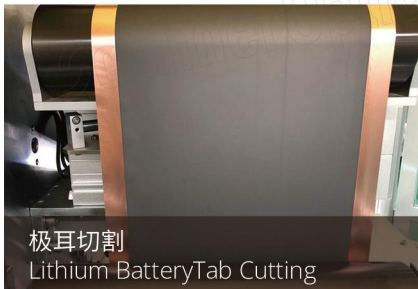
标准通讯协议：16bit XY2-100, 20bit ST2-100。  
Standard protocol: 16bit XY2-100, 20bit ST2-100.

### 行业应用

#### INDUSTRY APPLICATIONS

主要应用于非金属和部分金属材料加工，现广泛应用于食品包装、饮料包装、医药包装、建筑陶瓷、钮扣、工艺礼品、电子元件、手机外壳、笔记本及平板外壳、剥线、薄膜切割、PCB条码、外壳铭牌等激光加工领域。

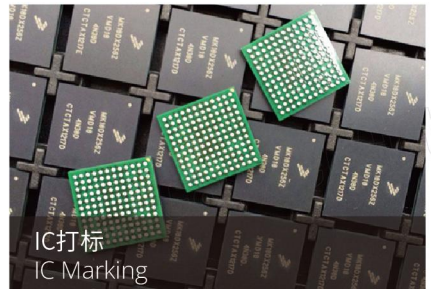
The product is mainly used for the processing of non-metallic and partial metallic materials, and it has been widely used in the laser processing fields such as food packaging, beverage packaging, medicine packaging, building ceramics, buttons, craft gifts, electronic components, mobile phone shells, laptop and tablet shells, wire stripping, film cutting, PCB barcodes, shell nameplate, etc.



极耳切割  
Lithium Battery Tab Cutting



印刷线路板  
PCB



IC打标  
IC Marking

## □ 技术参数

### TECHNICAL PARAMETERS

UltraScan I	10mm <sup>①</sup>	10mm <sup>②</sup>	10mm <sup>③</sup>	14mm	20mm	30mm	50mm
入射光斑直径 Input Beam Aperture (mm)	10	10	10	14	20	30	50
光柱位移 Beam Displacement (mm)	12.54	12.54	12.54	16.42	25.25	35.61	62.25
跟随误差 Tracking Error (ms)	0.14	0.14	0.14	0.23	0.45	0.70	1
重复精度 Repeatability (μrad)	<2	<3	<2	<2	<2	<2	<2
零位漂移 Offset Drift (μrad/K)	<15	<15	<15	<15	<15	<15	<15
增益漂移 Gain Drift (ppm/K)	<80	<80	<80	<80	<80	<80	<80
>8小时长时间漂移 Long-Term Drift over 8h (mrad)	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
1%全行程 1% of Full Travel (ms)	0.40	0.30	0.35	0.65	0.80	1.20	1.5
10%全行程 10% of Full Travel (ms)	1.20	1.00	1.10	1.60	2.50	4.50	6.5
定位速度 <sup>④</sup> Positioning Speed (m/s)	10.0	20.0	15.0	10.0	5.0	3.0	1
扫描角度 <sup>⑤</sup> Scan Angle (°)	±25						
增益误差 Gain Error (mrad)	<5						
零位误差 Zero Offset (mrad)	<5						
非线性度 Nonlinearity (%)	<0.4						
电源要求 Power Requirements	±15VDC, ≥3A						
通讯协议 Communication Protocol	16bit: XY2-100			20bit: ST2-100 <sup>⑥</sup>			
工作温度 Operation Temperature (°C)	25±10						
重量 Weight (kg)	1.9	1.9	1.9	2.3	5.0	5.2	8.8

