

## 2048像素高速线扫描工业数字相机 2048 Pixels Industrial Line Scan CCD Cameras

### 产品简介 (Description)

本系列产品采用2048像素，14 $\mu$ m $\times$ 14 $\mu$ m方型像素的高性能线扫描CCD传感器，是像素密度、灵敏度和动态范围的最佳结合，提供低至3%像素不均匀性、低残像率及最高11.9KHz的扫描频率，尤其适用于表面检测和色选行业。

系列相机产品内部集成了高性能的AFE模块及高精度的AD采样器，输出包含了8bit/12bit各种型号，用户可通过标准的RS-232接口及简单易用的Windows配置软件进行相机工作模式、积分时间调整、增益和偏置调整；外同步输入则可进行多相机并行工作设置。

系列相机产品提供8bit LVDS和Camera Link Base两种接口方式，采用高精度的装配工艺，经过了严格的检验及测试，具有高稳定性、高可靠性和高性价比的优点。

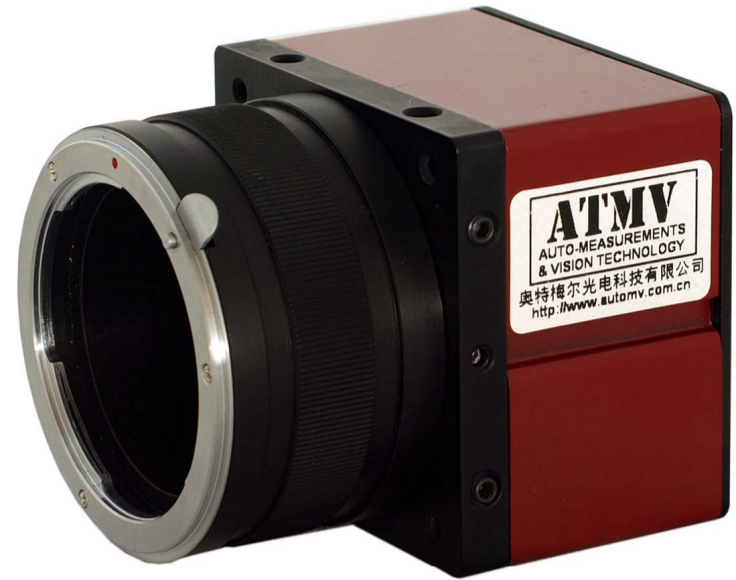
This series line scan cameras features 2048 pixels high performance linear CCD sensor with 14  $\mu$  m $\times$ 14  $\mu$  m pixel size, offers low PRNU (3% typical), low image lag and up to 11.9KHz line scan rate.

This series line scan cameras offers superb image sensing quality, versatility and easy implementation, even at high-speed data acquisition. This series of products, has a compact mechanical design, fully compatible with LVPCI series PCI data capture cards. The programmable settings via RS-232 let the user work at different integration time, gains and offsets. The external trigger enable synchronization of several cameras. The performance and reliability of this series of products make it well-suited for most demanding industrial applications, from web inspection to document scanning, from surface inspection to metrology.

### 联系方式 (Contact Info)

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### 产品特性 (Features)

- 高灵敏度及低噪声线扫描CCD传感器(High Sensitivity and High Performance Linear CCD sensors);
- 2048像素(2048 Pixels Resolution);
- 14 $\mu$ m $\times$ 14 $\mu$ m像素尺寸(14 $\mu$ m $\times$ 14 $\mu$ m Pixel Size with 14 $\mu$ m Pitch);
- EIA-644 LVDS接口(EIA-644 LVDS Data Format);
- Camera Link Base接口(Camera Link Base Configuration);
- 25M像素/s输出频率(High Data Rate Up to 25MPixels/s);
- 集成CDS功能的8/12bit采样精度(8bit or 12bit Data Output with CDS Sampling);
- 串行相机配置功能(Flexible Serial Camera Configuration);
- 积分时间设置(Integration Time Control);
- 增益及偏置控制(Gain and Offset Control);
- 同步模式控制(Sync Mode Control);
- 测试图像输出(Test Image Output);
- 多相机同步(Multi Camera Synchronization);
- 小型化设计(Compact Design);
- 多种镜头接口(Variable Lens Mount Available: F Type, K Type, M42 $\times$ 1);

### 典型应用 (Applications)

- 工业表面在线检测(Surface Inspection);
- 图像扫描应用(Document Scanning and Imaging);
- 高速尺寸及振动测量(High-speed Metrology);
- 灰度色选(Grey Scale Sorter);
- 科研及教学(College & Study);

Specifications	LD2108A-2048 LD2112A-2048	LD2108B-2048 LD2112B-2048	LD2108B-2048D LD2112B-2048D
有效像素 ( Valid Pixels )	2048 Valid Pixels		
行扫描频率 ( Line Rate )	5.7KHz	9.5KHz	11.9KHz
像素尺寸 ( Pixel Size )	14μm×14μm with 14μm Pitch		
光谱相应特性 ( Spectral Range )	300nm ~ 1000nm		
灵敏度 ( Response )	TYP. 31V/Lux·s @DAYLIGHT FLUORESCENT LAMP		
像素不均匀性 ( PRNU )	±3% Typical ( ±10% MAX )		
残像率 ( Image Lag )	3% MAX		
动态范围 ( Dynamic Range )	TYP. 2000		
AFE增益范围 ( AFE Gain Adjust )	0dB ~ 24dB 10bit digital ( 16V/V MAX )		
偏置调整范围 ( Offset Adjust )	-300mV ~ +300mV 8bit digital		
数据输出 ( Video Output )	12MPixels/s 8/12Bit Data	20MPixels/s 8/12Bit Data	25MPixels/s 8/12Bit Data
输出接口 ( Output Format )	RS-644 LVDS 8bit		
同步模式 ( Sync Mode )	Internal free-run / External Trig/Sync via LVDS Input		
配置端口 ( Configuration Type )	RS-232		
输入电源 ( Power Supply )	+12VDC, 0.5A, ±5% / +5VDC, 0.6A, ±5% ( Dedicate Power Supply Available )		
镜头接口 ( Lens Mount )	F-Mount / K-Mount / M42×1 Screw Mount		
尺寸重量 ( Dimensions/Weight )	65mm(W)×61mm(H)×43mm(L) / 400g		

Specifications	LD3108A-2048 LD3112A-2048	LD3108B-2048 LD3112B-2048	LD3108B-2048D LD3112B-2048D
输出接口 ( Output Format )	Camera Link Base Configuration with same other specifications of LVDS version		

Specifications are Subject to Change Without Prior Notice.

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### 外形及尺寸 Dimensions (Unit: mm)