① 针对精密打标定制 Customization for precision marking

② 针对飞行打标定制 Customization for marking on the fly

③ 针对FPC及SLA应用定制 Customization for FPC and SLA applications

④ 使用焦距F=160mm的场镜测试 Test using F-theta lens with focal length F=160mm

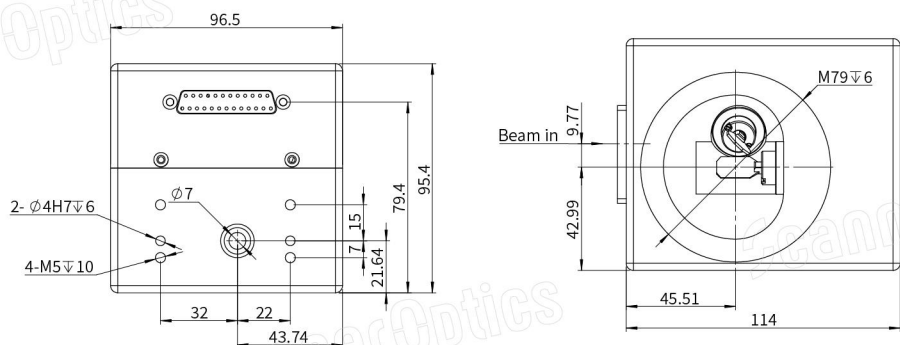
⑤ 以上角度均为光学角度 All angles above are optical angles

⑥ 10-50mm支持ST2-100协议 10-50mm supports ST2-100 protocol

## □ 外形尺寸图

### TECHNICAL DRAWING

UltraScan II 7mm



## □ 技术参数

### TECHNICAL PARAMETERS

UltraScan II	7mm	10mm	14mm	20mm	30mm
入射光斑直径 Input Beam Aperture (mm)	7	10	14	20	30
光柱位移 Beam Displacement (mm)	9.77	12.54	16.42	25.25	35.53
跟随误差 Tracking Error (ms)	0.12	0.12	0.15	0.35	0.6
重复精度 Repeatability (μrad)	<2	<2	<2	<2	<2
零位漂移 Offset Drift (μrad/K)	<12	<12	<12	<12	<12
增益漂移 Gain Drift (ppm/K)	<50	<50	<50	<50	<50
>8小时长时间漂移 Long-Term Drift over 8h (mrad)	<0.1	<0.1	<0.1	<0.1	<0.1
1%全行程 1% of Full Travel (ms)	0.22	0.3	0.35	0.70	1.10
10%全行程 10% of Full Travel (ms)	0.76	0.8	0.90	2.40	4.40
定位速度 <sup>①</sup> Positioning Speed (m/s)	25	18.0	14.0	6.0	4.0
扫描角度 <sup>②</sup> Scan Angle (°)	±25				
增益误差 Gain Error (mrad)	<5				
零位误差 Zero Offset (mrad)	<5				
非线性度 Nonlinearity (%)	<0.4			<0.2(UltraScan III)	
电源要求 Power Requirements	±15VDC, ≥3A				
通讯协议 Communication Protocol	16bit: XY2-100				
工作温度 Operation Temperature (°C)	25±10				
重量 Weight (kg)	1.6	1.9	2.3	5.0	5.2

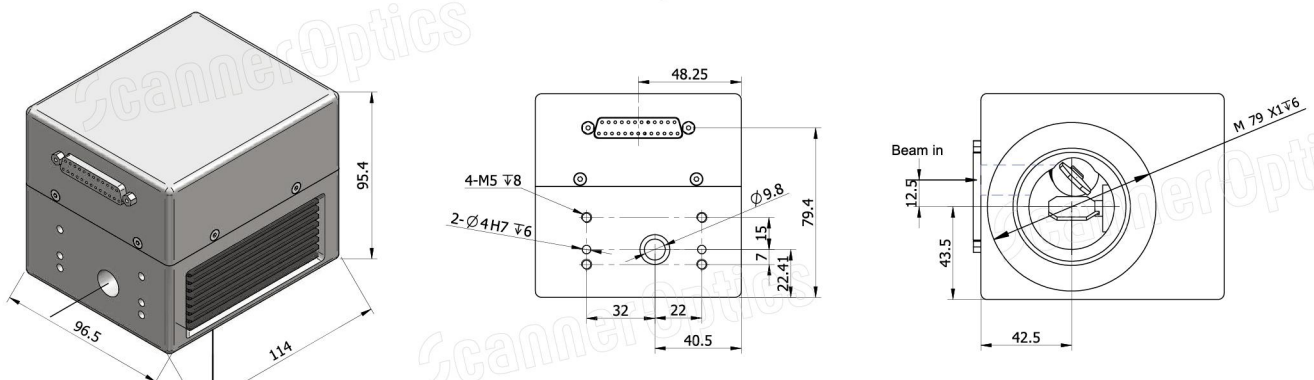
① 使用焦距F=160mm的场镜测试 Test using F-theta lens with focal length F=160mm

② 以上角度均为光学角度 All angles above are optical angles

## □ 外形尺寸图

### TECHNICAL DRAWING

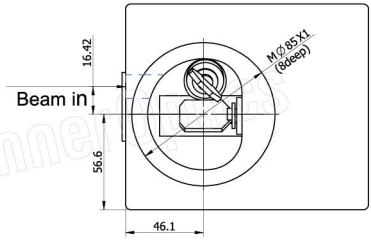
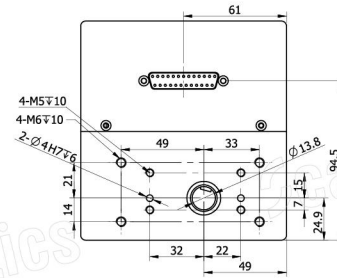
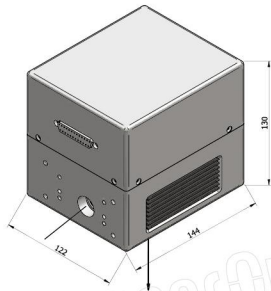
UltraScan I(II)10mm



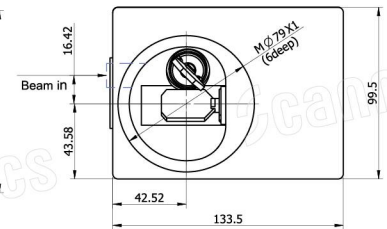
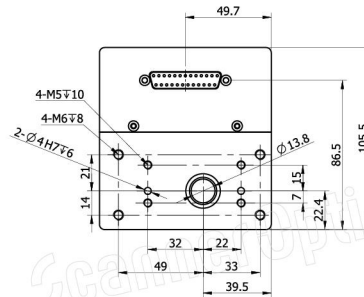
## 外形尺寸图

TECHNICAL DRAWING

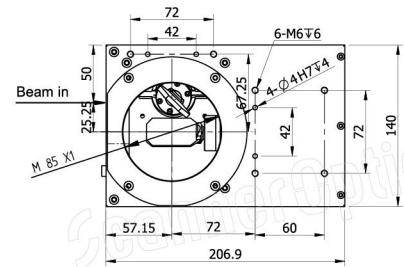
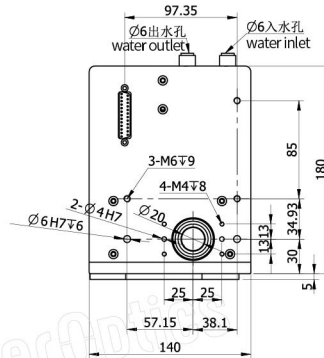
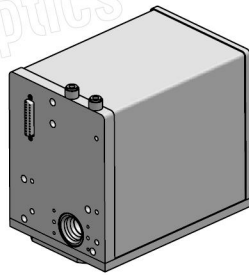
UltraScan I 14mm



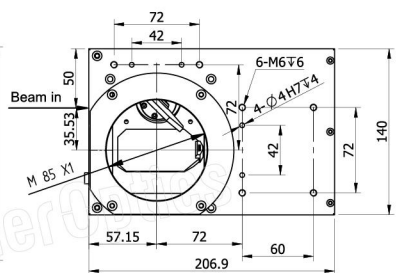
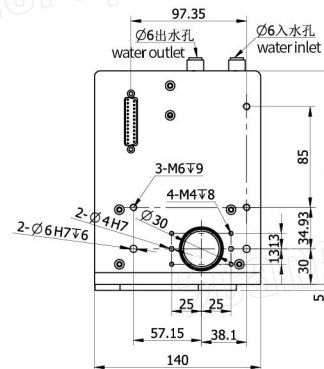
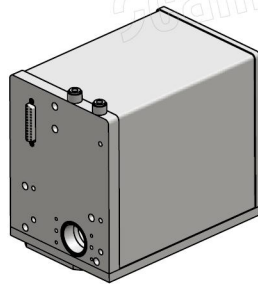
UltraScan II(III) 14mm



UltraScan I(II) 20mm



UltraScan I(II) 30mm



UltraScan 50mm

